



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 3.12.2002  
SEC(2002) 1329

**COMMISSION STAFF WORKING PAPER**

**Technical Annexes of the**

**Eighth Report on the Implementation of the Telecommunications Regulatory  
Package**

**{COM(2002)695 final}**



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 3.12.2002  
SEC(2002) 1329

**COMMISSION STAFF WORKING PAPER**

**Technical Annexes of the**

**Eighth Report on the Implementation of the Telecommunications Regulatory Package**

**CORRIGENDUM**

{COM(2002)695 final}



# **ANNEX 1**

## **MARKET OVERVIEW**



## TABLE OF CONTENTS

|          |  |            |
|----------|--|------------|
| <b>1</b> | <b>PLAYERS IN THE FIXED MARKET .....</b>   | <b>7</b>   |
| 1.1.     | LICENSING REGIMES IN THE MEMBER STATES .....   | 8          |
| 1.2.     | NUMBER OF FIXED TELECOMMUNICATIONS OPERATORS .....   | 10         |
| 1.3.     | INCUMBENTS MARKET SHARE ON FIXED TELEPHONY MARKET .....  | 17         |
| 1.4.     | SHARE OF PUBLIC OWNERSHIP IN INCUMBENT OPERATORS .....   | 20         |
| 1.5.     | ADMINISTRATIVE AND NUMBERING FEES FOR THE PROVISION OF PUBLIC VOICE<br>TELEPHONY AND PUBLIC NETWORK SERVICES .....                     | 21         |
| <b>2</b> | <b>CONSUMER'S CHOICE OF FIXED OPERATORS.....</b>   | <b>27</b>  |
| 2.1.     | PERCENTAGE OF SUBSCRIBERS WITH CHOICE OF OPERATORS FOR FIXED CALLS.....  | 27         |
| 2.2.     | PERCENTAGE OF SUBSCRIBERS ACTUALLY USING AN ALTERNATIVE PROVIDER OTHER<br>THAN THE INCUMBENT .....                                     | 29         |
| 2.3.     | FACILITIES USED BY NEW ENTRANTS TO PROVIDE VOICE TELEPHONY .....   | 30         |
| <b>3</b> | <b>PUBLIC NETWORK INTERCONNECTION AND INTERCONNECTION CHARGES.....</b>   | <b>33</b>  |
| 3.1.     | FIXED-TO-FIXED INTERCONNECTION CHARGES .....   | 33         |
| 3.2.     | LEASED LINE INTERCONNECTION CHARGES .....  | 35         |
| 3.3.     | FIXED-TO-MOBILE INTERCONNECTION CHARGES .....  | 40         |
| <b>4</b> | <b>MOBILE MARKET .....</b>   | <b>45</b>  |
| 4.1.     | MOBILE PENETRATION.....  | 45         |
| 4.2.     | PLAYERS IN THE MOBILE MARKET .....   | 47         |
| 4.3.     | OPERATORS' MARKET SHARES .....   | 49         |
| 4.4.     | MOBILE BASKET .....  | 51         |
| <b>5</b> | <b>LOCAL ACCESS AND PRICING .....</b>  | <b>55</b>  |
| 5.1.     | BROADBAND ACCESS .....   | 55         |
| 5.2.     | PRICES FOR UNBUNDLED LOCAL LOOP.....   | 62         |
| <b>6</b> | <b>INTERNET SERVICES .....</b>   | <b>67</b>  |
| 6.1.     | INTERNET MARKET DATA .....   | 67         |
| 6.2.     | INTERNET ACCESS PRICING .....  | 69         |
| <b>7</b> | <b>PUBLIC VOICE TELEPHONY TARIFFS.....</b>   | <b>71</b>  |
| 7.1.     | CHARGING SYSTEM.....   | 72         |
| 7.2.     | MONTHLY RENTAL CHARGED BY THE INCUMBENT OPERATORS.....   | 74         |
| 7.3.     | AVERAGE MONTHLY EXPENDITURE (COMPOSITE CALL BASKET) .....  | 76         |
| 7.4.     | FIXED NATIONAL CALLS .....   | 78         |
| 7.5.     | TREND OF THE BASKET FOR FIXED NATIONAL CALLS (NATIONAL BASKET).....  | 81         |
| 7.6.     | ALTERNATIVE NATIONAL OPERATORS .....   | 82         |
| 7.7.     | PRICE OF AN AVERAGE FIXED INTERNATIONAL CALL (INTERNATIONAL CALL BASKET) .....   | 84         |
| 7.8.     | PRICE OF CALLS TO EU, JAPAN, USA .....   | 86         |
| 7.9.     | ALTERNATIVE INTERNATIONAL OPERATORS .....  | 88         |
| <b>8</b> | <b>LEASED LINES RETAIL TARIFFS.....</b>  | <b>91</b>  |
| 8.1.     | INCUMBENTS' NATIONAL LEASED LINES.....   | 91         |
| 8.2.     | NATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2002).....  | 97         |
| 8.3.     | INTERNATIONAL LEASED LINES PRICES .....  | 98         |
| 8.4.     | INTERNATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2002).....   | 102        |
| <b>9</b> | <b>EXCHANGE RATES.....</b>   | <b>103</b> |
| 9.1.     | EXCHANGE RATE USED IN SECTION 6 ON INTERNET, SECTION 7 ON PUBLIC VOICE<br>TELEPHONY TARIFFS AND SECTION 8 ON LEASED LINE TARIFFS. .... | 103        |
| 9.2.     | EXCHANGE RATE USED IN SECTION 1.5 ON ADMINISTRATIVE AND NUMBERING FEES .....   | 103        |
| 9.3.     | EXCHANGE RATE USED IN SECTION 3 ON INTERCONNECTION AND SECTION 5.2 ON PRICES<br>FOR LOCAL LOOP .....                                   | 103        |



## 1 PLAYERS IN THE FIXED MARKET

This section analyses the situation of the market players in the fixed telecommunications market (voice telephony and network services): number of operators authorised to operate a network and to provide public fixed voice telephony, number of players actually active in the market, licence fees for fixed services, market shares and the public ownership in the incumbent operators.

Data are based on the replies to the European Commission questionnaire provided by the national regulatory authorities and gives the situation as at August 2002.

The following definitions apply:

- Public network operators are defined as operators that install, manage and operate a telecommunications transmission network to provide public telephony services or public network services<sup>1</sup> (i.e. provision of leased lines).
- Public fixed voice telephony is defined as a service available to the public for the direct transport on a commercial basis of real-time speech via the public switched network, such that any user can use equipment connected to a network termination point at a fixed location to communicate with another user of equipment connected to another termination point. Voice telephone could be provided on an own self-operated network or on a leased network.
- Public fixed voice telephony (not including the installation of the network): provision of national and international public voice telephony by service providers that operate, control and manage the transmission capacity which is leased from other operators. Simple call-back and calling card services and operators dealing only with marketing, billing, etc., are excluded. The definition of service provider may differ from that used in the national law of individual countries (in some countries non-self operated network operators engage exclusively in reselling activities).
- Public voice telephony on an own self-operated network (not including network services): provision of public fixed voice telephony over a network fully controlled, operated and (wholly or partially) owned by the operator, excluding the provision of network services.
- Local operators are operators authorised to offer telecommunications services only to users located in specific areas (to whom they provide local calls as well as long-distance and international calls through interconnection agreements with other operators).
- National operators are operators authorised to offer telecommunications services without any geographical restriction. They may provide all types of telephony services (local, long-distance and international calls) to users located throughout the national territory.

---

<sup>1</sup> Public fixed network services are defined as the conveyance of calls, messages and signals over a telecommunications network, including any necessary switching. They may be network interconnection services, which are provided to other network operators to enable calls and associated functions to be passed through interconnected networks, or basic retail network services, which are provided to customers such as end-users or service providers.



## 1.1.LICENSING REGIMES IN THE MEMBER STATES

A variety of different national licensing regimes can be identified across Member States: telecommunications operators<sup>2</sup> may have individual licences/authorisations or be subject to registration/notification procedures, or may effectively operate in the market without being subject to any individual licence or declaration procedure. Furthermore, depending on the national licensing regime, in order to provide a particular service, the operators may have to hold (and pay for) a number of different licences or may have to pay for a licence with a wider scope than they require (i.e. nation-wide), even if they do not make full use of it.

Table 1 shows the licensing regimes in the 15 Member States for the four main categories of fixed services. The first column indicates whether the national licence regime provides for geographical restriction on the licence (local or national). The rest of the table shows the type of licence (or licences) required for four types of telecommunications service (see above for the definitions): public fixed voice telephony (not including the installation of the network); operation of a public network and provision of network services (not including voice telephony); public voice telephony on a owned self-operated network (not including the provision of network services); public voice telephony and network services on a owned self-operated network.

In the Netherlands and Finland the licence regimes provide for a registration/notification system. In Sweden both individual licence and registration systems are applied<sup>3</sup>. The Danish licensing regime system does not even require a notification.

In Greece public voice telephony can be provided by way of both an individual licence and a general authorisation, but in the latter case operators are not allowed to use numbers<sup>4</sup>.

The rest of the countries apply a system of individual licences. In the United Kingdom and Ireland a single fixed telecommunications licence exists, whatever the types of public service provided (voice telephony and/or public network)<sup>5</sup>. In Austria a single licence for voice telephony services exists, whether or not the operators self-operate a owned or a leased network. Belgium, Germany, Portugal and Sweden provide only two types of fixed licences (voice telephony services and public network), while the other countries also provide a single licence which combines several categories of more limited individual licences (i.e. public voice telephony on a owned self-operated network; public voice telephony and network services on an own self-operated network)<sup>6</sup>.

---

<sup>2</sup> In the following, “operators” means both network operators and service providers; “authorised operators” means operators that have been granted an individual licence/authorisation or are subject to a declaration/notification procedure.

<sup>3</sup> According to the Swedish licensing regime, a notification is required for the provision (within a publicly available telecommunications network) of telecommunications services (fixed telephony, mobile services, leased lines, etc.) which require allocation of capacity from the telephony numbering plan. An individual licence is required for the provision of telecommunications services if the activity is considered to be of “considerable scope” with regard to the areas covered, the number of users or other comparable factors.

<sup>4</sup> Simple resellers do not need any licence or authorisation.

<sup>5</sup> In Ireland a separate licence for Public Network (basic licence) is also provided.

<sup>6</sup> But in any case the allocation of the two separate licences for voice telephony and for public networks gives the same right as the “combined” licence.

**Table 1. Licensing regime for public fixed services**

|            | Distinction between national and local licence/registration | Type of fixed telecommunications services   |   |   |  |
|------------|---|---|---|---|--|
|            |   | Public fixed voice telephony services (not including the installation of the network)                       | Operation of owned public network and provision of network services (not including voice telephony) | Public voice telephony over a owned self-operated network | Public voice telephony and network services over a owned self-operated network |
| <b>B</b>   | No  | VT  | NET   | VT + NET  |  |
| <b>DK</b>  | No  | General Class Licence for Public Telecommunication Networks and Services (operators apply only for numbers) |   |   |  |
| <b>D</b>   | Yes   | VT (class 4)  | NET (class 3)   | VT + NET (class 4 + class 3)                              |  |
| <b>EL</b>  | No  | VT  | NET   | VT and NS on NET <sup>7</sup>                             |  |
| <b>E</b>   | Yes   | VT (type A)   | NET (type C1)   | VT and NS on NET (type B1)                                |  |
| <b>F</b>   | Yes   | VT (L34-1)  | NET (L33-1)   | VT and NS on NET (L34-1 and L33-1)                        |  |
| <b>IRL</b> | No  | VT and NS on NET (General Licence)<br>(NET <sup>5</sup> (Basic Licence))                                    |   |   |  |
| <b>I</b>   | Yes   | VT  | NET   | VTonNET   | VT + NET<br>(or VTonNET+NET)   |
| <b>L</b>   | No  | VT (type C)   | NET (type B)  | VT and NS on NET (type A)                                 |  |
| <b>NL</b>  | No  | VT (registration)   | NET (registration)  | VT + NET (reg.)   |  |
| <b>A</b>   | No <sup>8</sup>   | VTonNET <sup>9</sup>  | NET   | VTonNET   | VTonNET + NET  |
| <b>P</b>   | No  | VT  | NET   | VT + NET  |  |
| <b>FIN</b> | Yes   | VT (registr.)   | NET (registr.)  |   |  |
| <b>S</b>   | No  | VT (lic./reg.)  | NET (lic./reg.)   | VT + NET (lic./reg.)                                      |  |
| <b>UK</b>  | Yes   | VT and NS on NET (PTO licence)  |   |   |  |

**Legend:**

VT (Voice Telephony): individual licence/registration for providing public fixed voice telephony (not including the installation of the network)

NET (Network): individual licence/registration/notification for operation of a public network and for the provision of network services (not including voice telephony services)

VTonNET (Voice Telephony on Network): individual licence/registration/notification for providing public voice telephony on a owned self-operated network (not including network services)

VTandNSonNET (Voice Telephony and Network Services on Network): individual licence/registration/notification for provision of public voice telephony and network services on a owned self-operated network

VT + NET; VTonNET + NET; VTandNSonNET + NET: both licences needed for provision of the services

<sup>7</sup> The Greek licensing regime provides for a list of 6 types of individual licence, among which those for public fixed networks and for public voice telephony. Moreover, at the request of the applicant, the NRA can issue a single licence which combines several categories of individual licence.

<sup>8</sup> The legal framework for the licensing regime in Austria does not distinguish between local and national coverage of licences, although operators can apply for a licence restricted in scope as to the network and/or the services provided.

<sup>9</sup> An individual licence is required for the provision of public voice telephony over a self-operated fixed telecommunication network. The network could either belong to the operators, or could be totally leased from a third-party network operator.

## 1.2. NUMBER OF FIXED TELECOMMUNICATIONS OPERATORS

This section shows the number of operators authorised to provide public fixed network services and public fixed voice telephony, as well as the number of operators effectively active in the market.

The figures include a great variety of operators: fixed network operators, service providers, cable modem access operators and operators with wireless local loop, mobile and satellite operators (for the fixed part of their networks and services).

Depending on the national licensing scheme, for some countries data for both local and national operators are given (see table 1). This does not mean that in the other countries all operators are national, but only that the licensing scheme does not require a licence limited as to its scope (in consequence all the operators have to pay for a national licence even if they are only local operators).

In the following charts, “national operator” means an operator that has been granted either a national licence/authorisation or a non-geographically limited licence under a licensing scheme which does not specify the geographic coverage.

The figure reflect the number of operators, rather than the number of licences. This is particularly true for the cable TV operators that operate their telecommunication licence through local licences granted to their local franchisees; in this case they have been considered as one single operator.

The number of local operators is not strictly comparable between Member States, since it varies considerably between countries depending on the division of the national territory into local areas.

Figures for Denmark may be incomplete due to the fact that there is neither a licensing requirement nor a central register of operators and their activities (operators only apply for numbers).

In Spain, the big increase from last year in the number of operators (46 local and 61 national in 2001) reflects the fact that many cable TV operators have transformed their provisional cable modem access concession into a B1 licence for provision of telecommunication services (voice telephony and network services) over a own network.

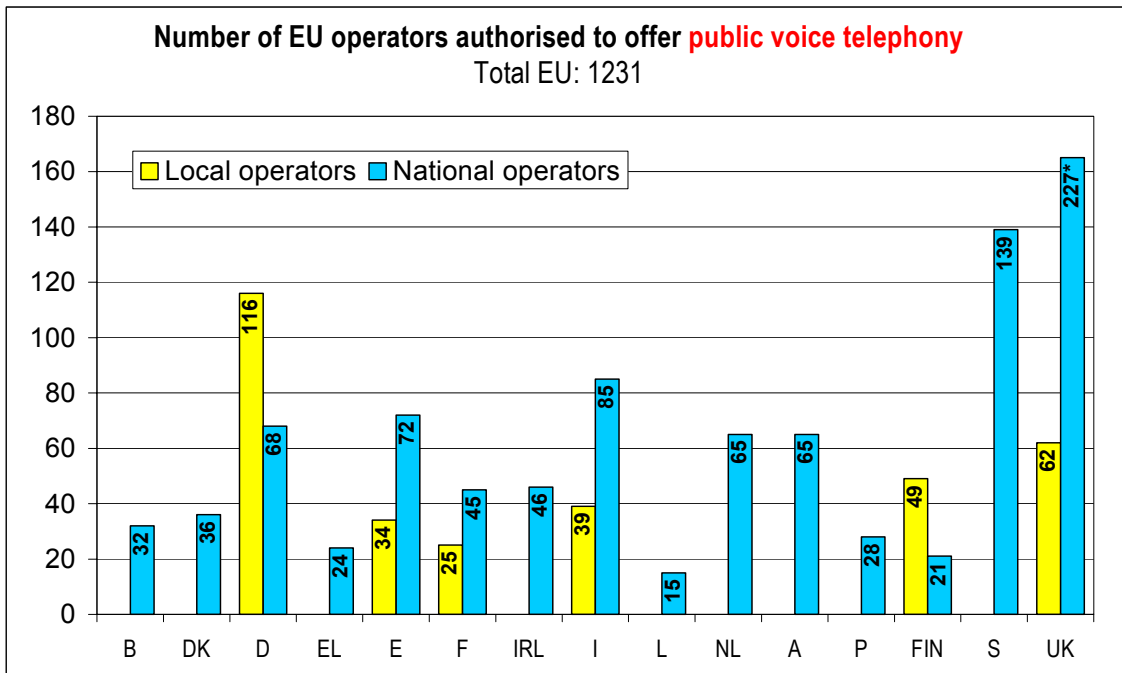
In Finland, 38 of the 48 regional operators are local incumbents and belong to the Finnet Group.

Data for Sweden include both licensed and notified operators.

In the United Kingdom, the 62 local cable franchise operators, owned by 2 companies, must hold (inter alia) a standard PTO licence for the provision of cable modem access services which, in turn, also gives the right to provide public voice telephony/network service. How many of these cable modem access operators are also providing public voice telephony/network services is unknown. From January 2001 the geographical restriction on cable companies ceased to exist and any cable licensee was free to operate outside the area laid down in its licence, but to maintain comparability with previous Reports we will continue to consider these operators as local. The big decrease in the number of local operators (cable modem access) for 2001 (134) and 2002 (62) is due to intensive merger activities in the market.

## PUBLIC VOICE TELEPHONY SERVICES

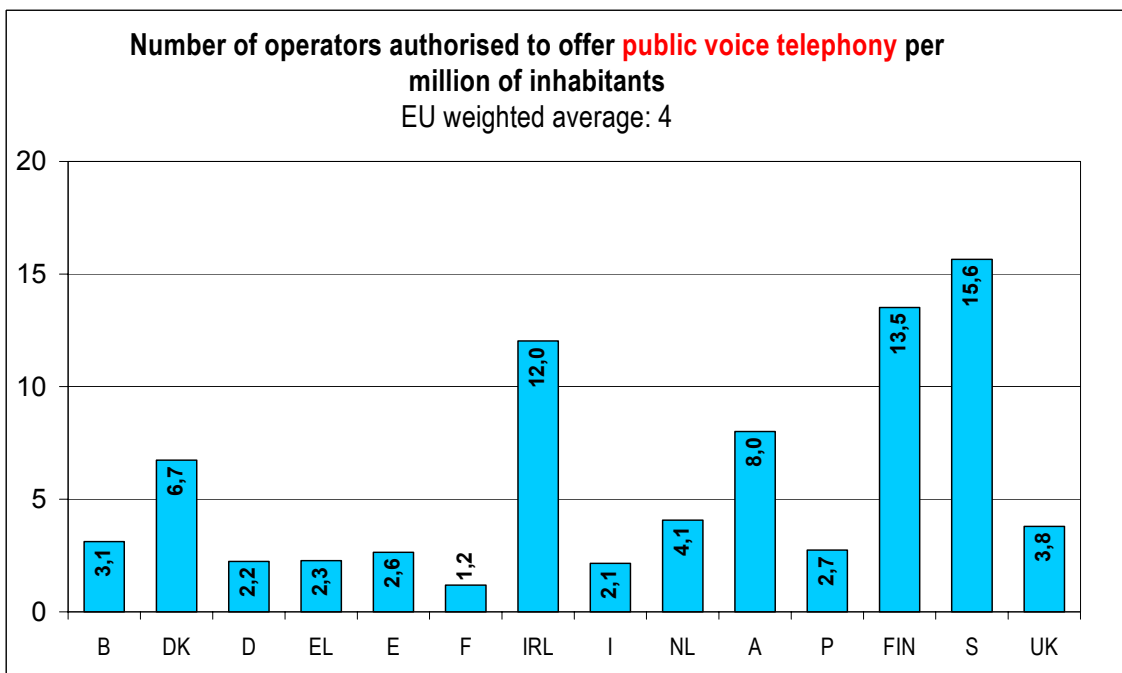
**Chart 1**



\* Figure not to scale

- Due to the registration system, the number of operators authorised to provide public voice telephony figures for Denmark has been estimated using the number of operators that have been allocated geographical numbers and/or access codes. The estimated overall number of operators has declined from 48 in 2001 to 36 in 2002 due to extensive merging and cornering in the Danish telecommunications market. Moreover, the total number of operators has diminished due to a couple of bankruptcies among smaller operators.

**Chart 2**

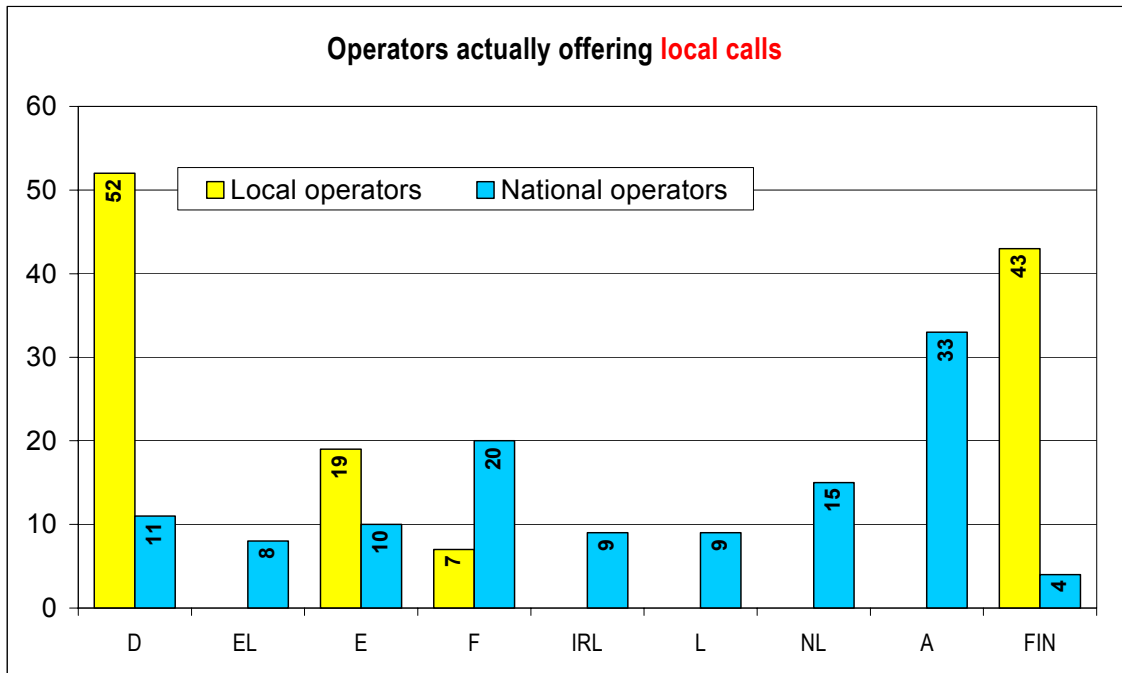


This indicator is not significant for Luxembourg, because of its peculiar characteristic in terms of low percentage of population in relation to the non-physical inhabitants.

The number of operators authorized to offer public fixed telecoms services indicates only the potential for competition in the market rather than the current level of competition. For this reason, where possible, an estimate is given of the number of operators actually active on the market. These figures do not show to what extent the operators are offering services. Many new entrants initially provide only services to business users in the main cities, even if they have a national license allowing them to offer all types of service throughout the country.

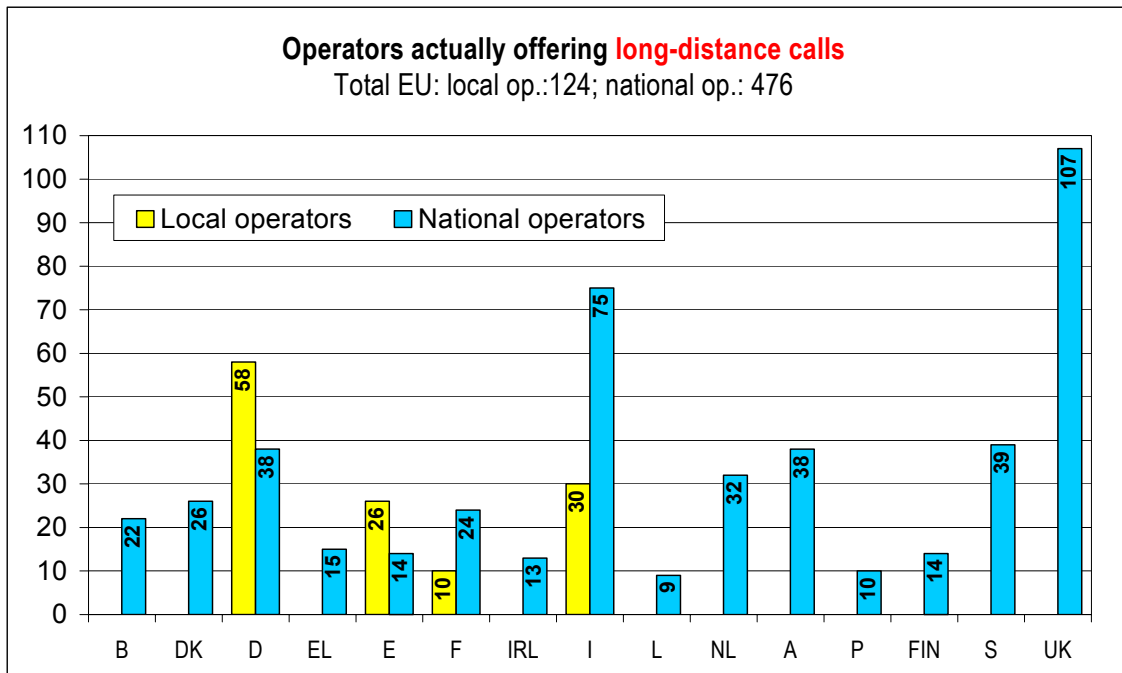
Figures in the following three charts should be read on a service by service bases (local, long-distance and international call markets) and not as country totals, since the same operator is usually authorized to offer more than one type of service.

**Chart 3**



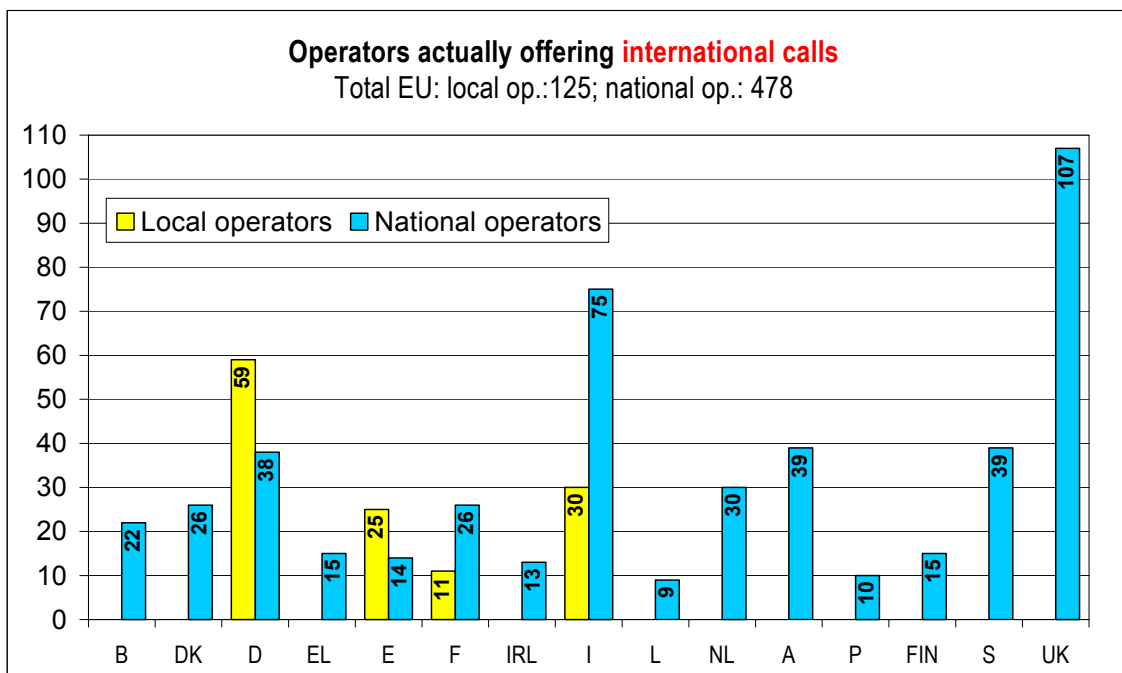
- Because of its small size, no distinction is made in Luxembourg between local and long-distance voice telephony services.
- B, DK, I, P, S and UK do not provide separate figure for the operators effectively providing local calls.

**Chart 4**



- Figure for Denmark should be considered as minimum.
- The figures for B, DK, I, P and S do not distinguish between the type of call provided (local, long-distance, international); the figure for the United Kingdom does not distinguish between local and national operators.

**Chart 5**



- Figure for Denmark should be considered as minimum.
- The figures for B, DK, I, P, S and the UK do not distinguish between the type of call provided (local, long-distance, international); the figure for the United Kingdom does not distinguish between local and national operators.

## PUBLIC NETWORK

The following charts show the number of network operators with a public network licence and/or authorised to offer network services (conveyance of calls, messages and signals over a telecommunications network, including any necessary switching).

The distinction between local and national public network operators concerns the geographical scope of the network, while the provision of network services could be subject to a different geographical limitation. In the following, “local operators” means operators whose network does not cover the whole national territory (whatever the geographical scope of the service).

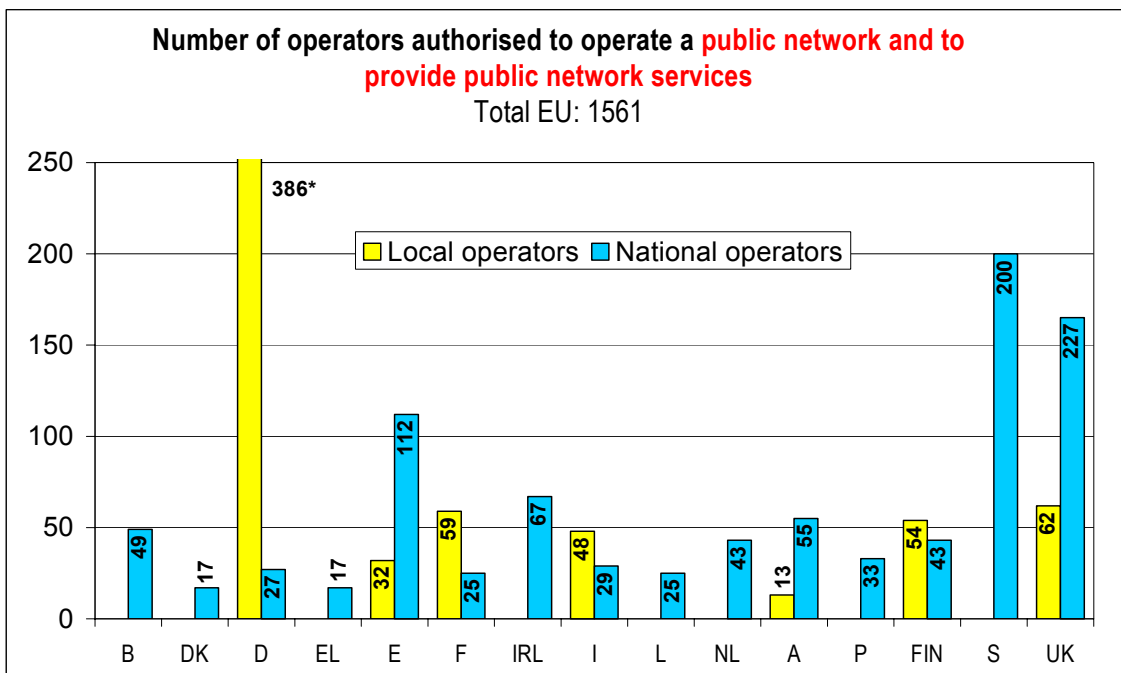
It should be noted that a licence to operate a local/regional public network does not necessarily imply the existence of local network access to customers (“the last mile”. See local loop access section for more details).

Figure for Spain does not include 75 local cable modem access operators, that have transformed their provisional cable modem access concession into a definitive public network licence.

Data for Ireland include both basic and general licences.

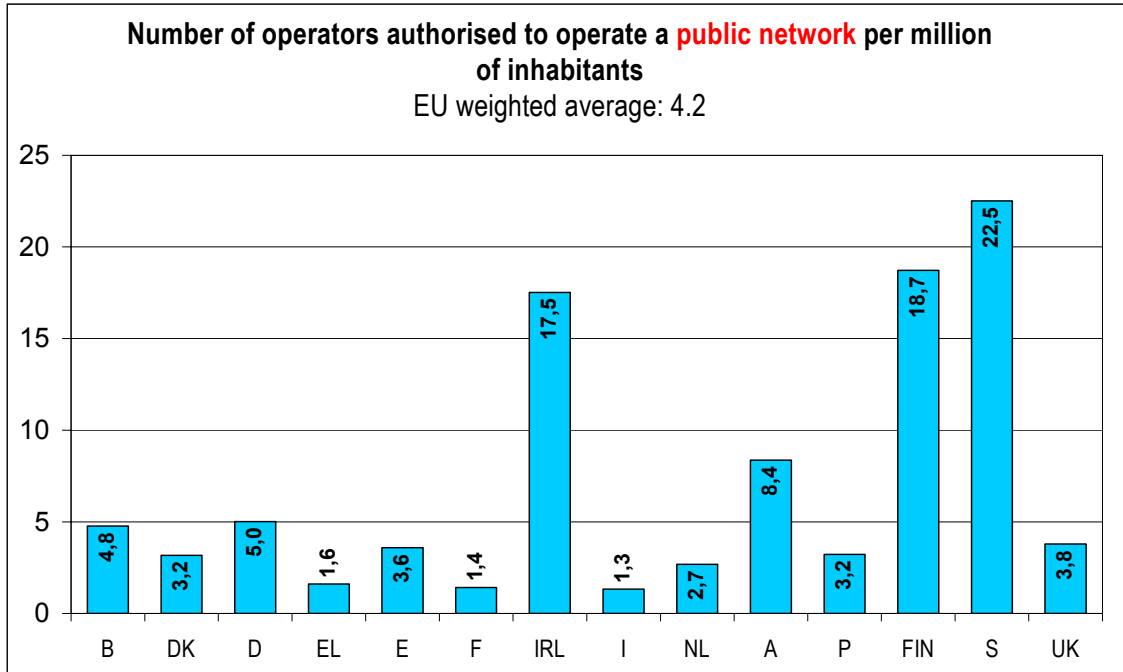
In the United Kingdom, the local operators refer to 62 local cable franchise operators, owned by 2 companies.

**Chart 6**



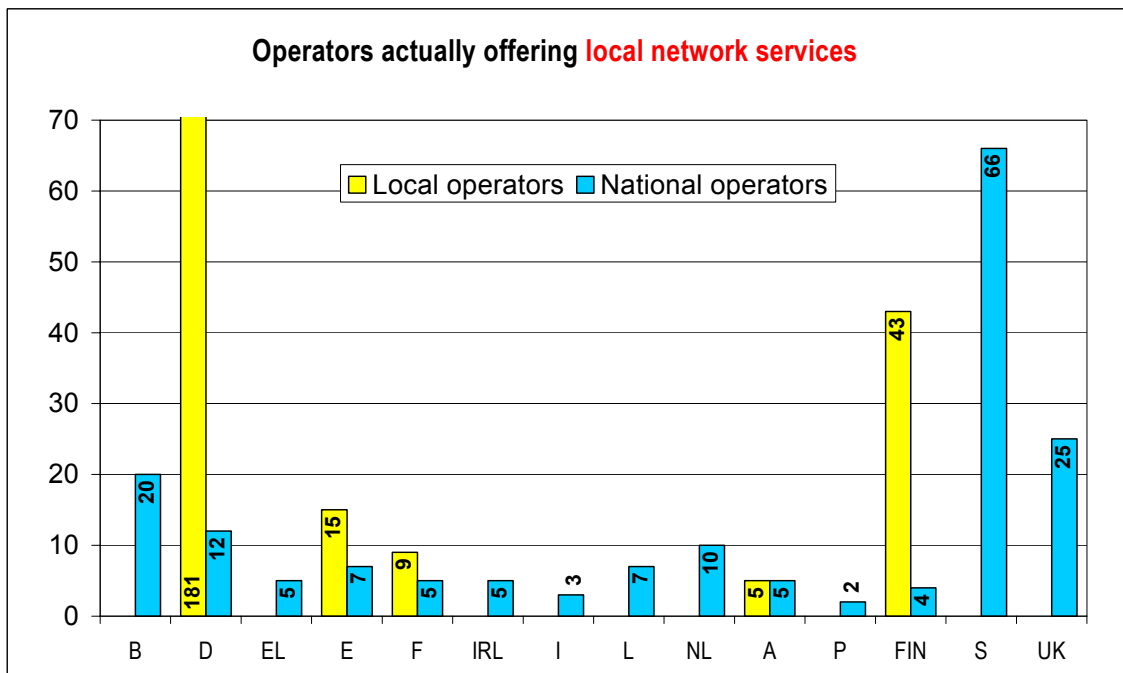
\* Figure not to scale.

**Chart 7**



This indicator is not significant for Luxembourg, because of its peculiar characteristic in terms of percentage of population in relation to non-physical inhabitants.

**Chart 8**

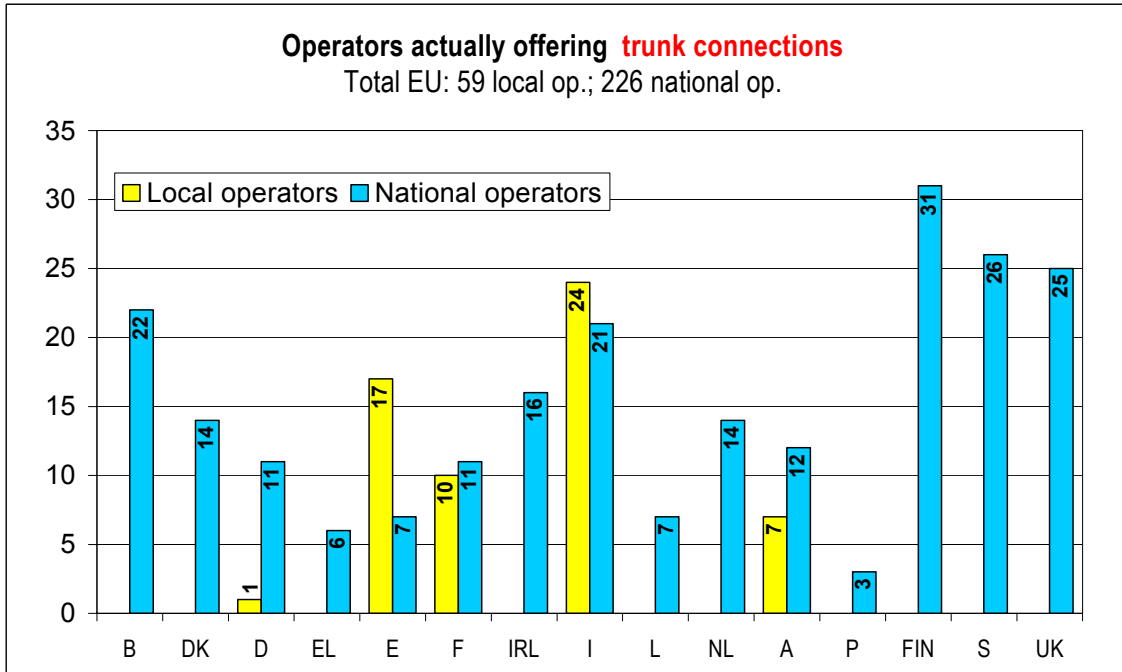


- Value for Germany not to scale.

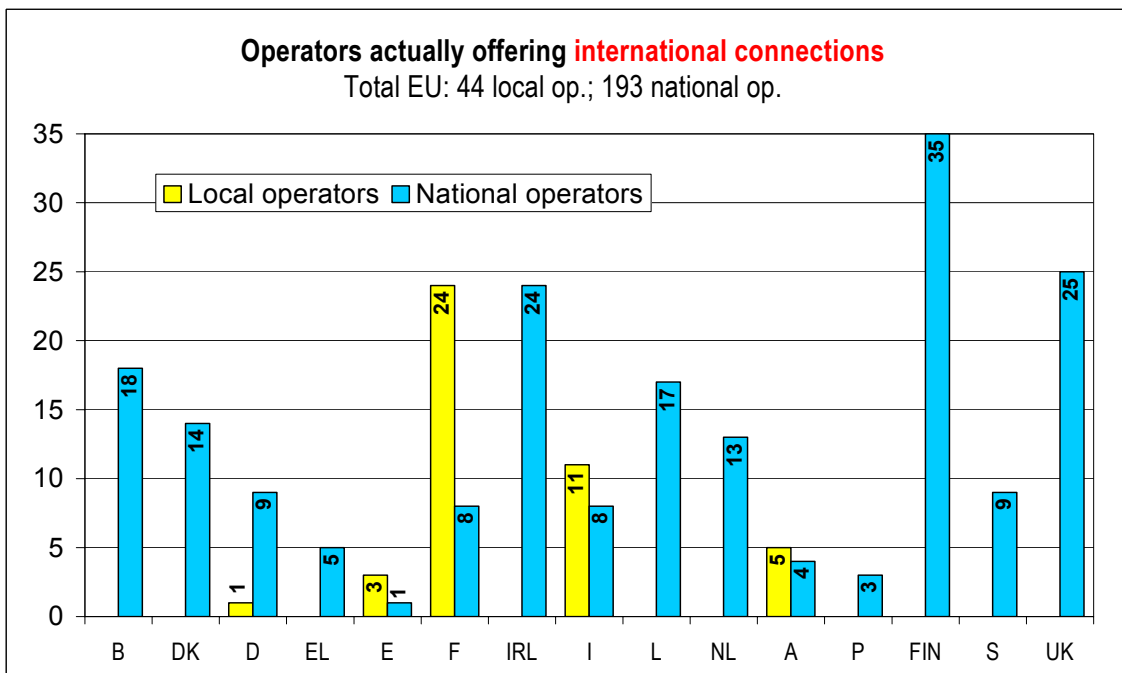
- Denmark does not provide separate figures for the operators effectively providing local network connections.



**Chart 9**



**Chart 10**

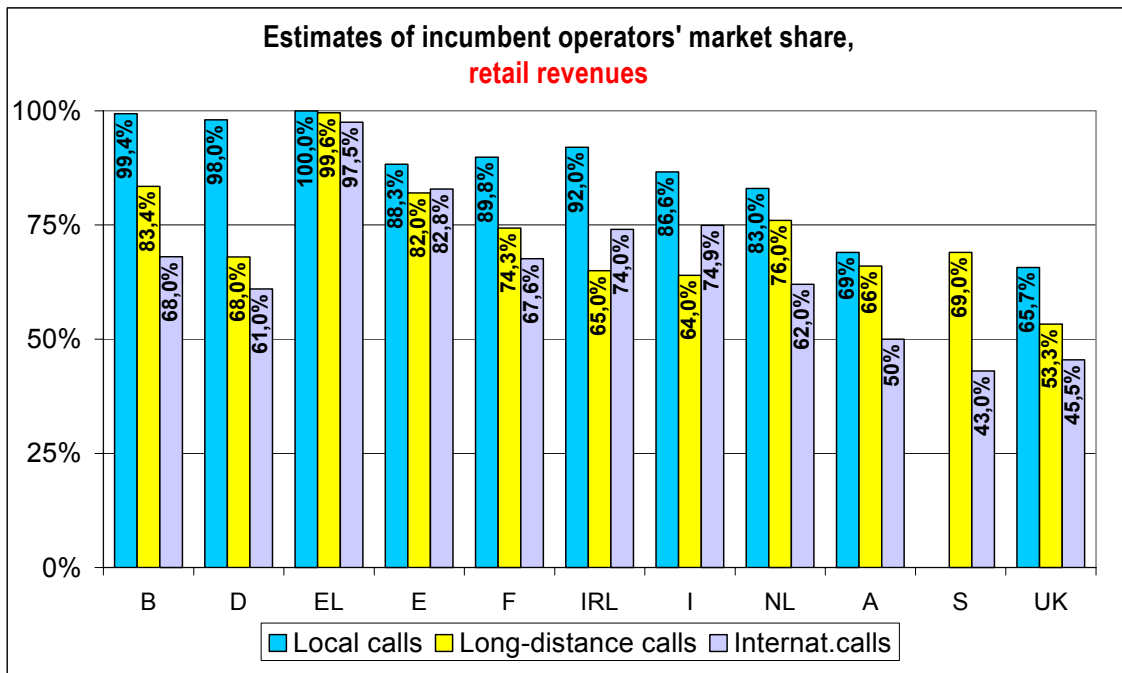


### 1.3. INCUMBENTS MARKET SHARE ON FIXED TELEPHONY MARKET

This section shows the incumbent's market share for telephony call market on the basis of retail revenues and outgoing traffic per minute. Unfortunately not all Member States collect both types of data, and differentiation between the various markets (local, long-distance, international) is not always available.

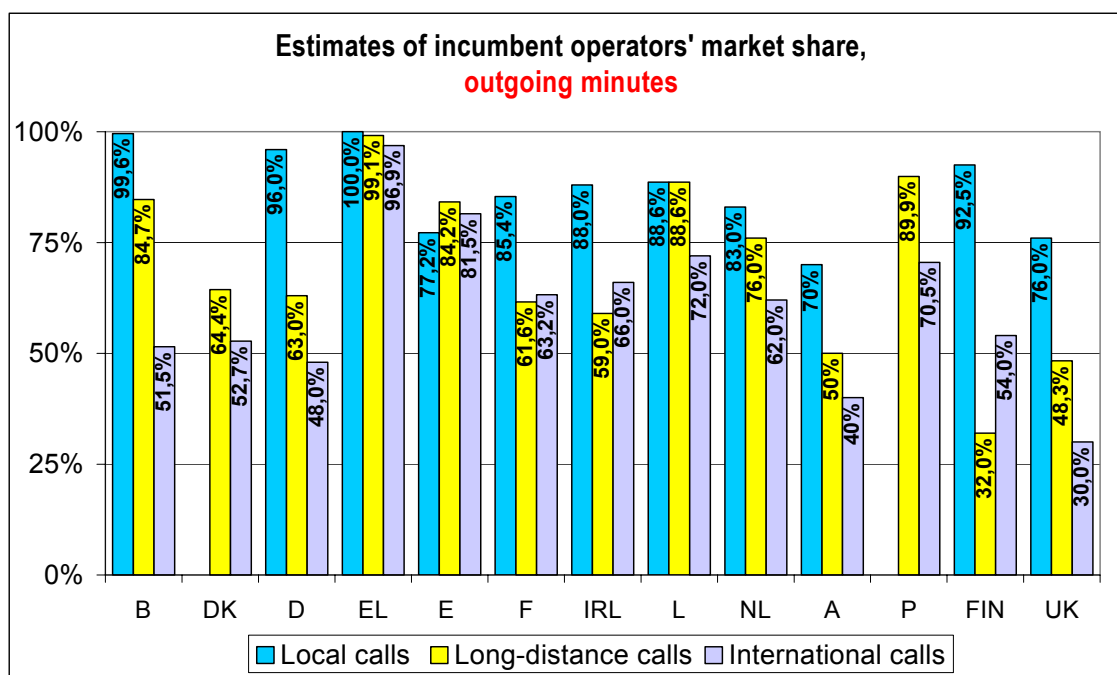
Figures have been provided by the national regulatory authorities and give the situation as for December 2001.

**Chart 11**



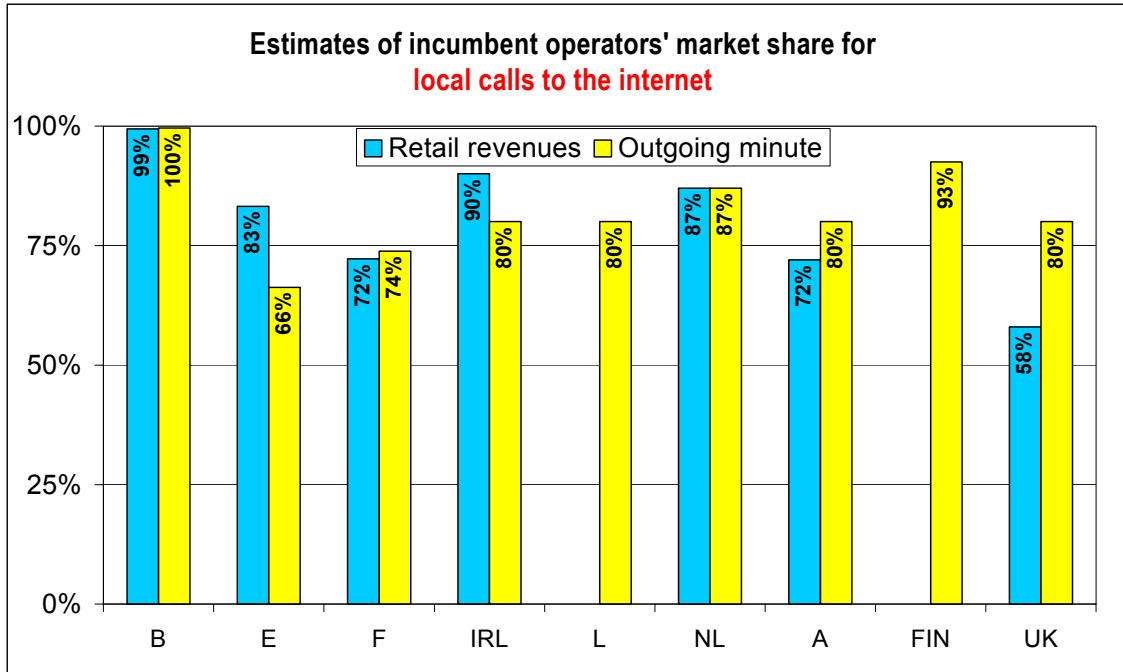
- Local call market include both phone calls and calls to internet.
- In Belgium, market share for local calls includes local calls to internet only; market share for long-distance calls refers to "national phone calls", including both local phone calls and long-distance calls.
- Data for Sweden for local calls market share is not available separately. Market share for long-distance calls refers to the total national calls", including local phone calls, calls to internet and long-distance calls.
- Data for DK, L, P, FIN are not available.

Chart 12

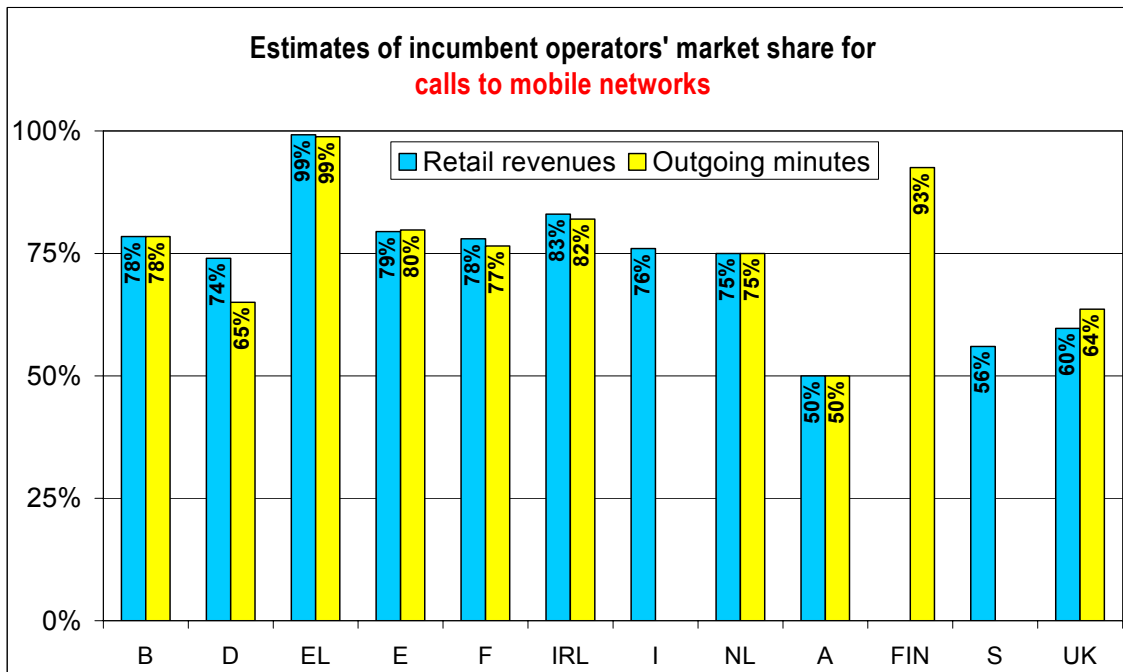


- Local call market include both phone calls and calls to internet.
- In Belgium, market share for local calls includes local calls to internet only; market share for long-distance calls refers to "national phone calls", including both local phone calls and long-distance calls.
- Market share for long-distance calls for Denmark and Portugal refer to the overall national calls", including local and long-distance phone calls, calls to internet and call to mobile.
- Because of its small size, no distinction is made in Luxembourg between the local and the long-distance call markets.
- Local calls market share for Finland refers to the combined share of the incumbents (Sonera, Elisa and Finnet). Market share for long-distance and international refers to Sonera only and do not include market share of Kakoverkko Ysi Oy and Finnet International Ab, that have been designated as SMP
- Local calls market share for DK, A and P are not available separately.

**Chart 13**



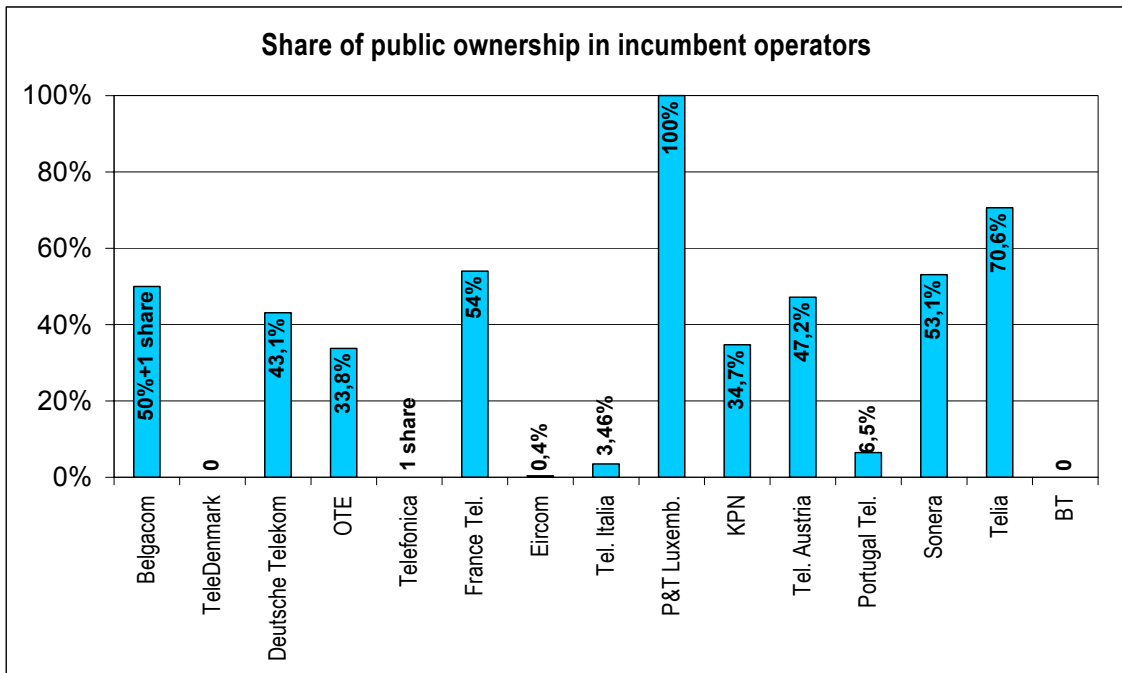
**Chart 14**



#### 1.4. SHARE OF PUBLIC OWNERSHIP IN INCUMBENT OPERATORS

In order to provide a complete overview of the players in the EU telecommunications market, the following chart shows the degree of public ownership of the incumbent operators on the fixed market. Spain, Italy, Portugal and the Netherlands have a golden share in the incumbent operators, that gives the State special rights on strategic decisions.

Chart 15



## **1.5. ADMINISTRATIVE AND NUMBERING FEES FOR THE PROVISION OF PUBLIC VOICE TELEPHONY AND PUBLIC NETWORK SERVICES**

This section provides data on Member States' administrative and numbering fees for public voice telephony and public network services licences. The data have been provided by the national regulatory authorities and give the position as at August 2002.

**Administrative fees** (table 2) are fees charged to cover the costs of examining an application for a licence, granting the relevant authorisation and verifying compliance with the terms and conditions set once the service or network is operational.

The categorisation of administrative fees is closely linked to the general licensing framework applicable in the individual countries. The categories of administrative fees will depend on whether market entry is subject to an individual licence or a notification under a general authorisation scheme (see table 1 for more details).

**Numbering fees** (table 3) are fees applied by many Member States which reflect the relative scarcity of numbering resources.

Table 3 sets out for each Member State the different kinds of fees charged for the following categories of numbers needed by each operator to provide public voice telephony services:

- standard telephone numbers (ITU-T Recommendation E.164) (for subscribers directly connected to the operator),
- carrier selection codes (to select the operator)
- signalling point codes<sup>10</sup> (for interconnection with other networks at national (NSPC) and international (ISPC) level).

Ireland, Austria, Sweden, Portugal and the United Kingdom do not charge for such numbers, although often the right to use numbers is implicitly included in the licensing fees.

---

<sup>10</sup> Signalling Point Codes (SPCs) are used in public telephone networks using CCITT Signalling System No 7 (SS7). SPCs are the addresses of the signalling points. Two types of SPC are usually individually assigned to network operators: International SPCs and National SPCs. ISPCs are used in international transit networks, e.g. to address networks which connect the various networks in a specific country or to identify the national gateways of the various networks.

**1.5.1. ADMINISTRATIVE AND NUMBERING FEES FOR FIXED VOICE TELEPHONY**

**Table 2 Administrative fees (August 2002, €)**

|   | Public voice telephony over a leased network (service providers) |   | Operation of public fixed network and provision of network services over a own network (not including voice services) |   | Public voice telephony over a own self-operated network (not including network services) |  | Public voice telephony and network services over a own self-operated network |  |
|---|--|---|---|---|--|--|--|--|
|   | Single payment   | Annual fee  | Single payment  | Annual fee  | Single payment   | Annual fee   | Single payment   | Annual fee   |
| <b>B</b>  | Ind. Licence for VT  |   | Ind. Licence for NET  |   | Individual licence for VT + individual licence for NET                                   |  |  |  |
|   | 9 340  | 8 000<br>if SMP: 13 330                                     | 13 327  | 9 329<br>if SMP: 18 658                                     | 22 667   | 17 329<br>if SMP: 31 988   | 22 667   | 17 329<br>if SMP: 31 988   |
| <b>DK</b>   | 0  | 0   | 0   | 0   | 0  | 0  | 0  | 0  |
| <b>D</b>  | Ind. Licence for VT (class 3)                                    |   | Ind. Licence for NET (class 4)  |   | Individual licence for VT + individual licence for NET                                   |  |  |  |
| The regulation on licence fees is currently being reviewed by the government <sup>1</sup> |  |   |   |   |  |  |  |  |
| <b>EL</b>   | Ind. Licence for VT  |   | Ind. Licence for NET  |   | Individual licence for VT + individual licence for NET                                   |  | Individual licence for VT and NS on NET <sup>ii</sup>                        |  |
|   | 0  | % of turnover (from 0.5% to 0.025%; <sup>iii</sup> min 600) | 0   | % of turnover (from 0.5% to 0.025%; <sup>iii</sup> min 600) | 0  | % of relevant turnover (from 0.5% to 0.025%; <sup>iii</sup> min 600) | 0  | % of relevant turnover (from 0.5% to 0.025%; <sup>iii</sup> min 600) |
| <b>E<sup>iv</sup></b>   | Ind. licence for VT (type A)                                     |   | Ind. licence for NET (type C1)  |   | Ind. licence for VT and NS on NET (type B1)  |  |  |  |
|   | 0  | 0.15% of relevant turnover                                  | 0   | 0.15% of relevant turnover                                  | 0  | 0.15% of relevant turnover   | 0  | 0.15% of relevant turnover   |
| <b>F</b>  | Ind. licence for VT (L34-1)                                      |   | Ind. licence for NET (L33-1)  |   | Ind. licence for VT and NS on NET (L34-1 and L33-1)                                      |  |  |  |
|   | > 5 regions  | 38 112  | 15 224  | 133 392   | 266 785  | 304 897  | 304 897  | 152 449  |
|   | ≤ 5 regions  | 38 112  | 15 224  | 38 112  | 76 224   | 114 386  | 114 386  | 57 168   |
|   | ≤ 1 region   | 38 112  | 15 224  | 15 244  | 38 112   | 76 224   | 76 224   | 38 112   |
| ≤ 1 department  | 38 112   | 15 224  | 15 244  | 7 622   | 53356  | 53356  | 53356  | 26 678   |
| ≤ 1 city of 100 000 inhabitants   | 38 112   | 15 224  | 7 622   | 3 811   | 45 734   | 45 734   | 45 734   | 22 867   |
| <b>If SMP</b>   | Not relevant   | Not relevant  | Double fees   | Double fees   | Double fees  | Double fees  | Double fees  | Double fees  |

**Table 2 Administrative fees (cont'd)**

|                   | Public voice telephony over a leased network (service providers) |   | Operation of public fixed network and provision of network services over a own network (not including voice services) |   | Public voice telephony over a own self-operated network (not including network services) |   | Public voice telephony and network services over a own self-operated network |   |
|-------------------|--|---|---|---|--|---|--|---|
|                   | Single payment   | Annual fee  | Single payment  | Annual fee  | Single payment   | Annual fee  | Single payment   | Annual fee  |
| IRL               | 12 500   | 1 015 or 0.2% of turnover > 635 000               | 12 500<br>(3 175 if basic licence) <sup>vi</sup>  | 1 015 or 0.2% of turnover > 635 000               | 12 500   | 1 015 or 0.2% of turnover > 635 000               | 12 500   | 1 015 or 0.2% of turnover > 635 000               |
|                   | Ind. licence for VT  |   | Ind. licence for NET  |   | Ind. licence for VTonNET   |   | Ind. lic. for VT + ind. lic. for NET<br>Or Ind. lic. VTonNET + ind. lic. NET |   |
|                   | 54 598   | 65 519  | 65 519  | 109 198   | 60 058   | 65 519  | 120 117 <sup>vii</sup><br>(125 577) <sup>ix</sup>                            | 174 716   |
| ≤ 10 million inh. | 21 840   | 27 300  | 21 840  | 54 598  | 27 300   | 27 300  | 43 679 <sup>viii</sup><br>(49 139) <sup>ix</sup>                             | 81 893  |
| ≤ 200 000 inh.    | 10 919   | 10 919  | 10 919  | 27 300  | 16 379   | 10 919  | 21 840 <sup>viii</sup><br>(27 300) <sup>ix</sup>                             | 38 219  |
| L                 | Ind licence for VT (type C)                                      |   | Ind. licence for NET (type B)   |   | Ind. licence for VT and NS on NET (type A)   |   |  |   |
|                   | 620  | 37 184 plus % of turnover (min. 0.15% max. 0.30%) | 6 197   | 12 394 plus % of turnover (min. 0.10% max. 0.25%) | 7 436  | 49 578 plus % of turnover (min. 0.20% max. 0.35%) | 7 436  | 49 578 plus % of turnover (min. 0.20% max. 0.35%) |
| NL                | Registration for VT  |   | Registration for NET  |   | Registration for VT + Reg. for NET   |   |  |   |
|                   | 363  | 1 985 if SMP: 1 933 205                           | 363   | 4 590   | 363  | 4 590 if SMP: 2 173 775                           | 363  | 4 590 if SMP: 2 173 775                           |
| A <sup>x</sup>    | Ind. Licence for VTonNET <sup>xi</sup>                           |   | Ind. Licence for NET  |   | Ind. Licence for VTonNET   |   | Ind. lic. VTonNET + ind. lic. NET  |   |
|                   | 0  | 0   | 5 087   | 0.14% of turnover                                 | 5 087  | 0.14% of turnover                                 | 10 174   | 0.14% of turnover                                 |
| P                 | Individual licence for VT  |   | Ind. Licence for NET  |   | Individual licence for VT + individual licence for NET                                   |   |  |   |
|                   | 9 976  | 9 976   | 9 976   | 9 976   | 19 952   | 19 952  | 19 952   | 19 952  |



**Table 2 Administrative fees (cont'd)**

|   | Public voice telephony over a leased network (service providers) |  | Operation of public fixed network and provision of network services over a own network (not including voice services) |  | Public voice telephony over a own self-operated network (not including network services) |   | Public voice telephony and network services over a own self-operated network |  |
|---|--|--|---|--|--|---|--|--|
|   | Single payment   | Annual fee   | Single payment  | Annual fee   | Single payment   | Annual fee  | Single payment   | Annual fee   |
|   | Registration for VT  |  | Registration for NET  |  | Registration for VT + Reg. for NET   |   | Registration for VT + Reg. for NET   |  |
| <b>FIN</b>                              | 0  | 0  | 0   | 0  | 0  | 0   | 0  | 0  |
| <b>S</b><br>Notification <sup>xii</sup> | Individual lic./reg. for VT                                      |  | Individual lic./reg. for NET  |  | Individual lic./reg. for VT + Individual lic./reg. for NET                               |   |  |  |
|   | 0  | - 115 for turnover <573 160<br>- 4 012 for turnover >573 160   | 0   | - 115 for turnover <573 160<br>- 4 012 for turnover > 573 160  | 0  | - 115 for turnover < 573 160<br>- 4 012 for turnover >573 160   | 0  | - 106 for turnover <317 511 for each relevant activity<br>- 2 646 for turnover >317 511 for each relevant activity   |
| Licence                                 | 11 463   | - 1,57 % of turnover (min. 5 732/area of licence)<br>- SMP operator: extra 0.5% of voice telephony turnover (max 11 463 190)           | 11 463  | - 1.57 of turnover (min. 5 732)  | 11 463   | - 1,57 % of turnover (min. 5 732/area of licence)<br>- SMP operator: extra 0.5% of voice telephony turnover (max 11 463 190 )                     | 22 928   | - 1,57% of turnover (min. 100 000 SEK) for each relevant activity (min. 10 584)<br>- SMP operator: extra 0.5% of voice telephony turnover (max 11 463 190) |
| <b>UK</b>                               | Individual licence for VT and NS on NET (PTO licence)            |  | Individual licence for VT and NS on NET (PTO licence)   |  | Individual licence for VT and NS on NET (PTO licence)                                    |   |  |  |
|   | 59 975   | new entrants: 4 498 for the first two years, then 4 498 if turn. < 7 496 768<br>- % of turnover to a max 0.08% if turnover > 7 496 768 | 59 975  | new entrants: 4 498 for the first two years, then 4 498 if turn. < 7 496 768<br>- % of turnover to a max 0.08% if turnover > 7 496 768 | 59 975   | new entrants: 4 498 for the first two years, then 4 498 if turn. < 7 496 768<br>- calculated % of turnover to a max 0.08% if turnover > 7 496 768 | 59 975   | new entrants: 4 498 for the first two years, then 4 498 if turn. < 7 496 768<br>- calculated % of turnover to a max 0.08% if turnover > 7 496 768          |

**Legend:**

VT (Voice Telephony): individual licence/registration for providing public fixed voice telephony (not including the installation of the network)

NET (Network): individual licence/registration/notification for operation of a public network and for the provision of network services (not including voice telephony)

VTonNET (Voice Telephony on Network): individual licence/registration/notification for providing public voice telephony on a owned self-operated network (not including network services)

VTandNSonNET (Voice Telephony and Network Services on Network): individual licence/registration/ notification for provision of public voice telephony and network services on a owned self-operated network

VT + NET, VTonNET + NET, VTandNSonNET + NET: both licences needed for provision of the services

- <sup>i</sup> In its judgement of 19 September 2001, the Highest Administrative Court (the Bundesverwaltungsgericht, BVerwG) annulled the regulation on licence fees on the basis that it does not reflect the principle that licence fees should only cover administrative costs. The regulation on licence fees is currently being reviewed by the government. Pending the previous proceedings in national courts, operators have been charged licence fees and have been granted suspension of the payment at their request. Since the judgement of the BVerwG, licence fees are not charged and licences are issued under the provision that licence fees will be fixed on the basis of the forthcoming regulation.
- <sup>ii</sup> The Greek licensing regime provides for a list of 6 types of individual licence, among which those for public fixed networks and for public voice telephony. Moreover, at the request of the applicant, the NRA can issue a single licence which combines several categories of individual licence.
- <sup>iii</sup> The fees are determined based on an interval function with respect of the turnover of the relevant activities, with a minimum of 600 Euro: 0.5% of turnover for the first 300 million euro, 0.2% for turnover between 300 and 600 million euro, 0.15% for turnover between 600 and 900 million euro, 0.1% for turnover between 900 and 1 200 Meuro, 0.05% for turnover between 1 200 and 1 500 million euro, 0.025% for turnover over 1 500 million euro.
- <sup>iv</sup> According to the General Telecommunications Act, the exact amount of the annual fees (percentage value) will be fixed every year by Parliament, taking into account the need to cover the administrative costs of the licensing management and controls system. The annual fees cannot be higher than 2%. For 2001 the value set is 0.15%.
- <sup>v</sup> In Ireland a separate licence for Public Network (basic licence) is also provided.
- <sup>vi</sup> Holder of a general licence are permitted to operate a public network and provide voice telephony and network services. A basic licence is sufficient to operate a public network and provide network services.
- <sup>vii</sup> Current fees are obtained adjusting original values provided by Ministerial Decree 05.02.1998 on the basis of inflation foreseen in the *Documento per la programmazione economica e finanziaria* on a year by year basis.
- <sup>viii</sup> Corresponding to the combination of licences for provision of voice telephony and for provision of public network services.
- <sup>ix</sup> Corresponding to the combination of licences for provision of voice telephony on a self-operated network and for provision of public network services.
- <sup>x</sup> For all types of operator, an annual fee (depending on turnover and market share) is payable to contribute to the overall costs of the regulator. The annual percentage varies between 0.1% and 0.2% of turnover (in 1999 it was 0.12%, in 2000 it was 0.1%). The value for the year 2001 will be communicated in the second half of 2002.
- <sup>xi</sup> An individual licence is required for the provision of public voice telephony over a self-operated fixed telecommunication network. The network could either belong to the operators, or could be totally leased from third-party network operator.
- <sup>xii</sup> A licence is required if an operator's activity is considered "significant" regarding the area of distribution, the number of users and similar factors. These operators typically have a market share of 10-15% (never less than 5%).

**Table 3**      **Numbering fees (€)**

(S = one-off fee; A = annual fee; where relevant: **S(r)/A(r)** = one-off/annual fee in case of allocation of a number that had been reserved before)

|   | <b>B</b>  | <b>DK</b> <sup>11</sup>                          | <b>D</b>  | <b>EL</b>  | <b>E</b>   | <b>FIN</b>  | <b>F</b>  | <b>I</b>  | <b>L</b>  | <b>NL</b>  |
|---|---|--|---|--|--|---|---|---|---|--|
| <b>Standard telephone numbers (E.164)</b>                                       | per block of 10 000 numbers<br>S: 400<br>A: 134 | per number (8-digit numbers)<br>A: 0.2571        | per block of 1 000 10-digit numbers<br>S: 500.00<br><br>per block of 1 000 11-digit numbers<br>S: 50.00 | per number:<br>S: 0.03<br>A: 0.025<br><br><b>reservation:</b><br>A: 0.0125 | per number<br>A: 0.03  | per number<br>A: 0.34   | per number reservation<br>A: 0.02<br>A: <b>0.01</b>   | per number reservation<br>A: 0.0109296<br>A: 0.0054648  | per number part of a block of 10 000 numbers<br>S: 0.12<br>A: 0.12<br><br>per number in amount < a block:<br>S 61 97 + n*0.24<br>A: 61 97 + *0.24 | per block of 1000 numbers.<br><b>reservation</b><br>S: 13.60 61<br>A: 1.60<br><b>allocation</b><br>S: 13.60<br>A: 9.75 |
| <b>Carrier selection code</b>   | 4 digits<br>S: 1 333<br>A: 13 327               | 4 digits<br>A: 2 570.97<br>5 digits<br>A: 257.10 | 4 digits<br>S: 500.00   | 4digit:<br>S: 15 000<br>A: 15 000<br><br>5digit:<br>S: 1 500<br>A: 1 500   | per number<br>A: 0.03 x a factor indicating the number of 9-digit numbers occupied in the numbering plan | <b>International</b><br>A: 3 digits 90 000<br>A: 4 digits 18 000<br>A: 5 digits 3 600<br><b>Long distance</b><br>A: 3 digits 45 000<br>A: 4 digits 9 000<br>A: 5 digits 1 800 | <b>reservation</b><br>A: 4 digits 54 598<br>A:5 digits 27 300<br><br><b>allocation</b><br>A: 4 digits 109 198<br>A: 5 digits 54 598 | <b>reservation</b><br>A: 4 digits 54 598<br>A:5 digits 27 300<br><br><b>allocation</b><br>A: 4 digits 109 198<br>A: 5 digits 54 598 | S: 1 239<br>A: 1 239  | <b>reservation</b><br>S 450<br>A: 112.5<br><b>allocation</b><br>S: 450<br>A: 225                                       |
| <b>International Signalling Point Codes</b> (for international interconnection) | S: 400<br>A: 13 327                             | A: 25 709.71                                     | S: 375  |  |  | A: 1680   |   |   | S: 991<br>A: 495  | <b>reservation</b><br>S: 450<br>A: 112.5<br><b>allocation</b><br>S: 450<br>A: 225                                      |
| <b>National Signalling Point Codes</b> (for national interconnection)           | S: 400<br>A: 0                                  |  | S: 187.50   |  |  | A: 0.7  |   |   | S: 991<br>A: 495  | per block of 8 numbers<br><b>reservation</b><br>S: 450<br>A: 112.5<br><b>allocation</b><br>S: 450<br>A: 225            |

<sup>11</sup> Changes in numbering fees in DK are due to a change in the exchange rate to Euro.

## 2 CONSUMER'S CHOICE OF FIXED OPERATORS

This section analyses the fixed voice telephony market from the point of view of the consumers.

The following indicators have been considered: the percentage of subscribers with choice of operators and the percentage of subscribers actually using a provider other than the incumbent. The facilities used by the operators to provide public voice telephony services have also been included.

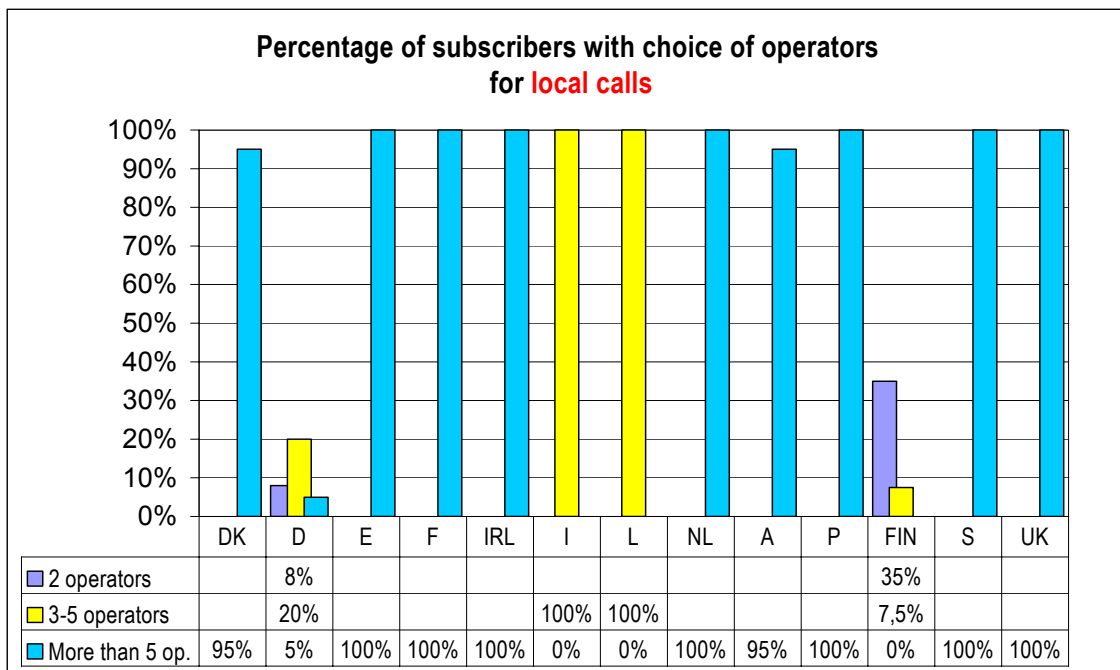
The data presented below has been provided by the national regulatory authorities and, unless otherwise indicated, reports the position at August 2002. Figures for countries not included in the charts are not available.

Figures are not comparable with those published in the 7<sup>th</sup> Implementation Report, since they are now based on the percentage of subscribers rather than population.

### 2.1. PERCENTAGE OF SUBSCRIBERS WITH CHOICE OF OPERATORS FOR FIXED CALLS

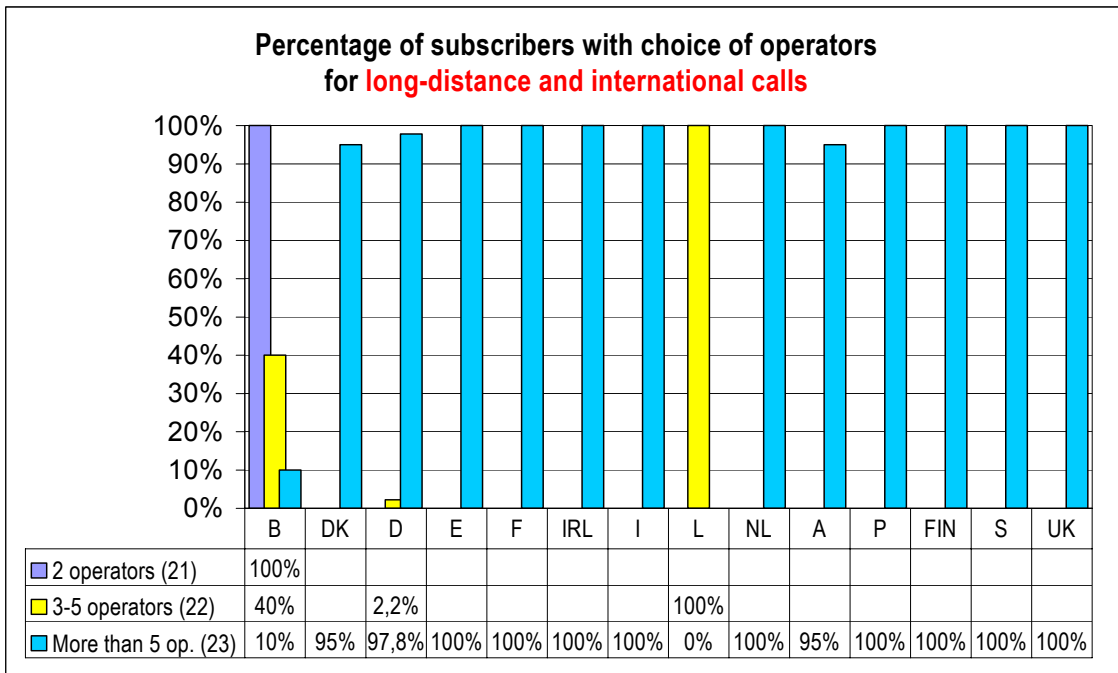
The following charts show the percentage of subscribers with choice of operators for local, long-distance and international calls and for direct access. The choice could be between only 2 operators, between 3 to 5 operators or more than five operators.

**Chart 16**



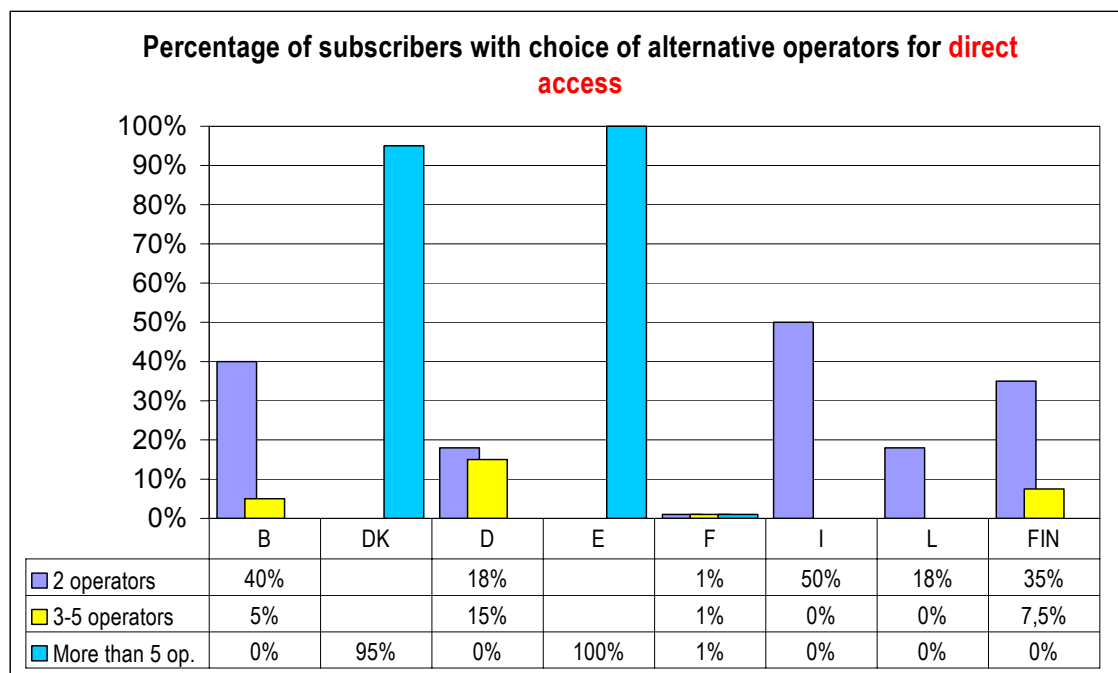
- Data for Belgium and Greece are not available.
- Figure for Denmark should be considered as minimum.
- Figure for France refer to end of March 2002.
- Data for Italy for "more than 5 operators" are not available.

**Chart 17**



- Figure for Denmark should be considered as minimum.
- Figure for Greece is not available.
- Figure for France refer to end of March 2002

**Chart 18**

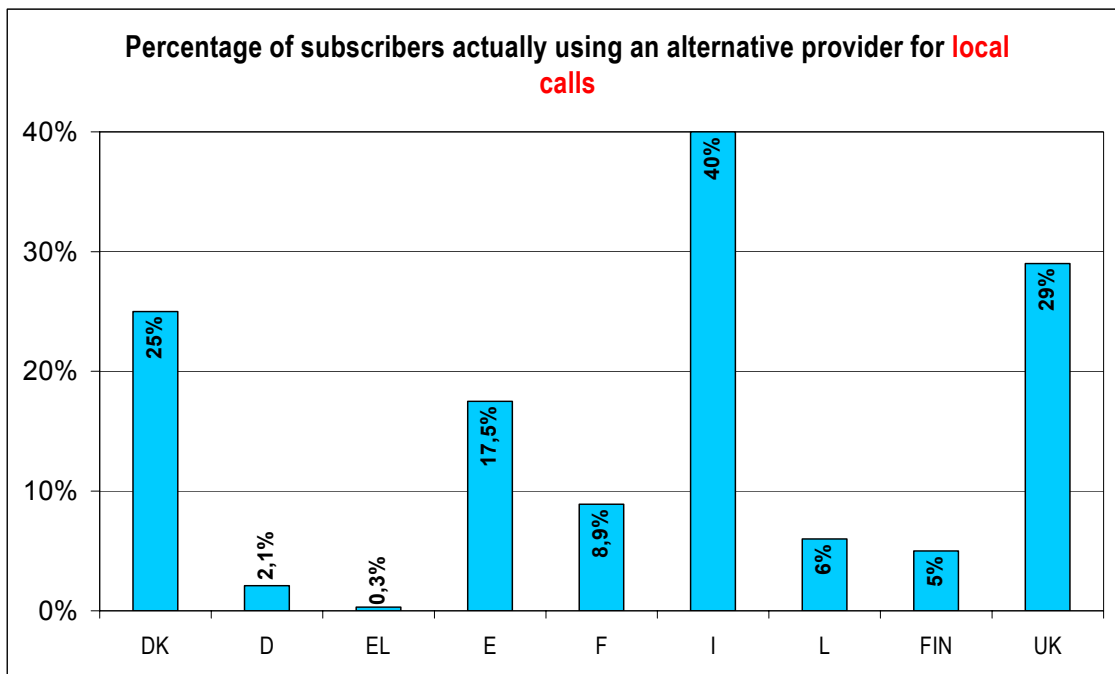


- Figure for Denmark, should be read as minimum.
- Figure for France should be read as maximum and refer to end March 2002.

## 2.2. PERCENTAGE OF SUBSCRIBERS ACTUALLY USING AN ALTERNATIVE PROVIDER OTHER THAN THE INCUMBENT

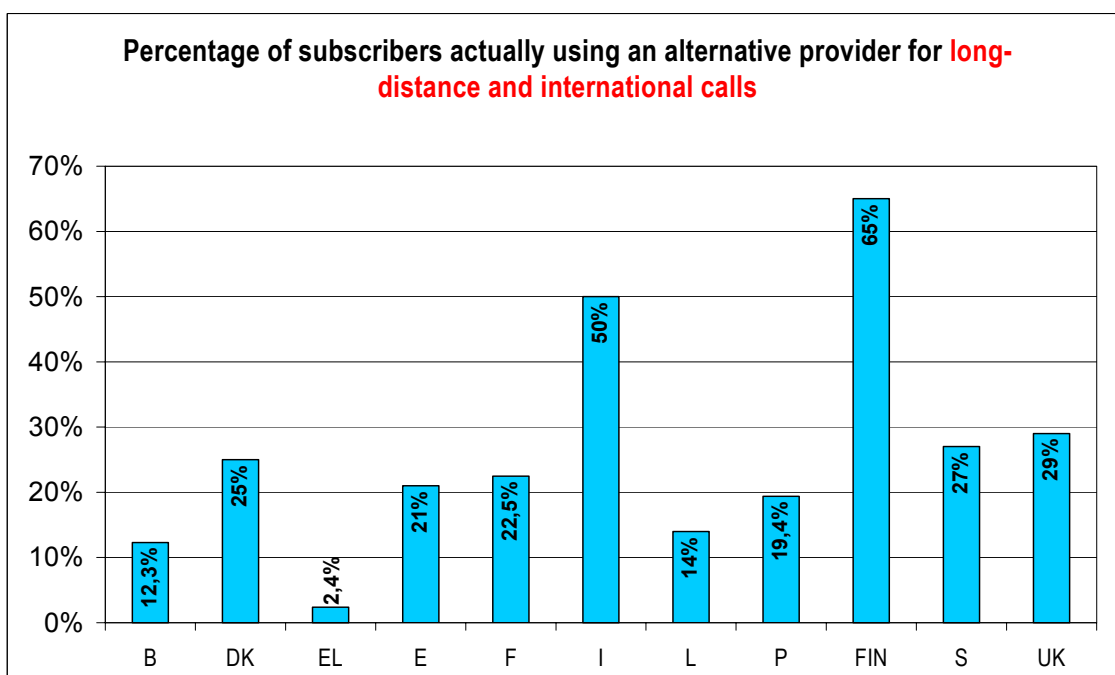
Unlike the previous indicators, that show the theoretic possibility of choice for the consumers, the following charts show the percentage of subscribers actually using an alternative provider for voice services.

**Chart 19**



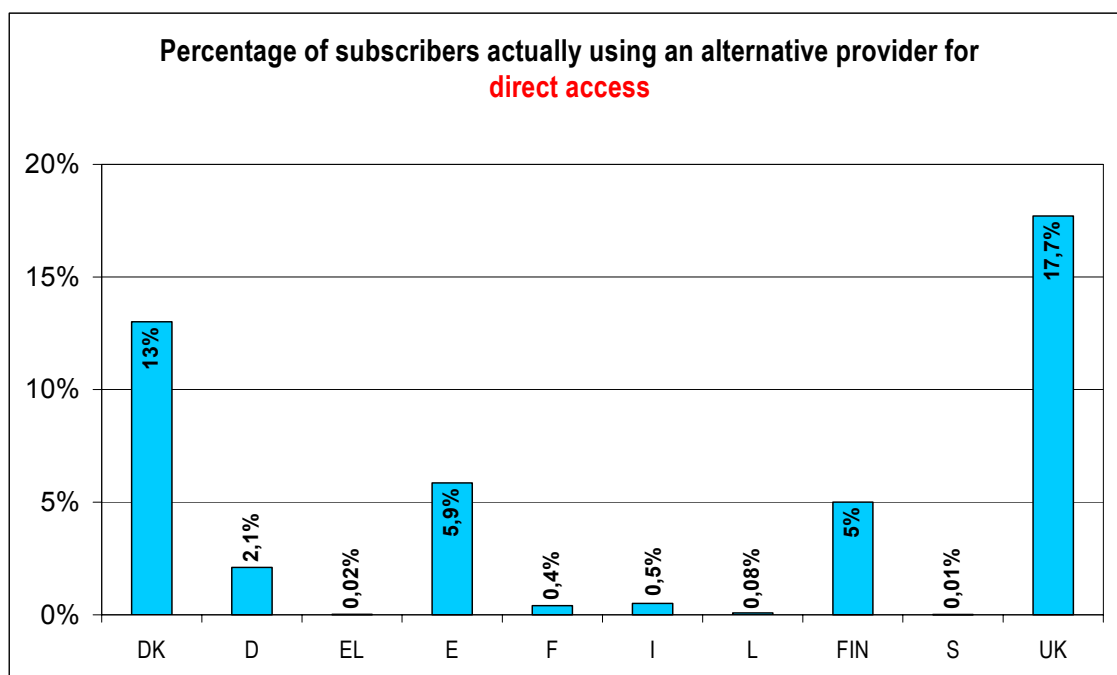
- Figure for Spain and France refer to subscribers using pre-selection and/or direct access only, and they should be considered as minimum
- Figure for Denmark should be considered as minimum.

**Chart 20**



- Figure for Denmark should be considered as minimum.
- Figure for Spain and France refer to subscribers using pre-selection and/or direct access only, and then should be considered as minimum

**Chart 21**



- Figure for Sweden should be considered as maximum.

### **2.3.FACILITIES USED BY NEW ENTRANTS TO PROVIDE VOICE TELEPHONY**

This section provides information on the facilities used by new operators to offer voice telephony, particularly to residential users.

The following charts show the estimated number of alternative operators using carrier selection, carrier pre-selection or direct access to provide voice telephony services to residential users.

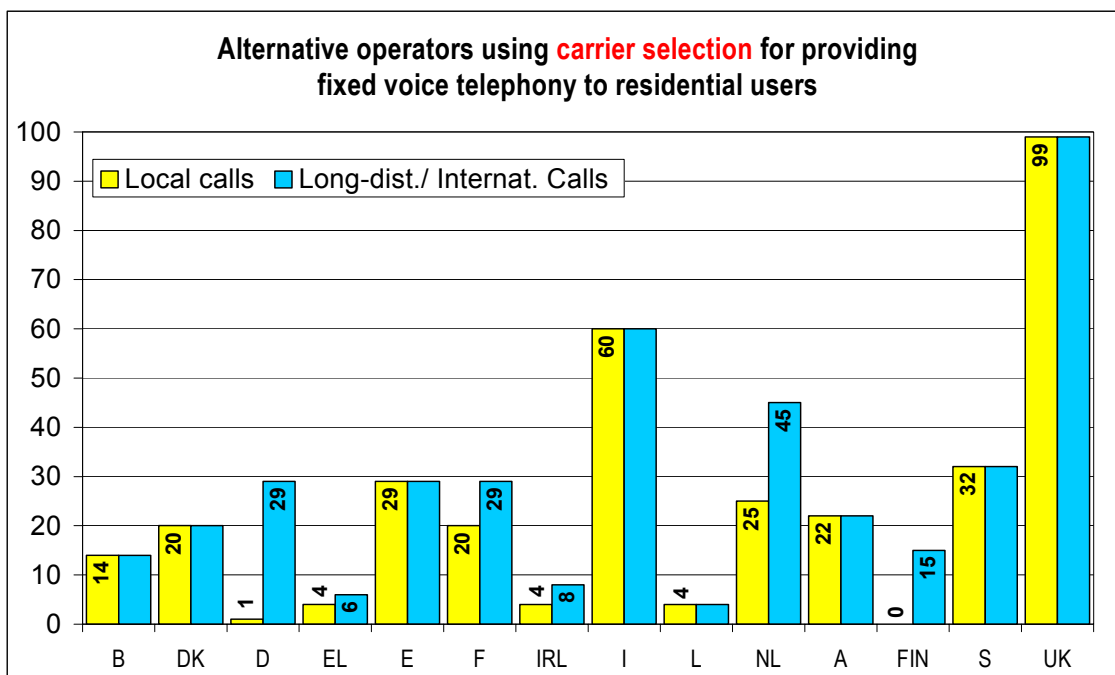
These figures are estimates provided by the national regulatory authorities and refer to July 2002. The charts should be read separately and not summed up as country totals, since most operators use more than one means of providing call services.

As indicated in the section on numbering, at the reference date used for these charts, carrier selection and pre-selection was not yet available for local calls in Germany, but legislation has been introduced recently. Furthermore, carrier pre-selection is not yet available in Greece, due to the deferment granted until 1 January 2003. In the United Kingdom, carrier pre-selection for local calls is only available via “autodiallers”.

Because of its small size, no distinction is made in Luxembourg between local and long-distance calls.

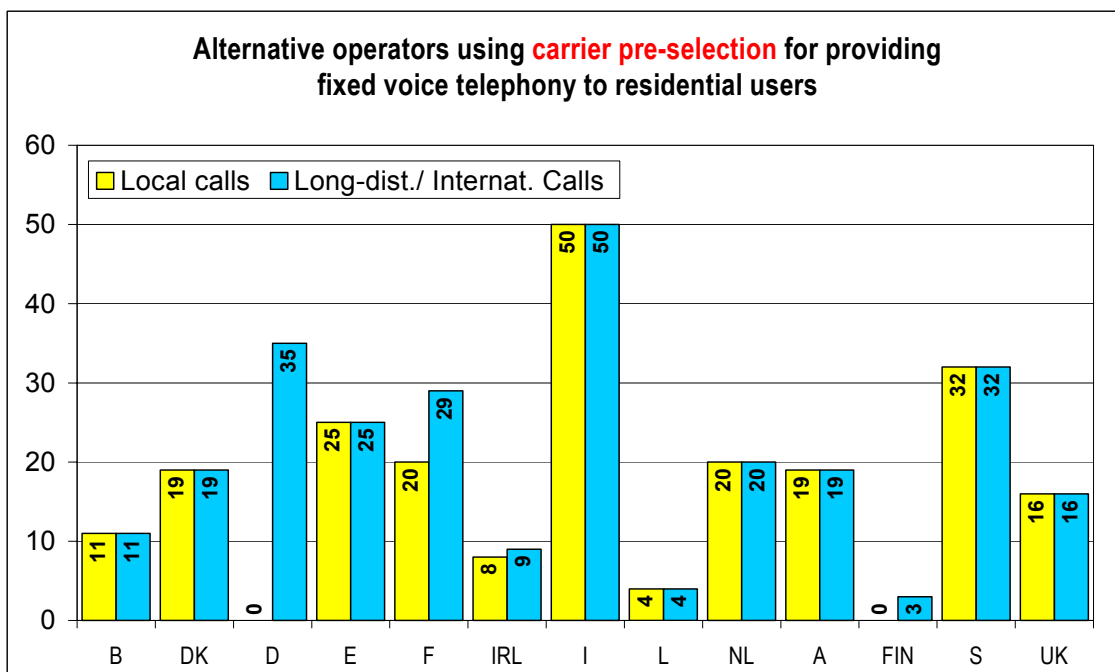
The information is not available for Portugal.

**Chart 22**



- Figure for Denmark should be considered as minimum.
- Data for France refer to May 2002.
- Figure for Ireland refers to August 2001.
- The United Kingdom estimate refer to residential and business users.

**Chart 23**

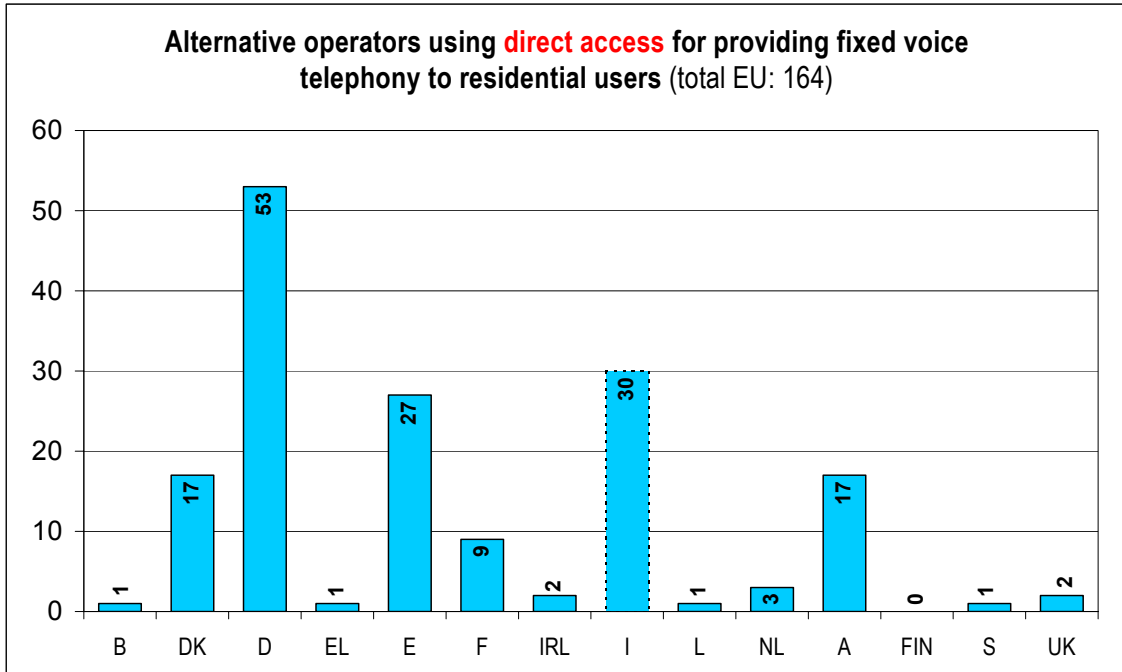


- Figure for Denmark should be considered as minimum.
- In Germany, carrier pre-selection for local calls is not available yet.
- In Greece, the carrier pre-selection for all types of calls is not available yet.
- Data for France refer to May 2002.

In the following chart, figures refer to all types of calls (local, long-distance and international).



**Chart 24**



- Figure for Denmark should be considered as minimum.
- Data for France refer to May 2002.
- Figure for Italy refers to the number of operators that signed a ULL contract with the incumbent, but not all of them are so far operational.
- Figure for the Netherlands refer to local call; data for long-distance/international call is 2.

### 3 PUBLIC NETWORK INTERCONNECTION AND INTERCONNECTION CHARGES

#### 3.1. FIXED-TO-FIXED INTERCONNECTION CHARGES

The following charts show the per-minute interconnection charges for call termination on the incumbent's fixed network, based on the first three-minute call at peak rate.

The charts show the absolute value of the interconnection charges (in €-cents) as of 1 August 2002, in comparison to the value as at August 2001.

The figures may have been approved by the NRA or simply agreed between operators, where the legal framework does not require NRA approval.

Interconnection charges for Spain refers to a standard single transit, but a different charge is applied in Barcelona and Madrid (1,05 eurocents/minute)

In the case of France, in order to maintain consistency across Member States, the per minute charge indicated does not include the per minute charge related to the cost of the 2 Mbit/s port, which, however, according to ART, provides a better picture of the cost borne by the interconnecting party. By taking this additional charge into account, per minute charges would be €-cent 0.62, €-cent 1.26 and €-cent 1.76 respectively at local, single transit and double transit interconnection levels.

Charges for Netherlands apply from 1 Sept. 2002.

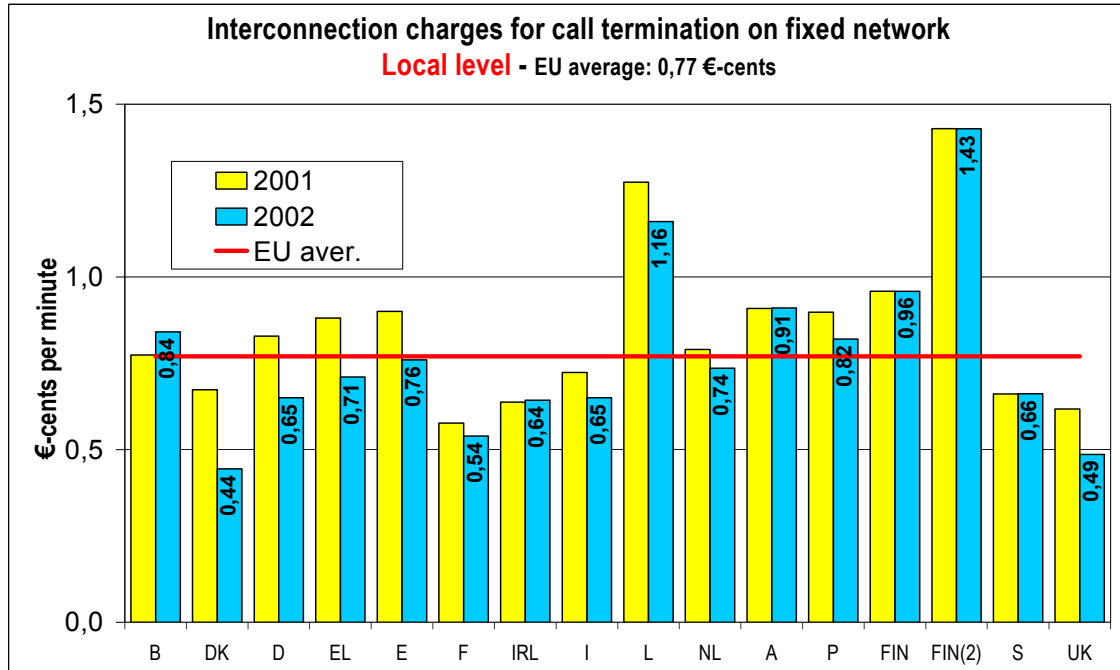
Figures for Austria are valid until 30.06.2002.

In Finland there are about 50 SMP operators who apply different interconnection charges. The charts refer to charges applied by the two major operators Elisa (FIN) and Sonera (FIN2).

Charge for Germany for single transit level is not comparable to last year, since the Regio50 and Regio200 zone rates have been unified in a unique single transit charge.

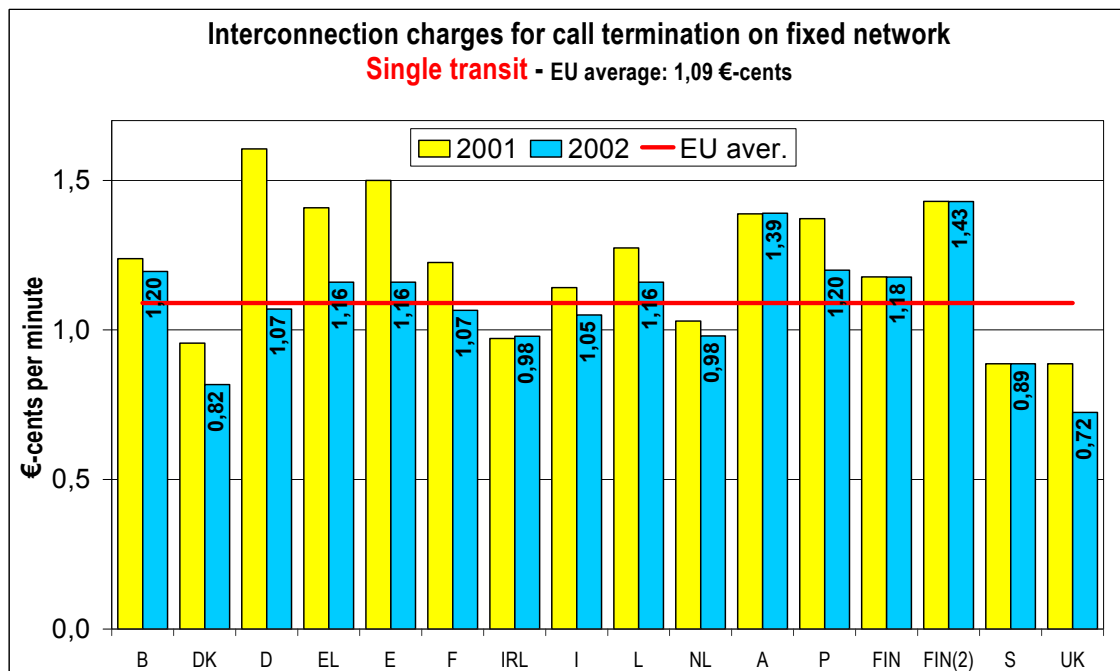
The EU average is a simple, rather than a weighted average.

Chart 25



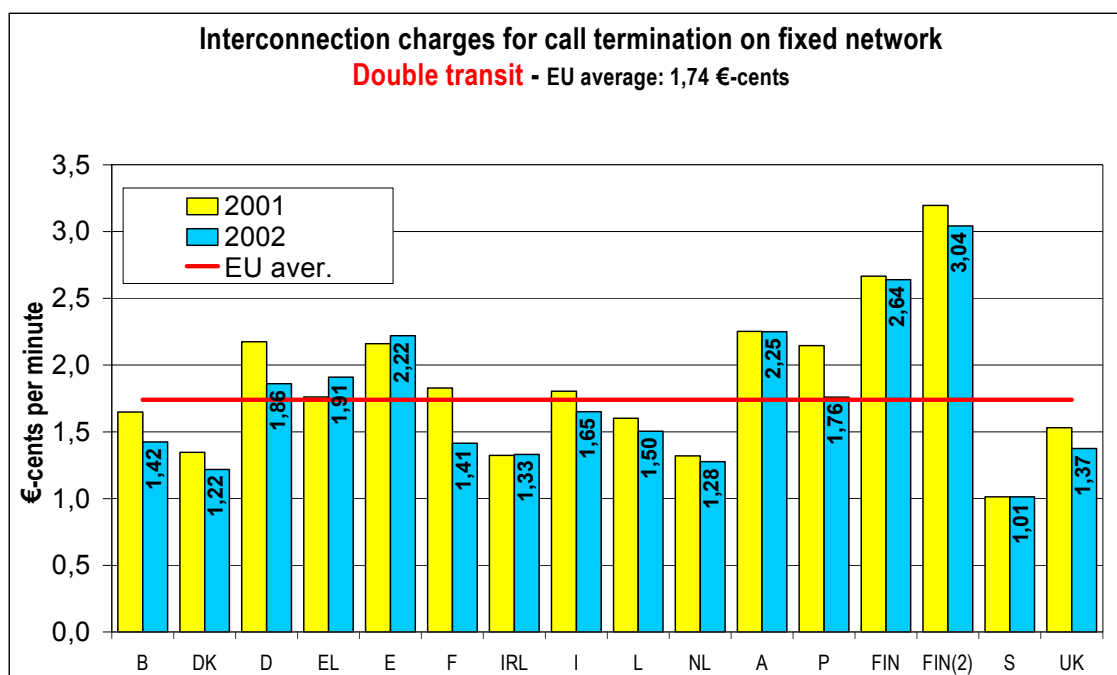
- In Luxembourg there is no distinction between local and long-distance domestic calls.

Chart 26



- Figure for Germany for the year 2001 is the simple average between the Regio50 and Regio200 zone rates.

Chart 27



- Data for the United Kingdom refers to a 100-200km connection length. For length less than 100 the interconnection charges at double level is 1,11184; and for more than 200km is 1,7832

### 3.2.LEASED LINE INTERCONNECTION CHARGES

This section shows the monthly rental and the one-off charges for short-distance leased lines (local ends, excluding VAT) up to 2 and 5 km provided by the incumbent operator to other interconnected operators. An estimate of the total average monthly rental cost (based on the total cost for the first year) is also presented.

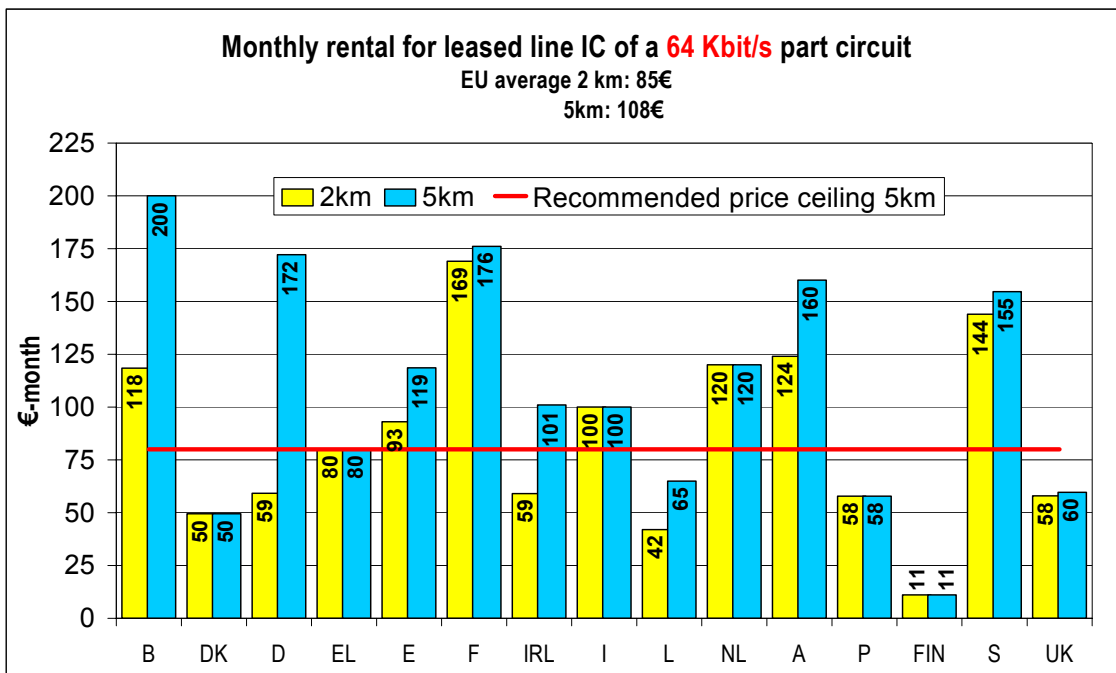
Deviations for the monthly rental from the “recommended price ceiling” set in Commission Recommendation 1999/3863 of 24 November 1999 are also shown. The recommended price ceilings are:

- € 80/month for a 64 Kbit/s leased line part circuit up to 5 km
- € 350/month for a 2 Mbit/s leased line part circuit up to 5 km;
- € 1 800/month for a 34 Mbit/s leased line part circuit up to 2 km;
- € 2 600/month for a 34 Mbit/s leased line part circuit up to 5 km.

These figures have been provided by the national regulatory authorities through the questionnaire for the 8<sup>th</sup> Implementation Report and the replies to the ONP COM02-18 Document. Figures indicate the position in August 2002.

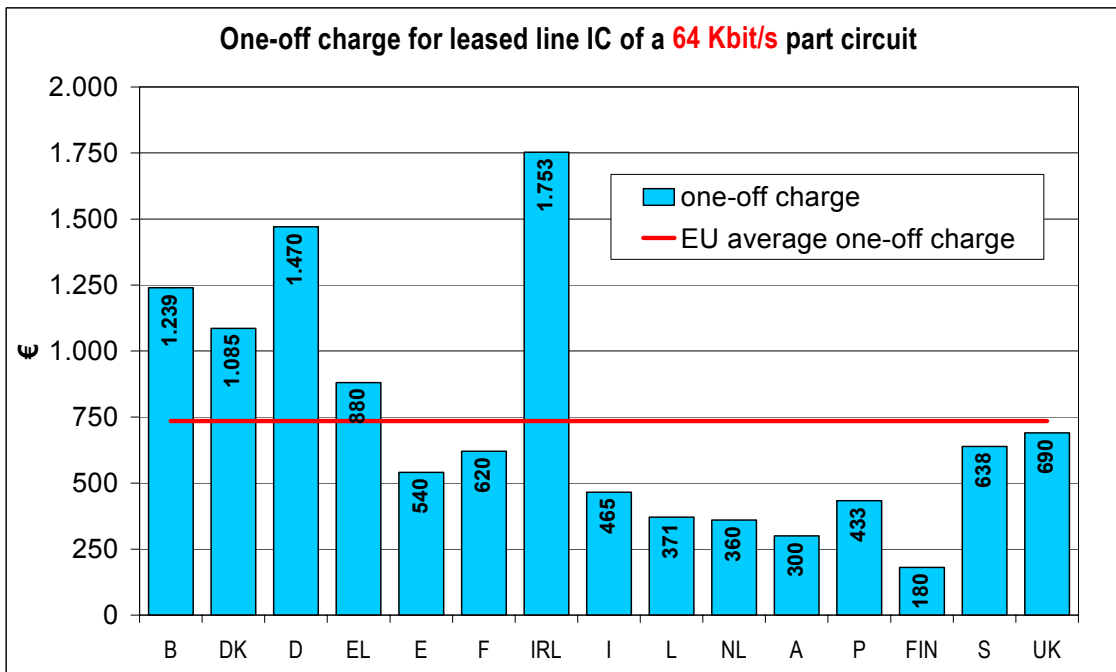
64 Kbit/s part circuit

**Chart 28**



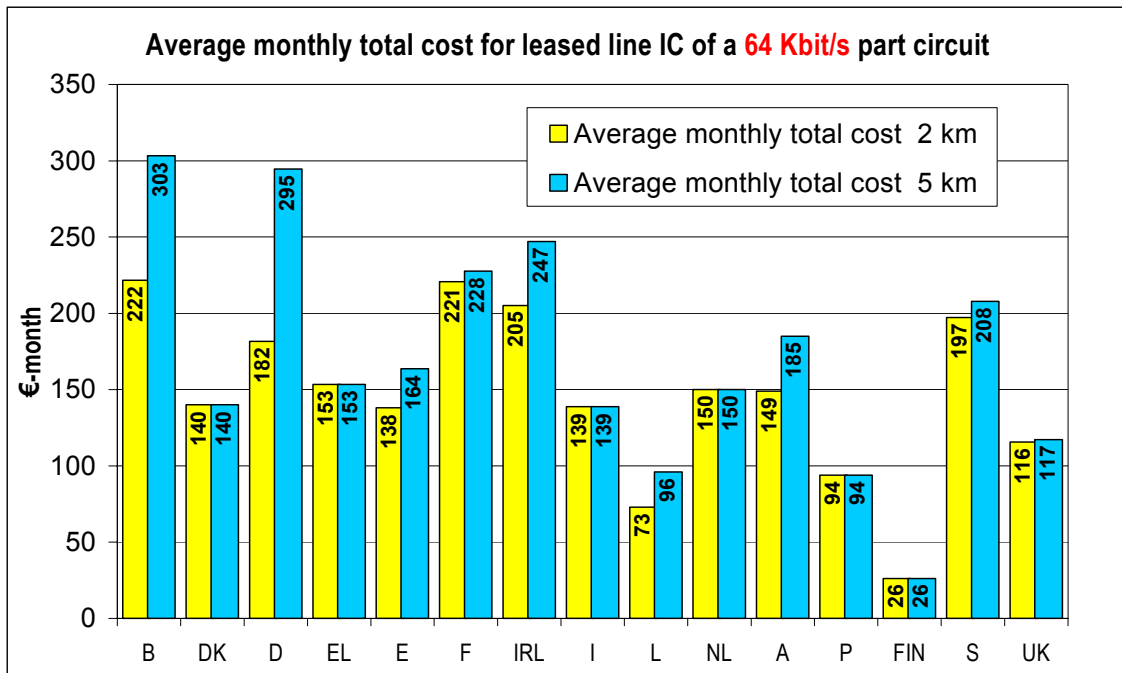
- Figure for Greece refer to August 2001.
- Figure for Denmark in force since October 2002.

**Chart 29**



- Figure for Denmark in force since October 2002.

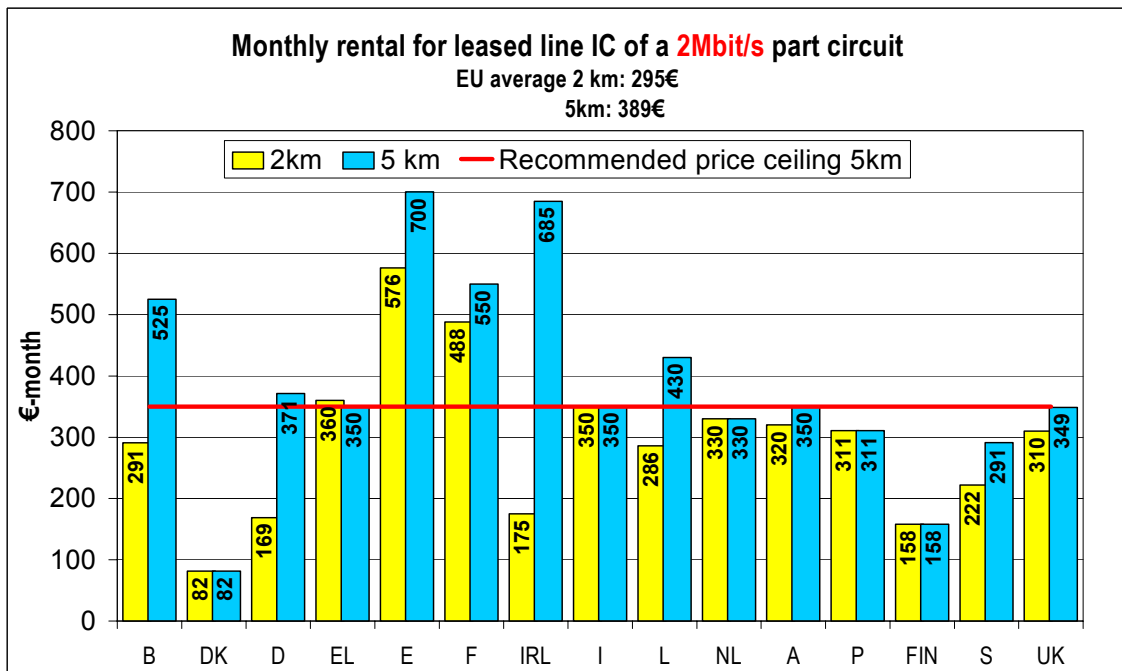
**Chart 30**



- Monthly rental for Greece refers to August 2001.
- Figure for Denmark in force since October 2002.

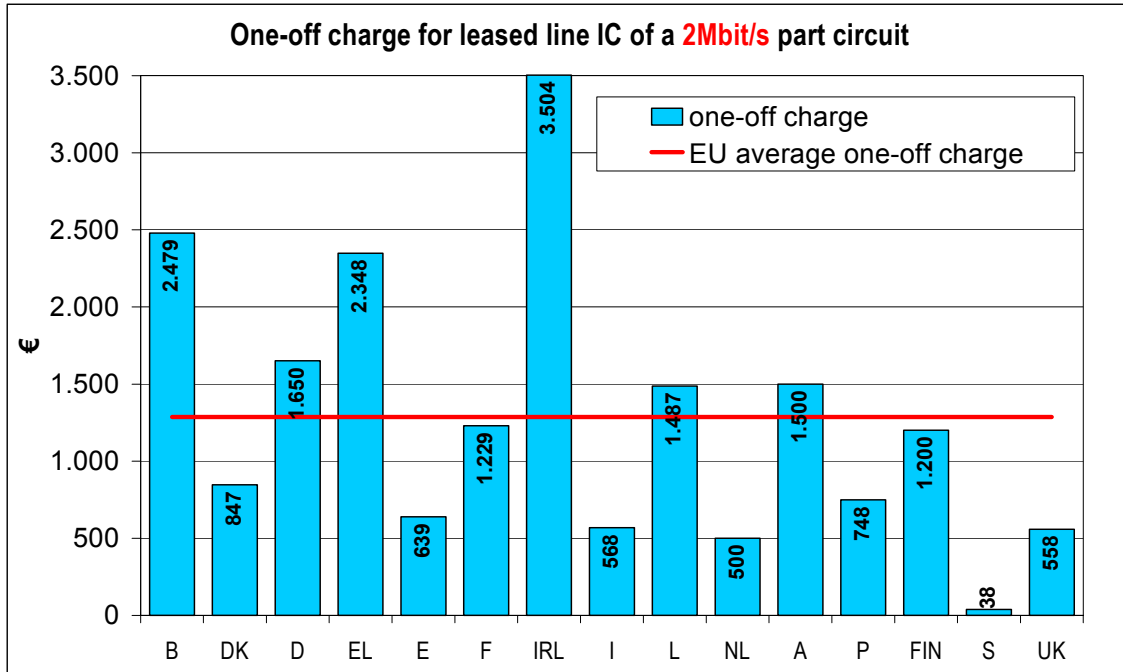
**2 Mbit/s part circuit**

**Chart 31**

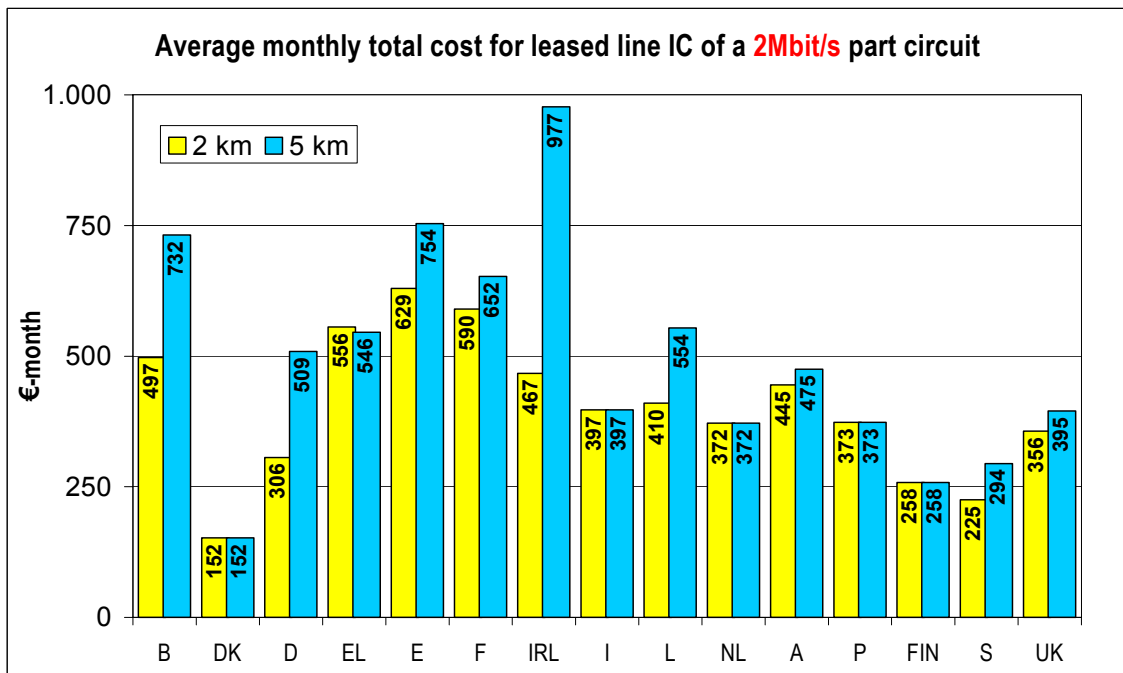


- Figure for 2km for Greece refers to August 2001.
- Figure for Denmark in force since October 2002.

**Chart 32**



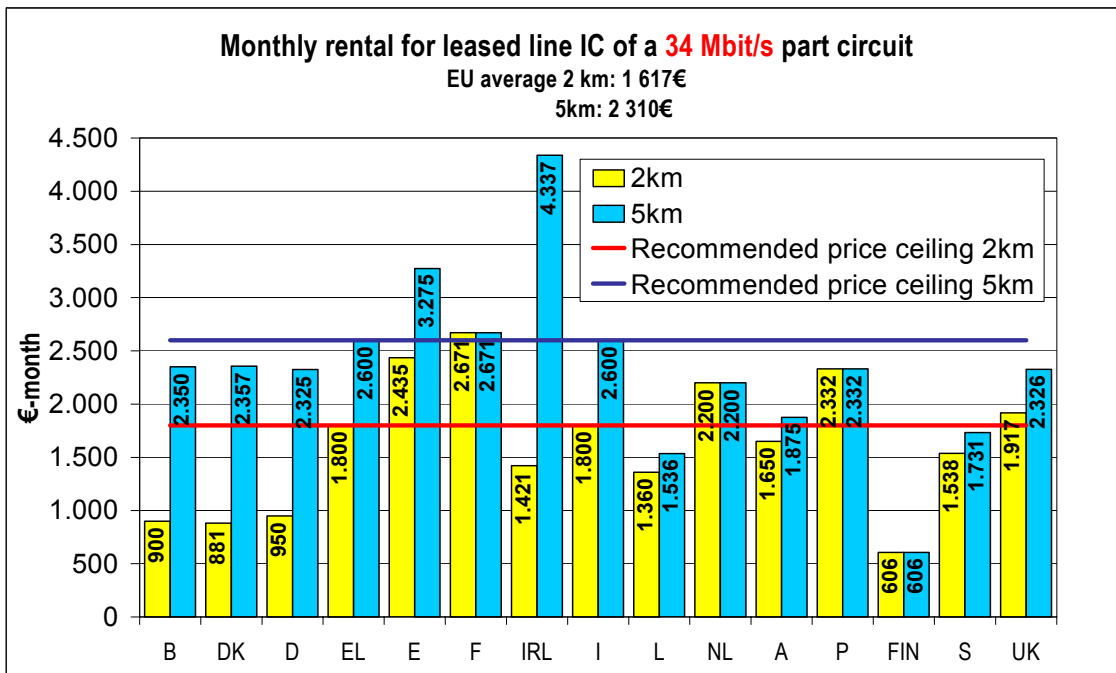
**Chart 33**



- Monthly rental for 2km for Greece refers to August 2001.

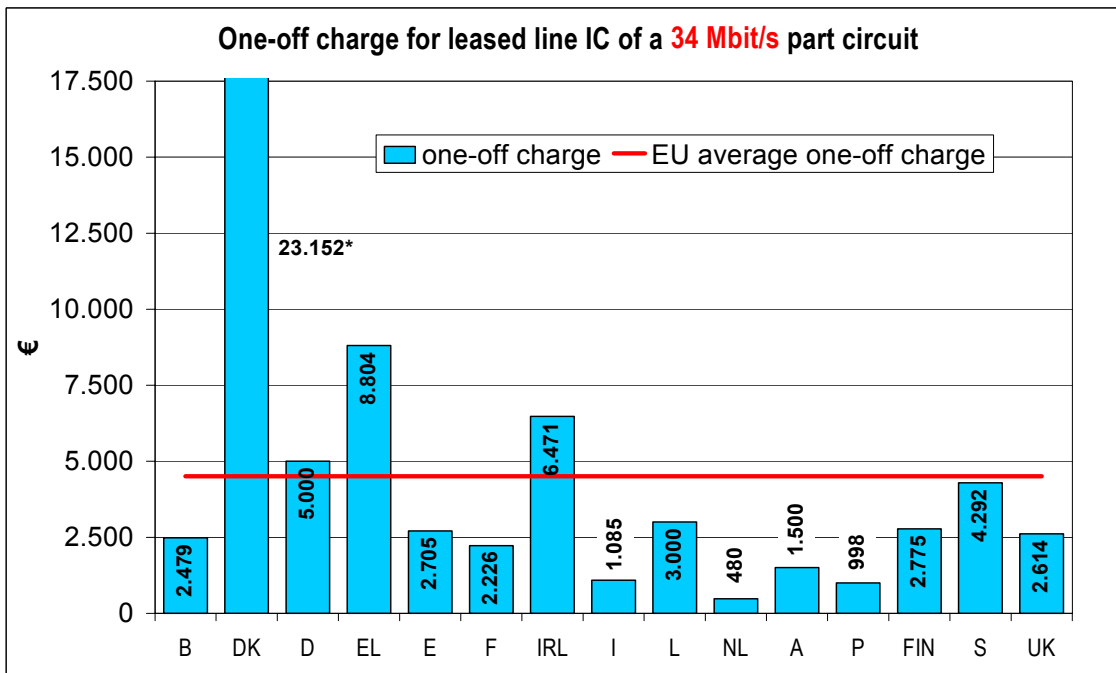
**34 Mbit/s part circuit**

**Chart 34**



- Figure for Denmark in force since October 2002.
- Figure for Greece refers to 2001

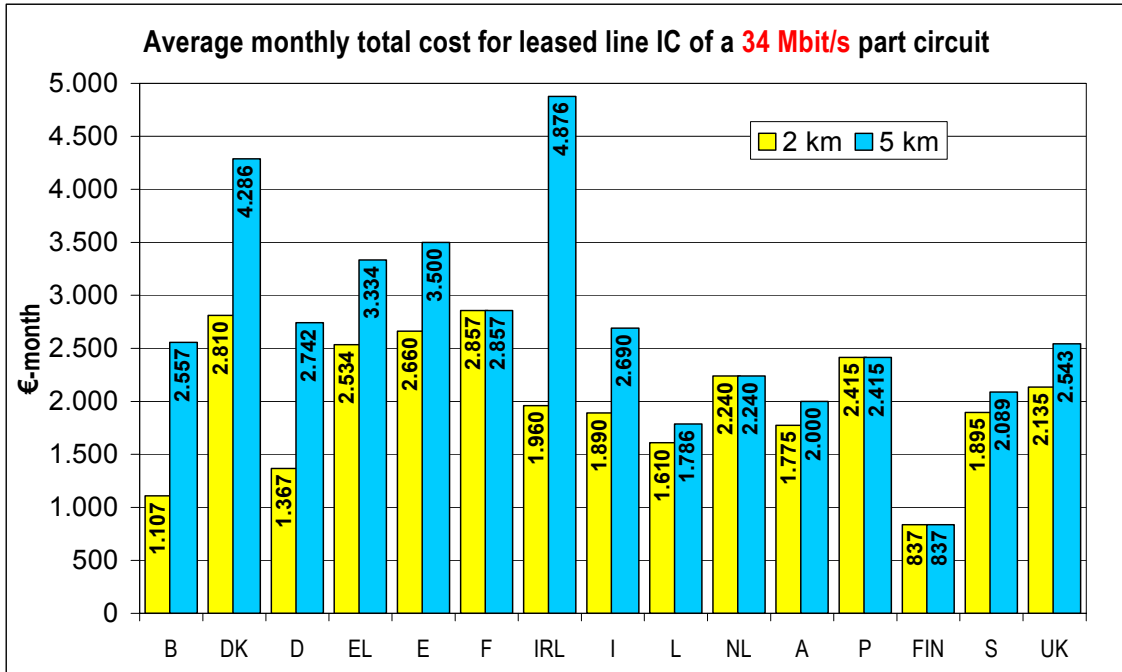
**Chart 35**



- \* Value not to scale
- Figure for Denmark in force since October 2002. One-off charge in the chart refers to 2km. One-off charge for 5 km is 55 458€.

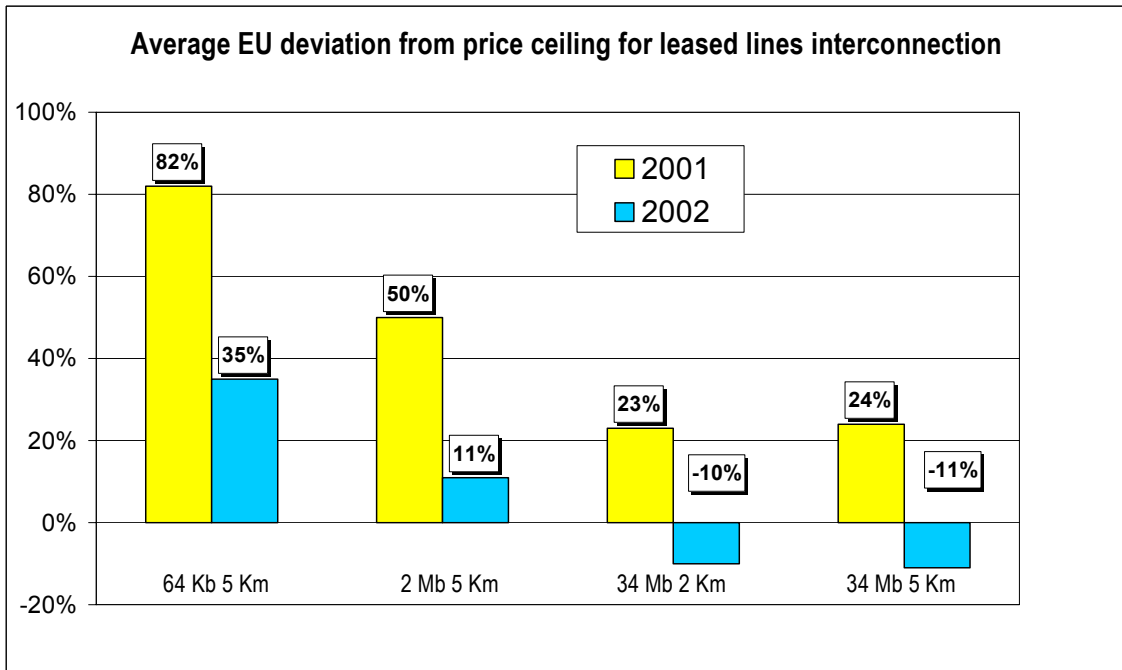


**Chart 36**



- Figure for Denmark in force since October 2002.

**Chart 37**



### 3.3.FIXED-TO-MOBILE INTERCONNECTION CHARGES

This section shows the per-minute interconnection charges for fixed call termination on the networks of mobile operators. Charges are for calls originating in the same countries, except for Finland, where charges for mobile termination of international fixed calls are considered.

The charges are based on the first three-minute call at peak rate, except for Finland, where the average peak/off-peak rate set by the NRA has been shown. Different charges may apply for call termination on other mobile networks.

Except for Germany, the figures have been collected by the NRA, and give the position in August 2002. Data for Germany are not publicly disclosed by the NRA and the figure shown in the chart was provided by Cullen International.

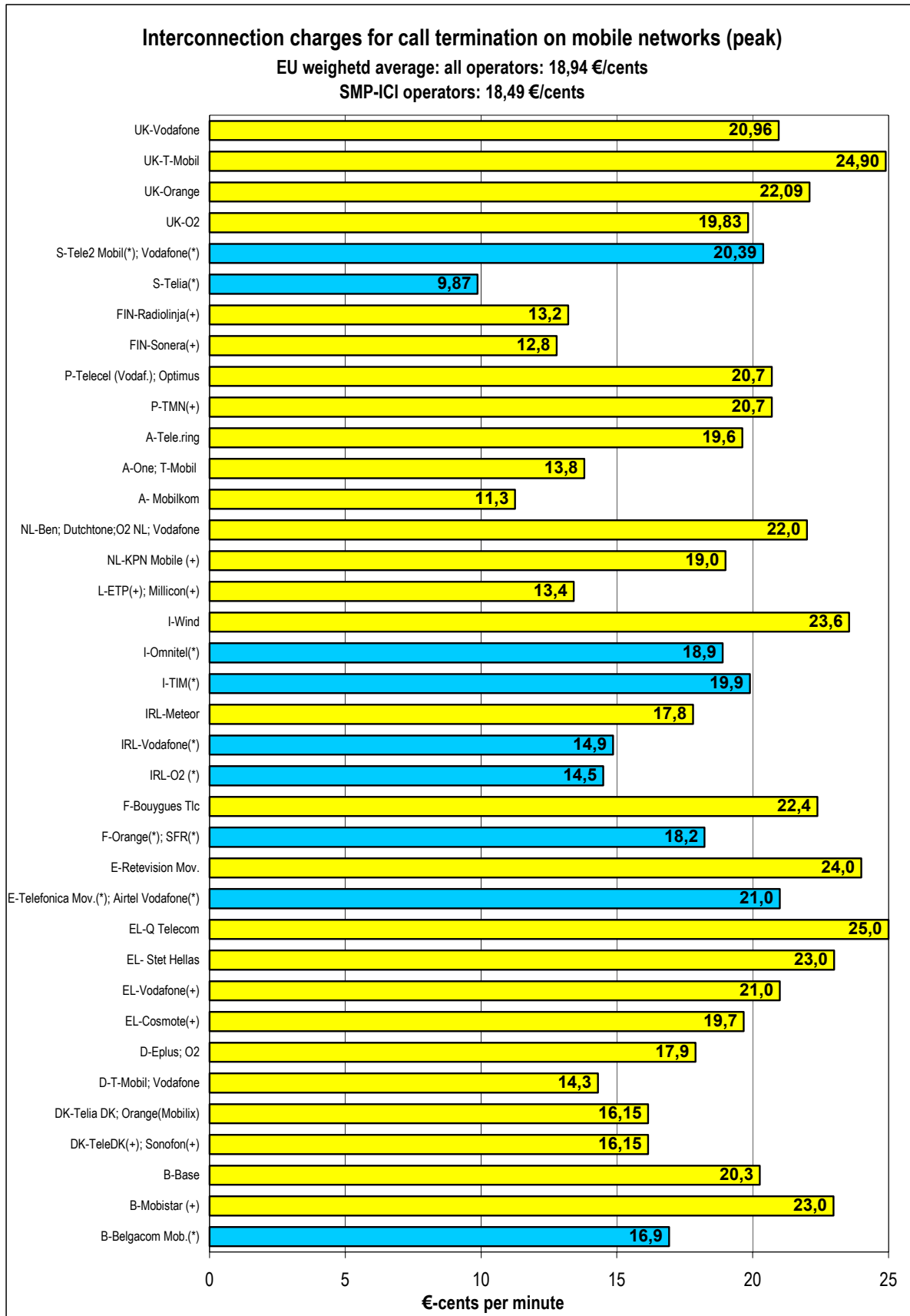
In the following chart figures are shown for a total of 12 operators with SMP in the national market for interconnection (Belgium, France, Ireland, Italy, Spain and Sweden). Figures for all the major mobile operators in each country are also shown (24 operators with SMP in the national mobile market). Denmark and Portugal applied to the non-SPM operators the same interconnection price as for the SMP operators in the mobile market.

In France, mobile-to-mobile interconnection charges are based on the "bill and keep" principle, so operators do not define termination charges.

Tariffs for Portugal are valid until 30.09.2002. Then, according to a NRA's decision they will be progressively reduced to 18.7 cents/min.

Data for Finland indicate the interconnection charges for an international fixed call to a mobile network (interconnection charges also apply to mobile-to-mobile calls). No mobile wholesale termination charges exist for call originating on national fixed network; instead, so-called "end-user" charges are levied.. The originating fixed operator charge a customer for a fixed network retail charge and for a mobile network retail charge (to be forward to the mobile operator). Both fixed and mobile operators determine the charges of their own segments. Example of fixed-to-mobile retail call charge (including VAT at peak rate) is 0,27€ for Sonera and 0,26€ for Radiolinja.

**Chart 38**

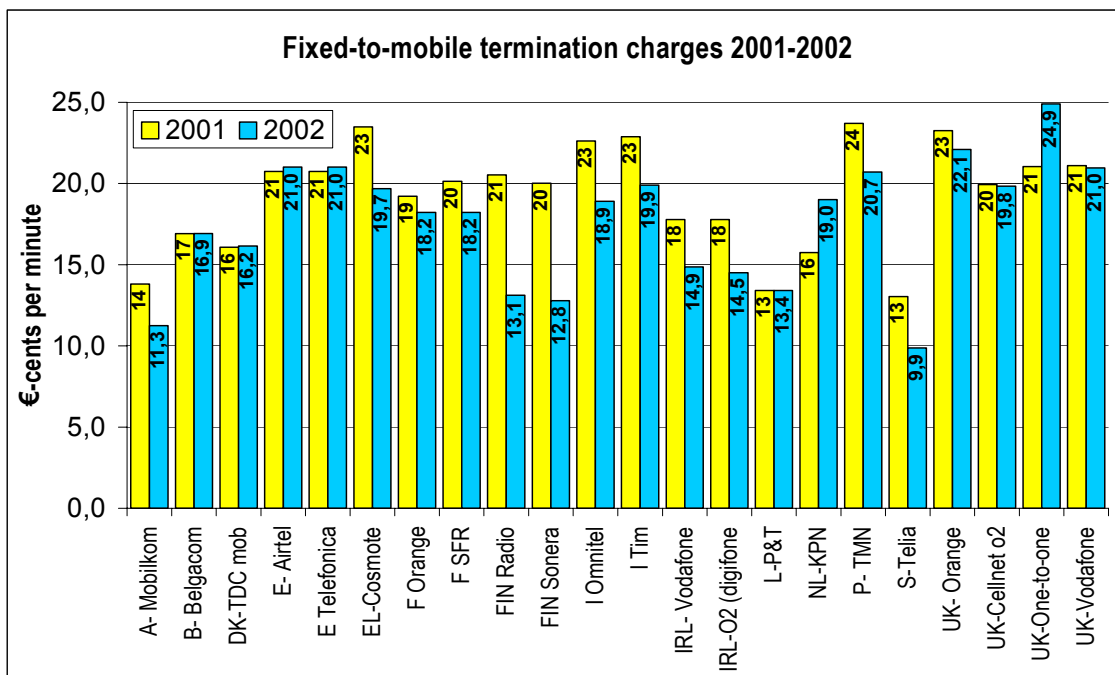


Legend:  
 (\*) SMP operators in the national interconnection market  
 (+) SMP operators in the national mobile market

Charge for the SMP operator Telia in Sweden refers to a weighted peak/off-peak average rate, set out by the NRA. Charges for the other operators refer to a per minute peak rate. The SMP designation for Tele2 Mobil and Vodafone has not taken effect due to pending court proceedings.

The following chart shows the mobile termination charges for the year 2001 and 2002 for the main EU operators. EU weighted average trend is also shown.

**Chart 39**





## 4 MOBILE MARKET

### 4.1. MOBILE PENETRATION

The following charts estimate for each Member State the number of mobile subscribers and the penetration rate in 2002 for second generation mobile services (DCS-GSM). Growth in the penetration rate since August 2001 is also shown.

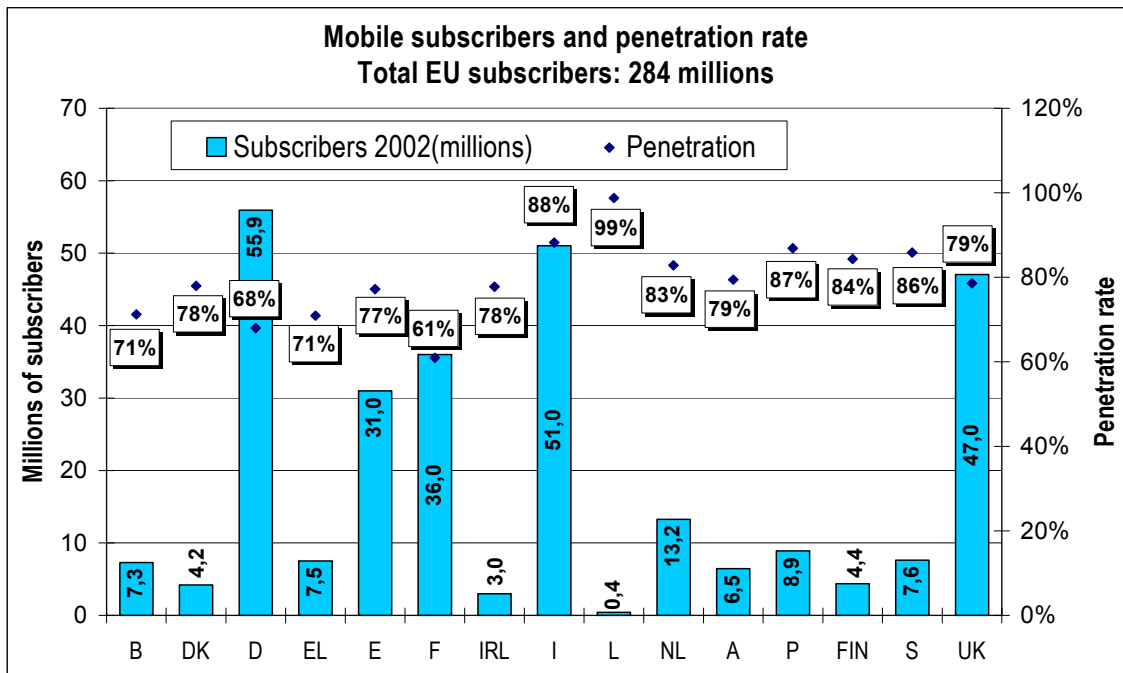
Subscriber figures are taken from FT Mobile Communications (August 2002) except for Germany, Austria and the Netherlands, where updated figures were provided by the respective NRAs. Data show the situation as at August 2002 and include both post-paid card and pre-paid subscribers.

EU average is a simple, rather than a weighted average.

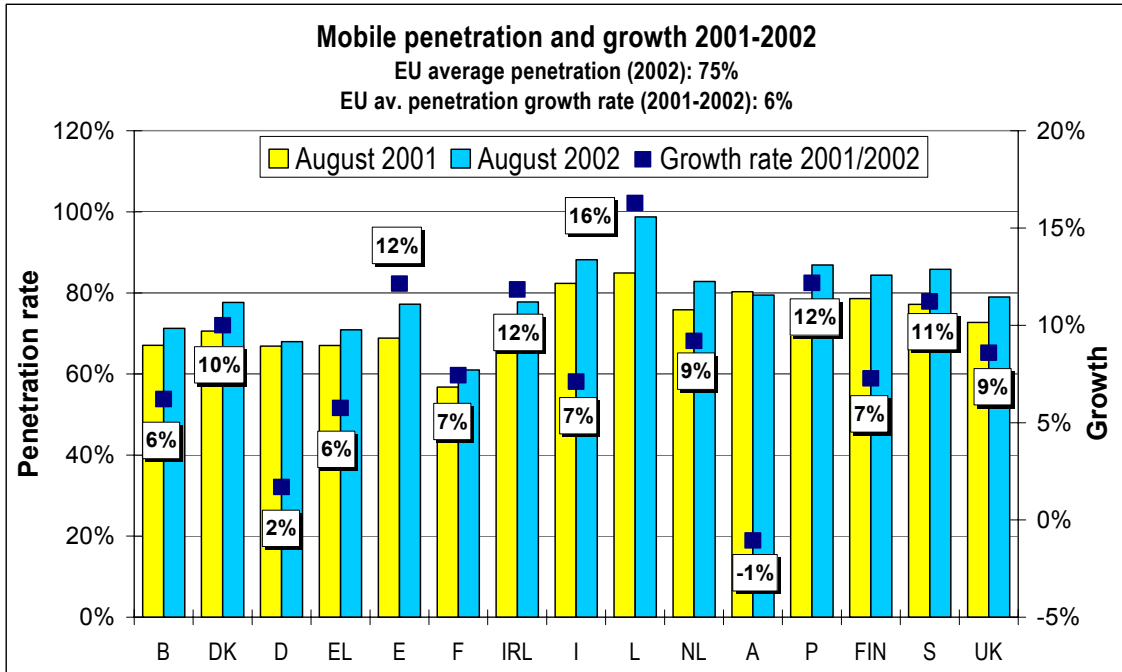
The following chart shows the absolute number of mobile subscribers in each Member State (columns) and their penetration rate (dots), expressed in terms of % of total subscribers over population.

Figures for Italy, Spain, Sweden and Finland include analogue subscribers.

**Chart 40**



**Chart 41**



According to the Austrian NRA, the decline in the number of Austrian subscribers is due to a revision in the definition of active subscriber. Non-regular users are excluded from these figures.

**Chart 42**

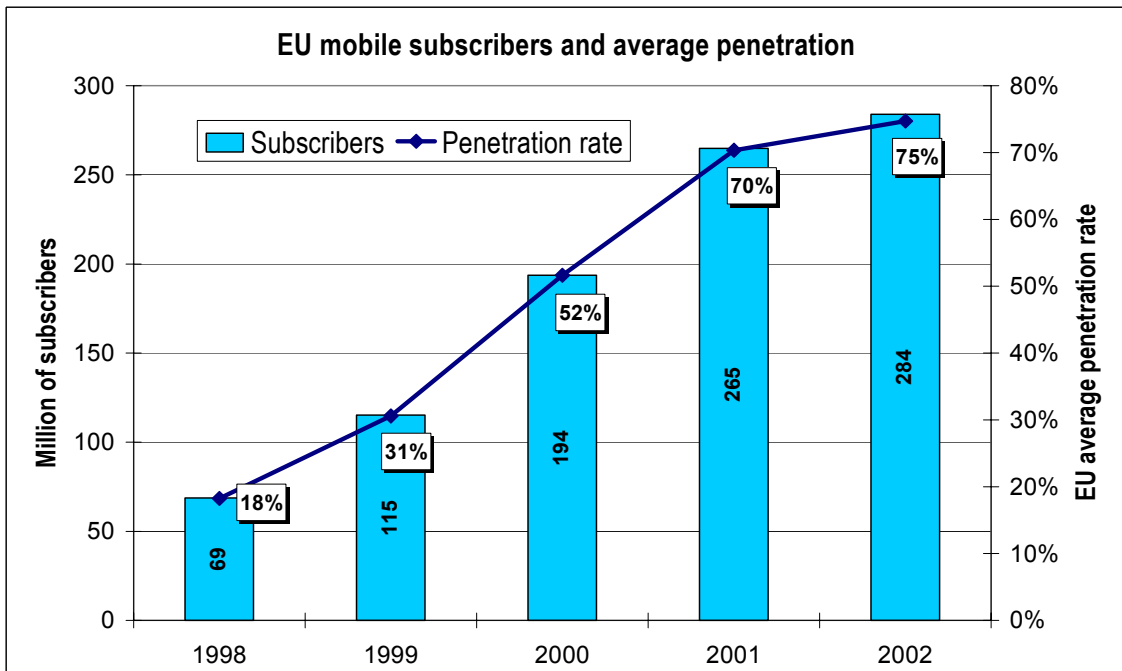
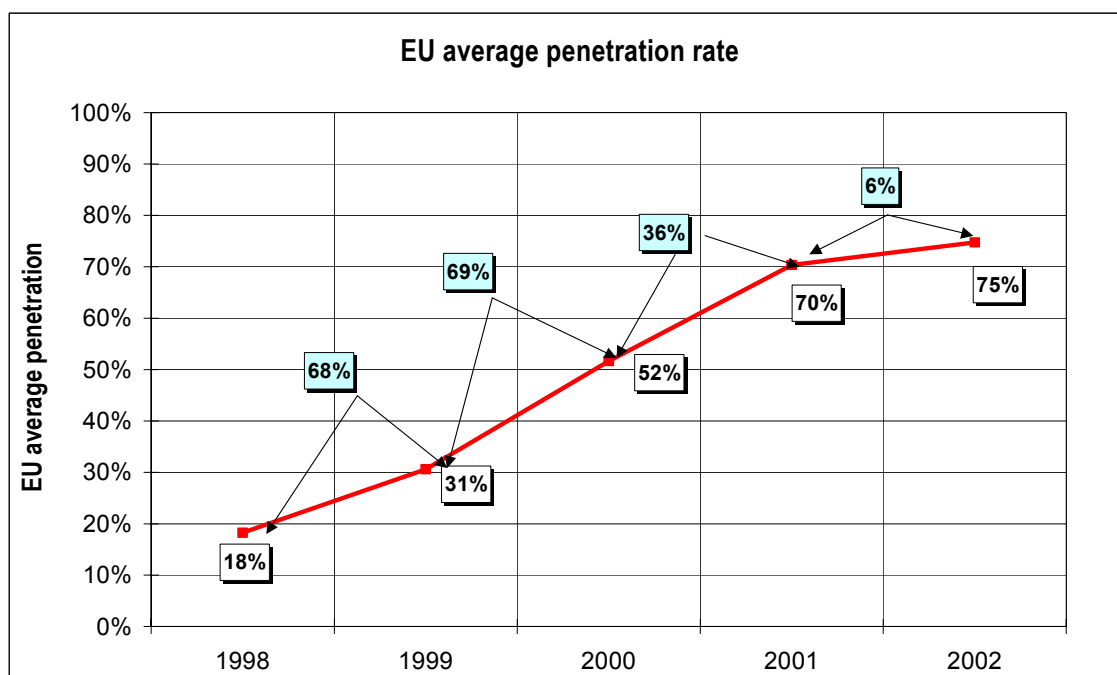


Chart 43



- EU average is a simple, rather than a weighted average.

#### 4.2. PLAYERS IN THE MOBILE MARKET

This section shows the number of mobile licences granted in each Member State for the provision of analogue, GSM 900, DCS 1800 and UMTS services.

The data on the number of licensed operators have been provided by the national regulatory authorities and indicate the position in October 2002.

Chart 44 shows the number of operators licensed to provide digital mobile services (second-generation) rather than the number of licences issued in each country. The number of operators indicates the real magnitude of the choice of operators for customers of digital mobile services, since very often operators have licences for both GSM 900 and DCS 1800. Mobile network operators have been identified as having only GSM 900 or only DCS 1800 frequencies, or both (in which case they have usually been granted a GSM 900 licence which has subsequently been extended to the DCS 1800 band).

Information on mobile service providers<sup>12</sup> has been included where available (without distinction between local and national coverage).

In Finland, 21 local telephone companies have been awarded licences to operate local DCS 1800 services, but spectrum has been allocated to two mobile operators, Radiolinja and Suomen 2G, in which those companies participate. Only 8 of these local companies are actually providing services. The figure does not include 1 local GSM operator belonging to the Finnet Group (Ålands) and 1 local GSM and 2 local DCS operators not belonging to the Finnet group. Only 3 mobile service providers have started commercial operations.

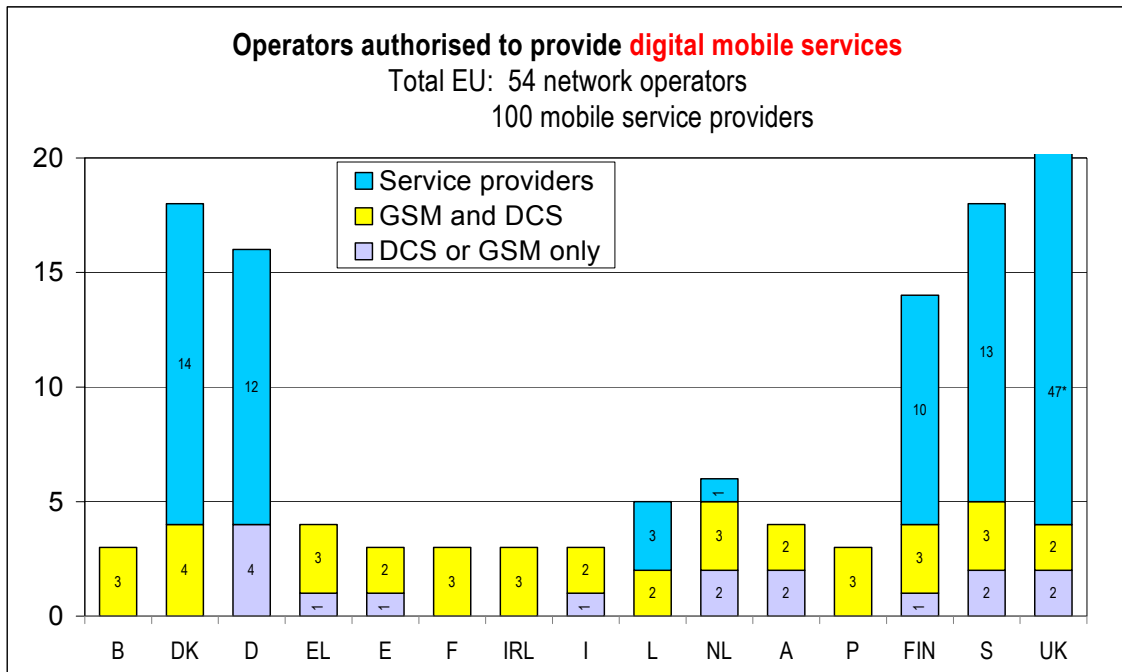
Figure for France does not include 2 analogue, 6 GSM local and 6 DCS local licences granted to the subsidiaries of the licensed mobile operators for the overseas departments<sup>13</sup>.

<sup>12</sup> Mobile service providers are defined as entities authorised to offer mobile service under their own brand name (dealing with marketing, billing, etc.), using a third party's mobile network.



Figures for Italy does not include the license of BLU since this has been withdrawn.

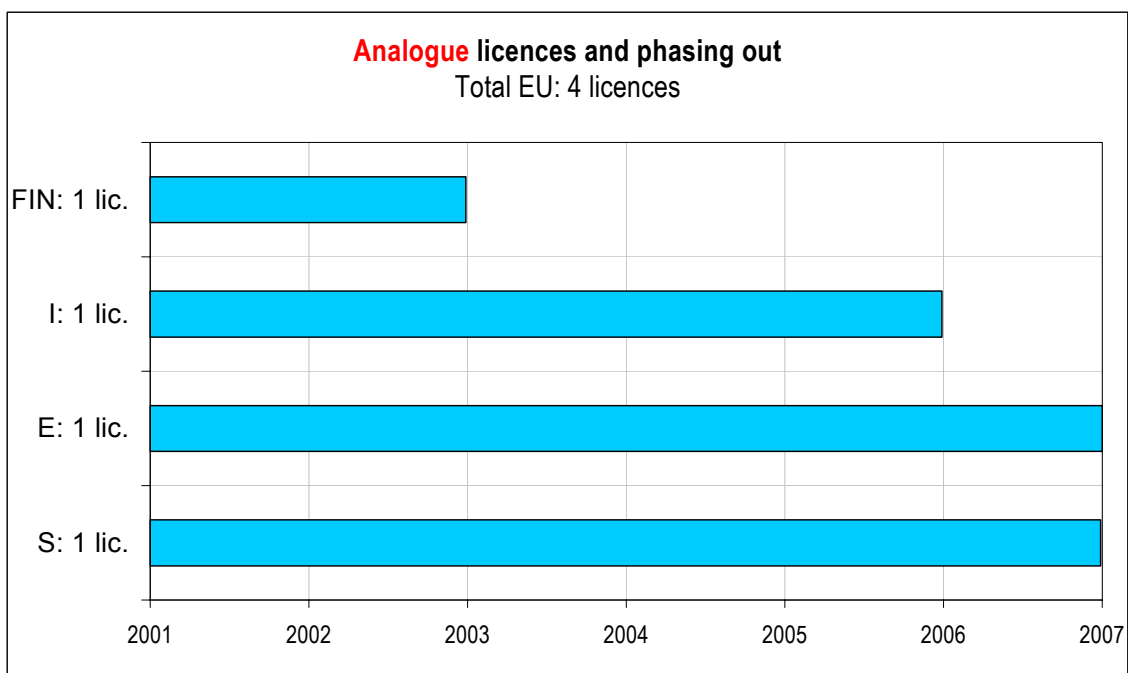
**Chart 44**



\* Values not to scale

The following chart shows the number of analogue licences still active in Europe and the date on which the phasing-out of these networks is expected to be completed. All the analogue licences have been granted to the subsidiary of the incumbent fixed network operator.

**Chart 45**

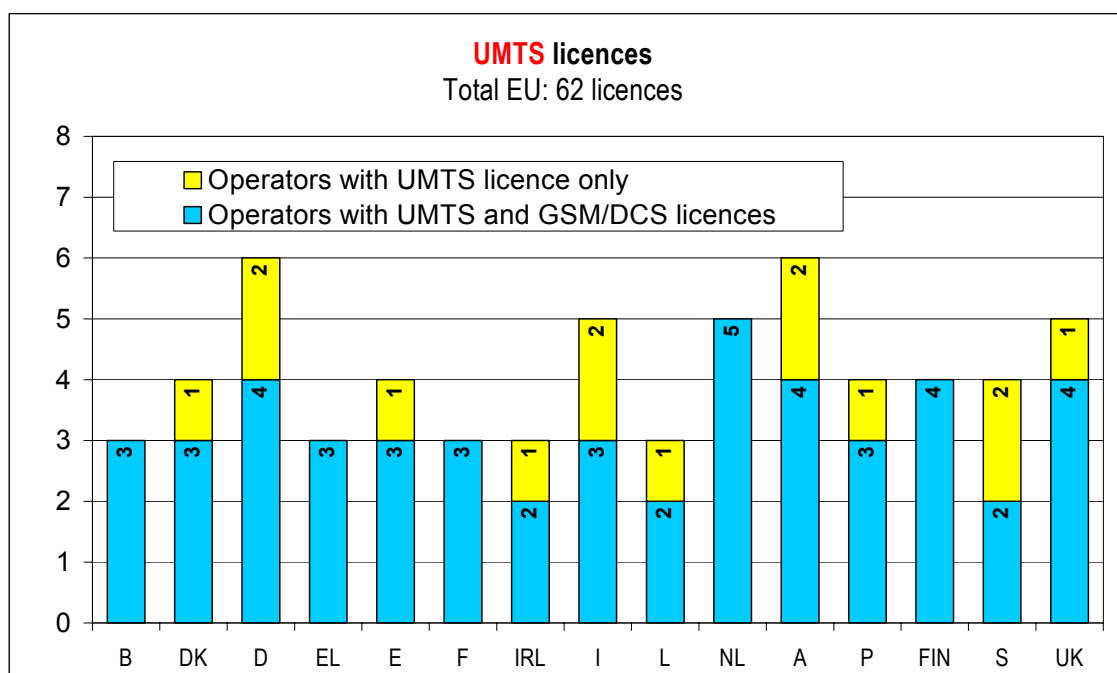


<sup>13</sup> Département de la Réunion, Antilles Françaises, Guyane; Île de Saint Martin et Saint Barthélémy)

Chart 46 shows the number of UMTS licences granted in Europe. The great majority of licences have been granted to players still active in the second generation market, and 14 licences have been granted to new entrants.

Figure for Finland does not include a local service provider.

**Chart 46**



### 4.3. OPERATORS' MARKET SHARES

The following charts show the market shares, in terms of subscribers, of the main competitors in the second generation mobile market.

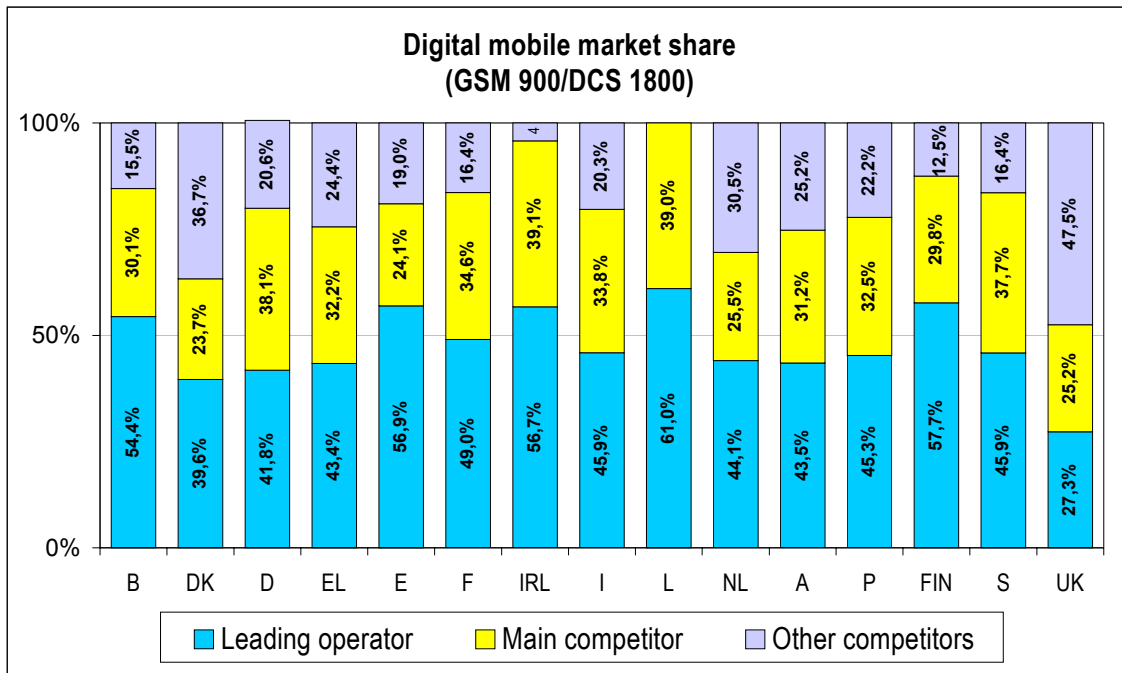
Since in four countries the incumbent's subsidiary is still providing the analogue service on the basis of a de jure or de facto monopoly, the operators' market shares have been calculated on two different relevant markets: the overall mobile market (including analogue, DCS 1800 and GSM 900 subscribers) and the digital market only (DCS 1800 and GSM 900).

Data concerning shares of the mobile market are based on estimates of the number of mobile subscribers, taken from FT Mobile Communications, and refer to August 2002. They have been compiled on the same basis in each country, and are therefore comparable. However, different figures might be obtained if the underlying raw data were collected/estimated on a different basis (number of subscribers, pre-paid card, minutes of conversation, etc.) or if a different method of calculation was used.

Apart from the United Kingdom, the leading operator is a subsidiary of the incumbent fixed network operator.

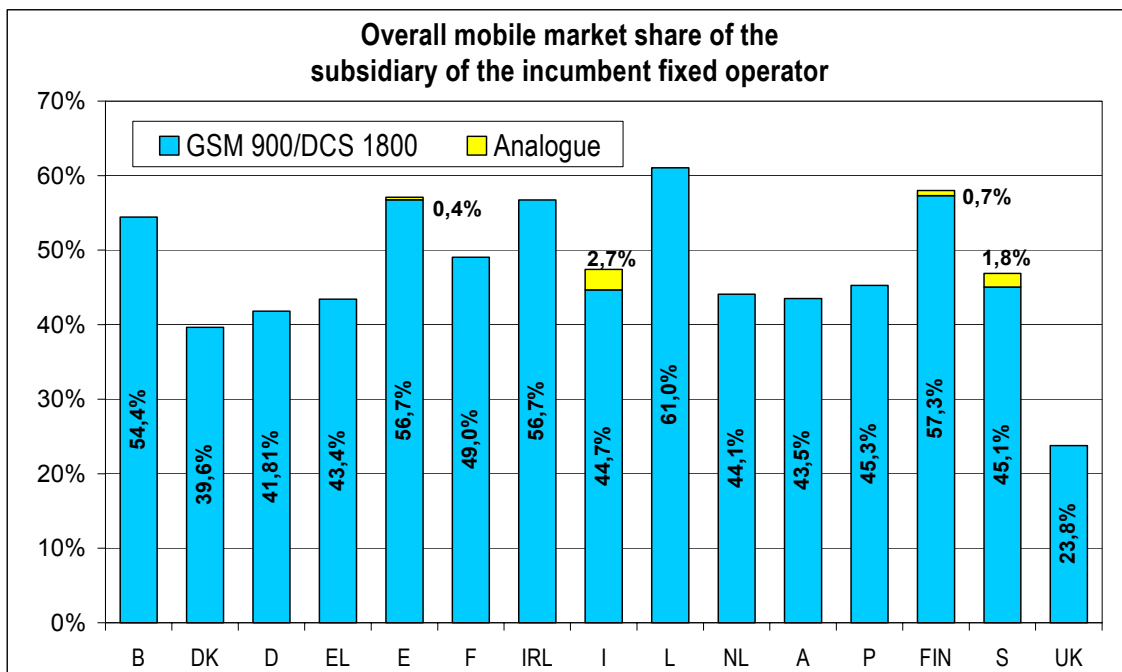
Chart 47 shows the shares of the leading operator, of the main competitor and of the other competitors on the digital mobile market only (100%).

**Chart 47**

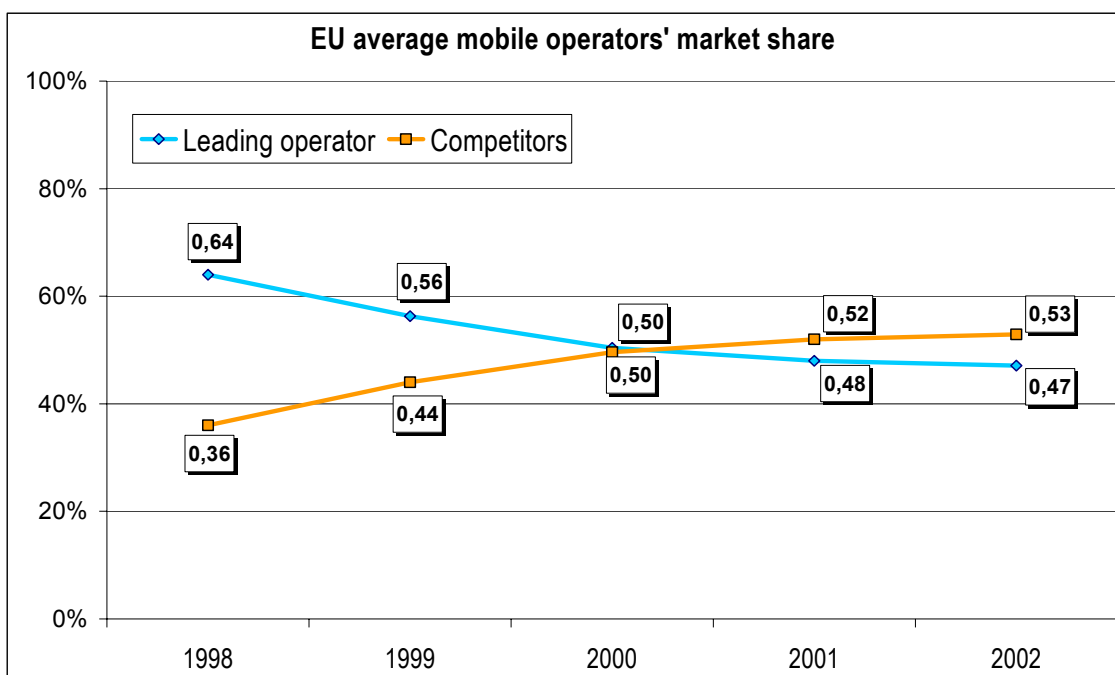


The following chart shows the share of the overall mobile market held by the mobile subsidiary of the incumbent fixed operator. Where the incumbent still operates the analogue service, the shares of the overall mobile market of their analogue and digital services are indicated separately.

**Chart 48**



**Chart 49**



#### **4.4.MOBILE BASKET**

The analysis of national (as opposed to roaming) mobile services is based on the OECD baskets for GSM/DCS services, as provided by Total Research Teligen in the August 2002 T-Basket. Due to significant changes in usage patterns the OECD baskets have been redefined with effect from August 2002<sup>14</sup>.

Since the results from the 'new' baskets are not finalised yet, the 'old' OECD baskets will be used in this section.<sup>15</sup>

The 'old' OECD baskets cover calls to local (70% of national calls) and distant (20% of national calls) fixed line phones, mobile phones in the same network (10% of national calls), and international calls.

All packages analysed are post-paid packages. The analysis is based on packages from the leading<sup>16</sup> operator in each country. Other providers may offer lower prices.

The low intensity basket will be typical for personal usage, with a weight towards afternoon and evening, and a lower number of calls (total 202 calls per year, of these 2 are international).

The high intensity basket is more typical for professional usage, with a heavy weight towards business hours, and far more calls than the low intensity basket (total 1272 calls per year, of these 72 are international).

The baskets cover all relevant charges, i.e. 1/5 of the activation charge, annual rental charges, and call charges as defined above.

<sup>14</sup> The 'new' baskets are not compatible with the "old" ones, in that they contain an SMS element, they include calls to several mobile networks, and they do not cover international calls. The new baskets will cover more than one operator per country, and a range of packages per operator. This means that the results from the new baskets will come out very different from the results obtained in previous years.

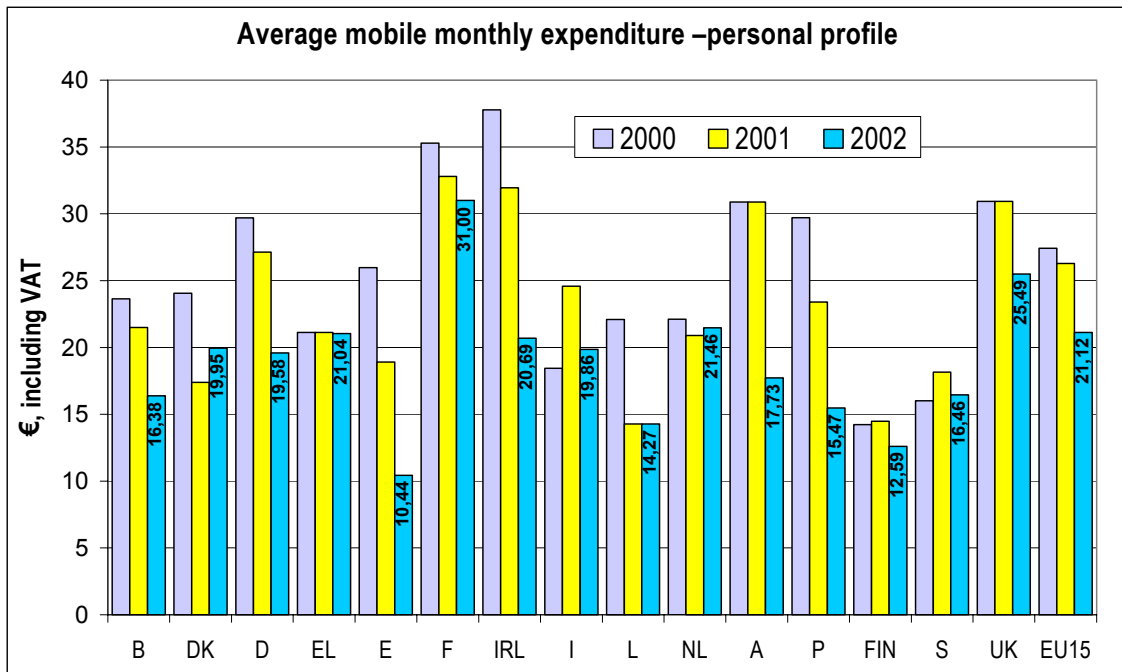
<sup>15</sup> A full description of the methodology can be found in the document 'OECD Telecommunications Basket definitions', June 2000, available at <http://www.oecd.org/pdf/M00005000/M00005340.pdf>

<sup>16</sup> In terms of number of subscribers.

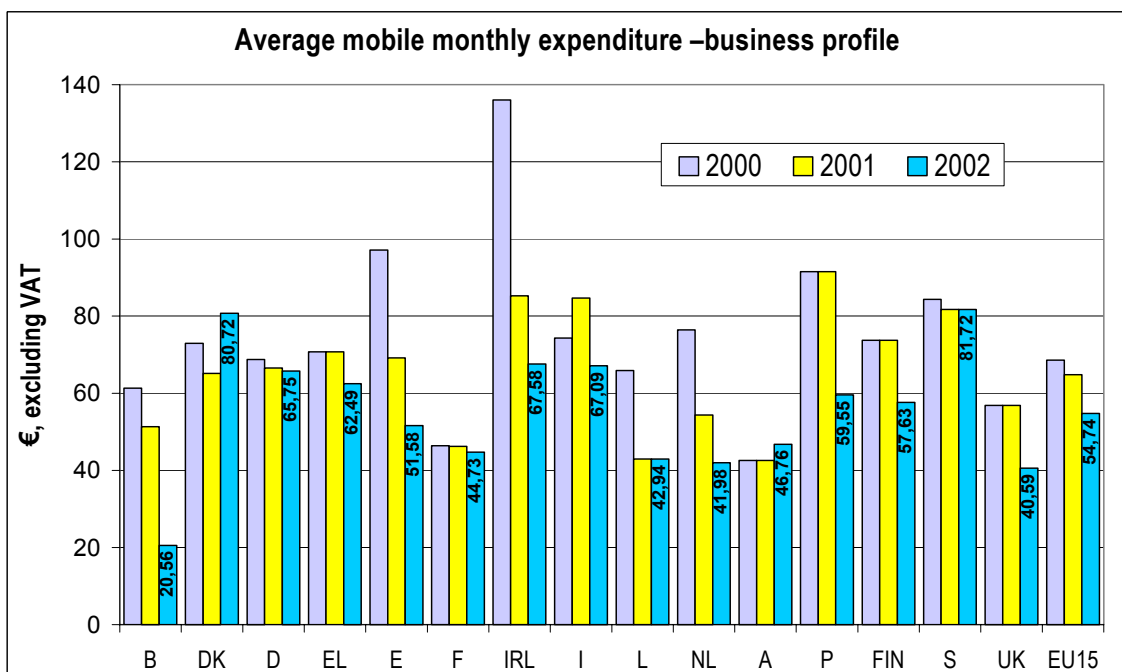
The packages from each operator have been selected as appropriate for each of the two baskets, based on an analysis of the range of packages offered.

Several packages offer an amount of free calls, included in the package price. These free calls are subtracted from the usage charges.

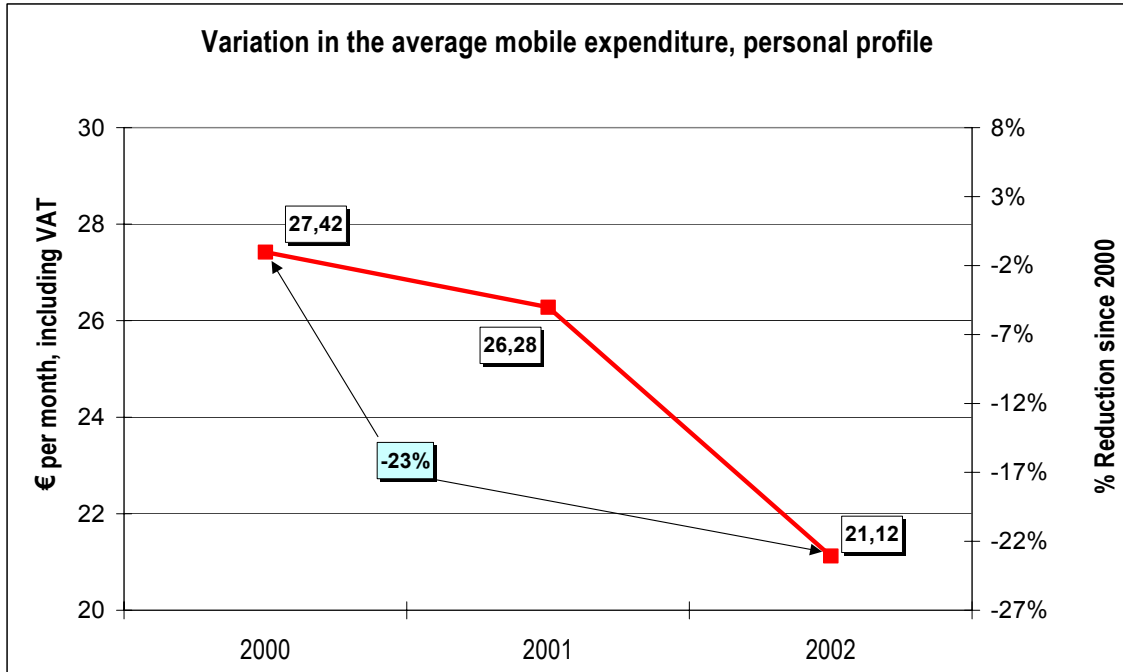
**Chart 50**



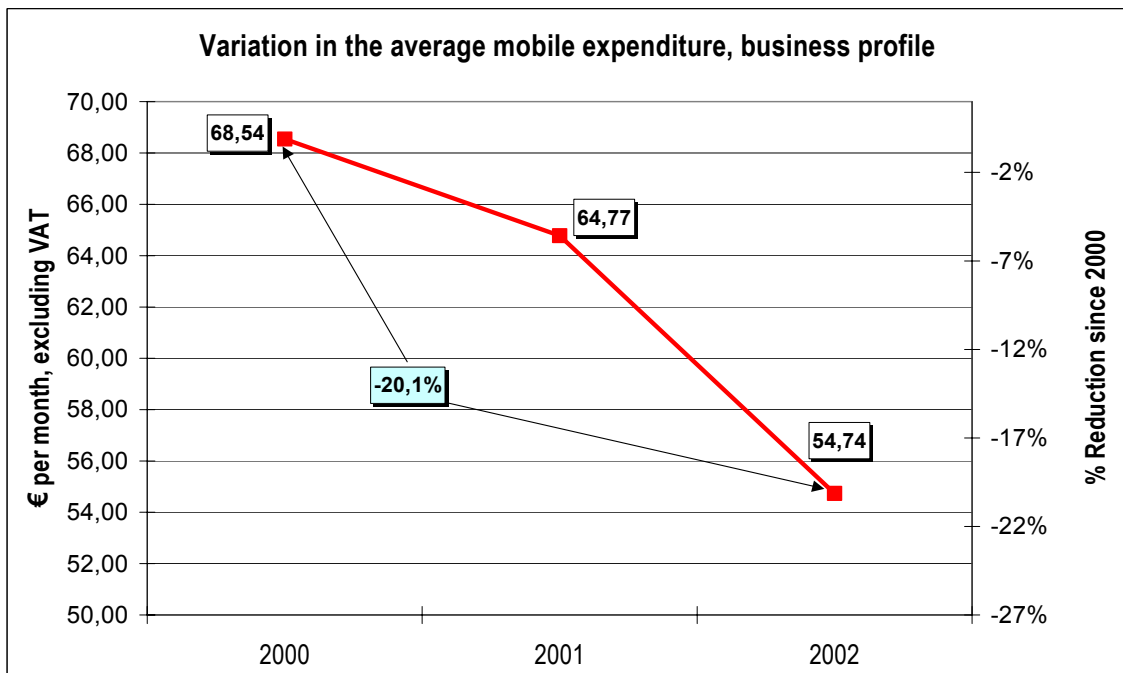
**Chart 51**



**Chart 52**



**Chart 53**





## 5 LOCAL ACCESS AND PRICING

### 5.1. BROADBAND ACCESS

This section provides data on the number and type of broadband lines supplied by both incumbent operators and new entrants in the EU. It also contains information on access lines provided by means of alternative technologies such as wireless access (WLL), satellite and cable modems.

Information have been collected from the national regulatory authorities through the ONP COM02-18 questionnaire on data for local broadband access. Given the rapid developments in this sector, it has been agreed with NRAs to update the ONP questionnaire data on a regular basis in January, July and October. Unless otherwise stated data below refer to the situation as at 1<sup>st</sup> October 2002.

For the collection of data the following concepts have been used:

- “New entrants” refers not only to alternative telecommunications operators, but also include the internet service providers (ISPs);
- In the case of full unbundling, the copper pair is rented to a third party for its exclusive use;
- As fully unbundled lines (ULL) supplied by incumbent to new entrants could in principle be used for services other than broadband the total number of ULL for access to internet will be lower than the total number of ULL;
- In the case of shared access, the incumbent continues to provide telephony service, while the new entrant deliver high speed data services over the same local loop;
- Bitstream access refers to the situation where the incumbent installs a high speed access link to the customer premises (e.g. by installing its preferred ADSL equipment and configuration in its local access network) and then makes this link available to third parties, to enable them to provide high speed services to customers. The incumbent may also provide transmission services to its competitors, to carry traffic to a “higher” level in the network hierarchy where new entrants may already have a broadband point of presence;
- In contrast to bitstream access, simple resale occurs where the new entrant receives and sells on to end-users - with no possibility of value-added features to the DSL part of the service - a product that is commercially similar to the DSL product provided by the incumbent to its own retail customers, irrespective of the ISP service that may be packaged with it;
- Retail broadband access refers to the access provided to the end users;
- Incumbents’ DSL lines refers to the lines provided to end users by the incumbent, its subsidiaries or partners;
- Other means of accessing the internet indicates connections by means of satellite, fibre optic, powerline communications, etc;



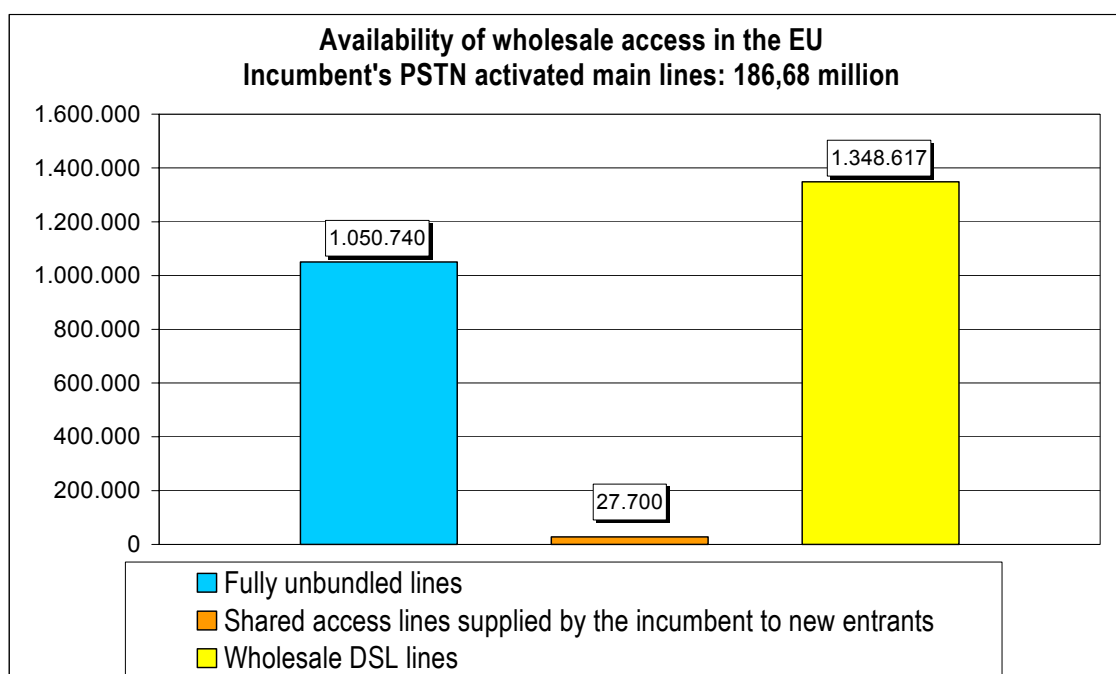
### 5.1.1. Wholesale access

This section shows the availability of wholesale access supplied by incumbents to new entrants. Separate figures are provided for full unbundled lines, shared access and bitstream access (wholesale DSL lines).

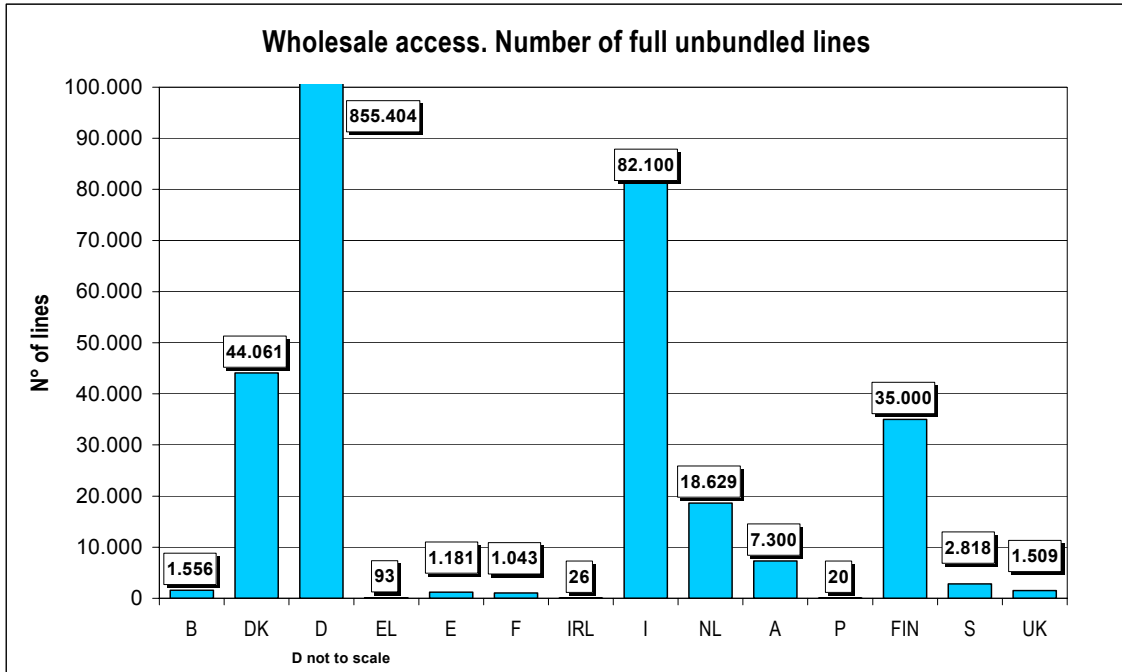
**Table 4 Number of agreements for full ULL, shared access, bitstream access and resale.**

|                | N. of agreements on fully unbundled lines | N. of agreements on shared lines | N. of agreements Wholesale DSL lines supplied. Bitstream access | N. agreements Wholesale DSL lines supplied. Simple resale |
|----------------|---|----------------------------------|---|---|
| <b>B</b>       | 7   | 4                                | 4   | 12  |
| <b>DK</b>      | 16  | 5                                | 5   | 1   |
| <b>D</b>       | 91  | 3                                | 2   | 52  |
| <b>EL</b>      | 2   | 0                                | 0   | 0   |
| <b>E</b>       | 6   | 6                                | 38  | n.a.  |
| <b>F</b>       | 9   | 9                                | 4   | 5   |
| <b>IRL</b>     | 1   | 1                                | 0   | 0   |
| <b>I</b>       | 31  | 2                                | 50  | n.a.  |
| <b>L</b>       | n.a.                                      | n.a.                             | n.a.  | n.a.  |
| <b>NL</b>      | 10  | 10                               | n.a.  | n.a.  |
| <b>A</b>       | 12  | 0                                | 24  | 0   |
| <b>P</b>       | 4   | n.a.                             | 4   | n.a.  |
| <b>FIN</b>     | 180                                       | 80                               | 60  | 35  |
| <b>S</b>       | 33  | 33                               | 4   | 5   |
| <b>UK</b>      | 53  | 5                                | 309   | 0   |
| <b>Tot. EU</b> | <b>455</b>                                | <b>158</b>                       | <b>504</b>  | <b>110</b>  |

**Chart 54**



**Chart 55**



**Chart 56**

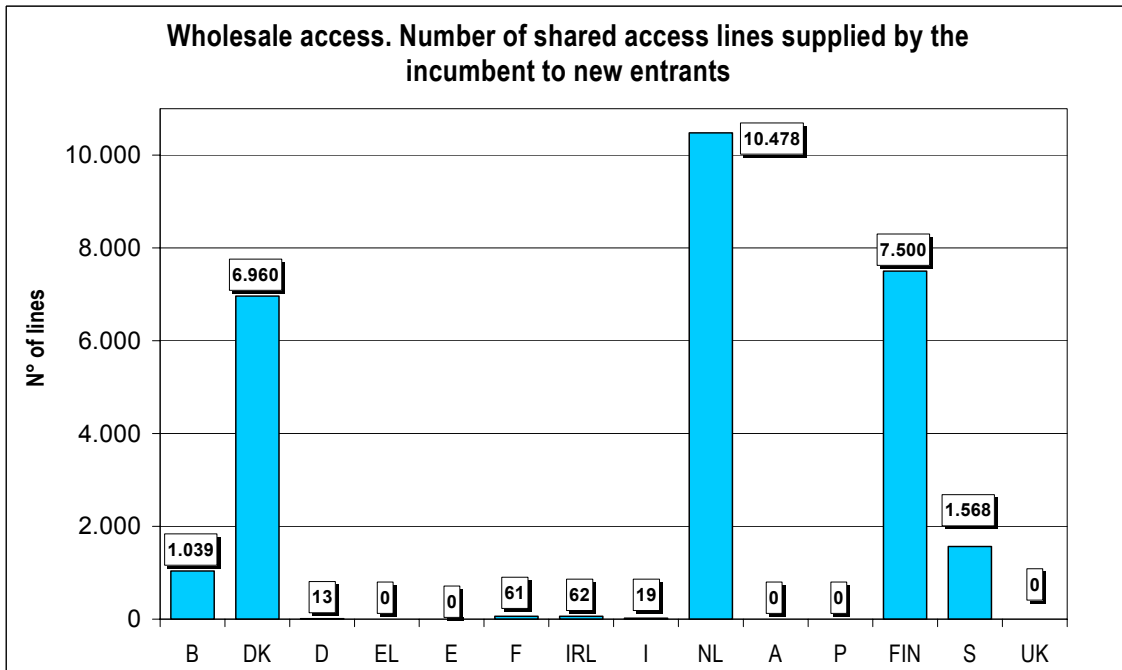
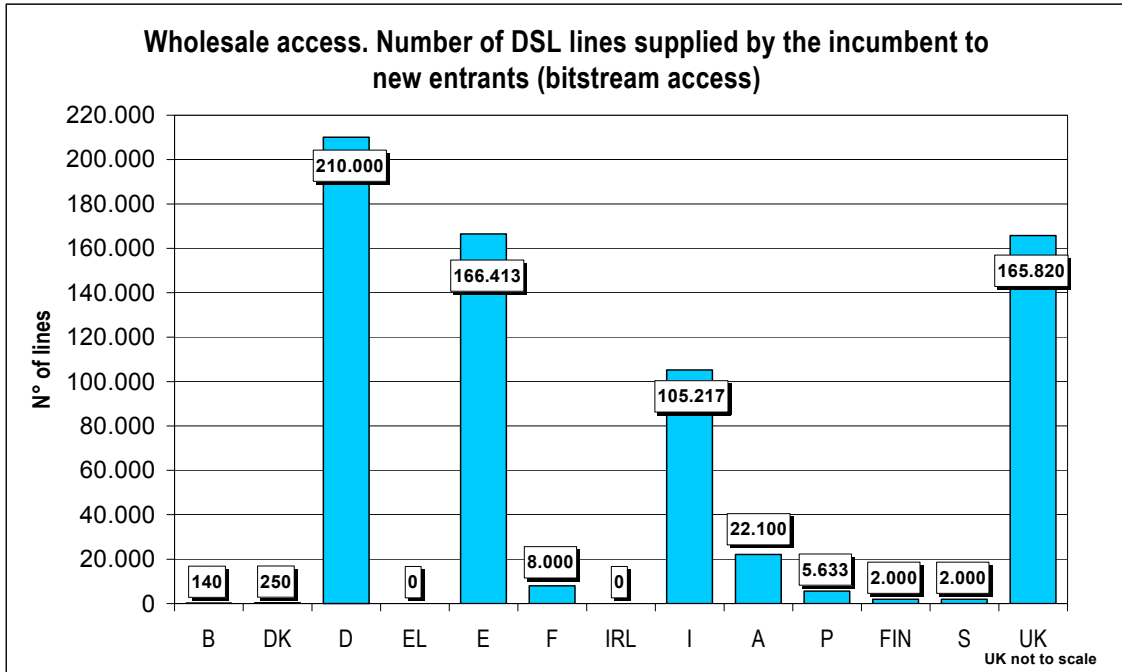


Chart 57



### 5.1.2. Retail broadband access to internet

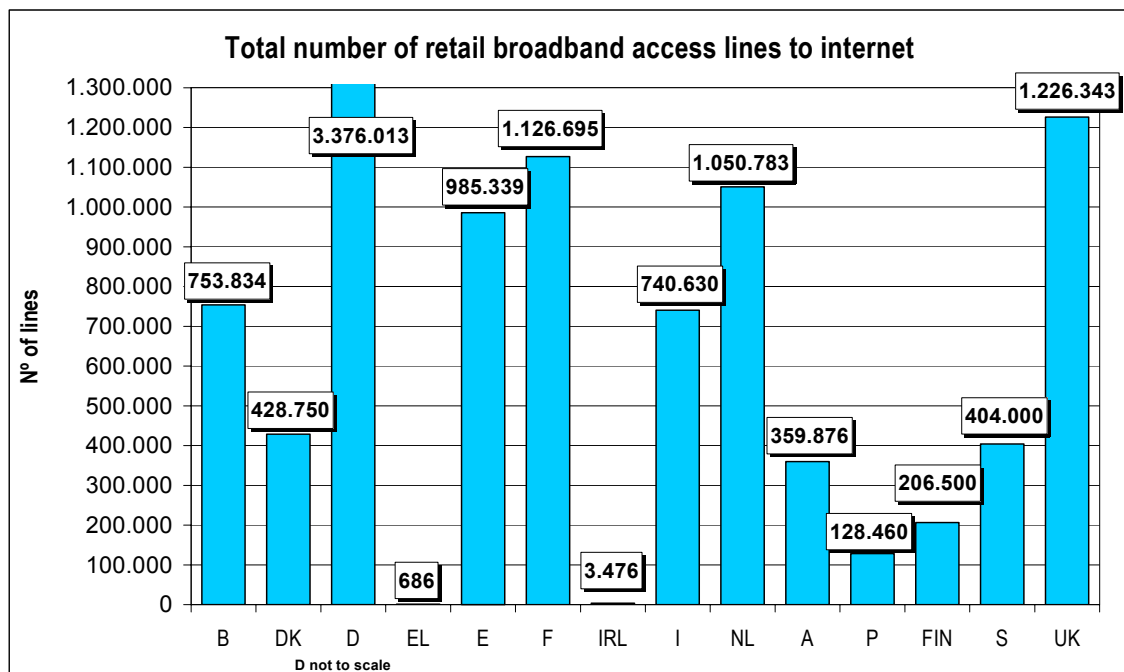
This section show the availability of broadband access to internet for end-users provided by incumbents (its subsidiary or partners) and by new entrants (alternative telecom operators or Internet Service Providers).

Internet broadband access can be provided through different means: DSL lines, wireless local loop (WLL), cable TV access (cable modem), dedicated leased lines and other access (like satellite, fibre optic powerline communications, etc..)

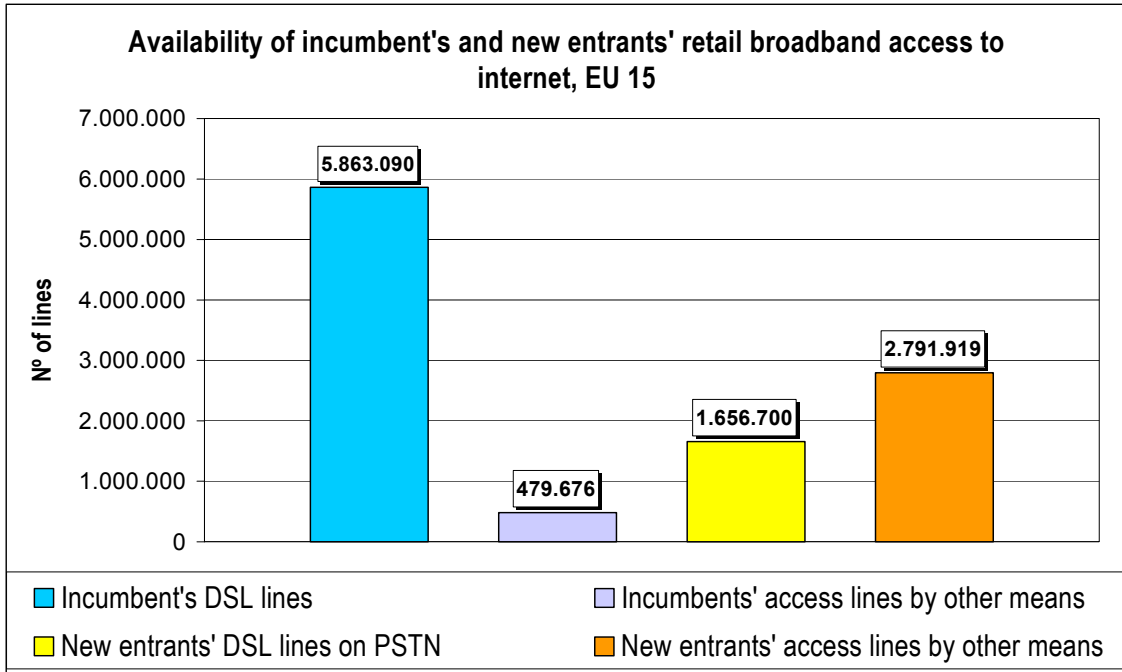
New entrants' DSL lines can be provided to end users by means of full unbundled, shared access, bitstream access or resale.

Chart 58 shows the total number of broadband access to internet for each Member States provided by both incumbents and new entrants and including all means of broadband connections.

**Chart 58**



**Chart 59**



**Chart 60**

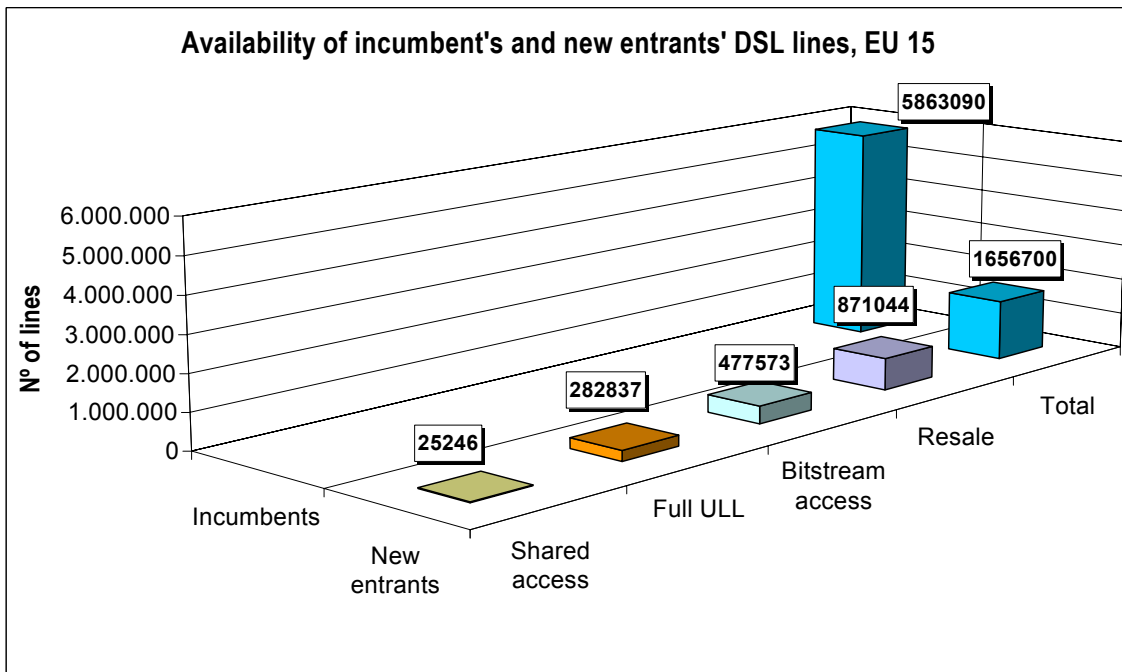
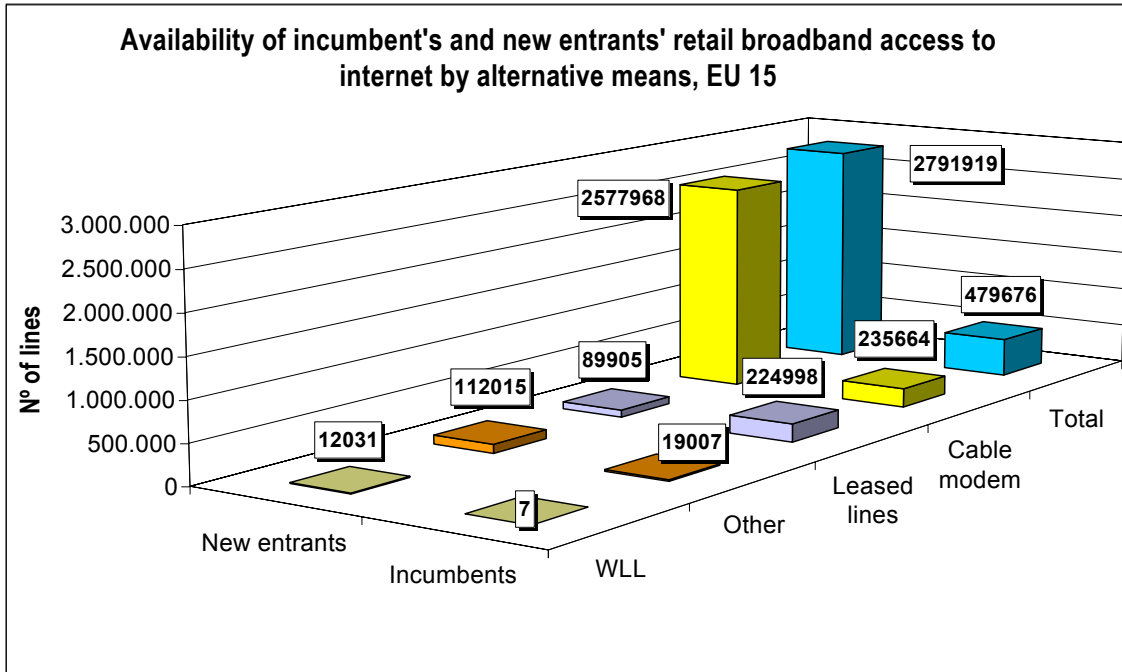
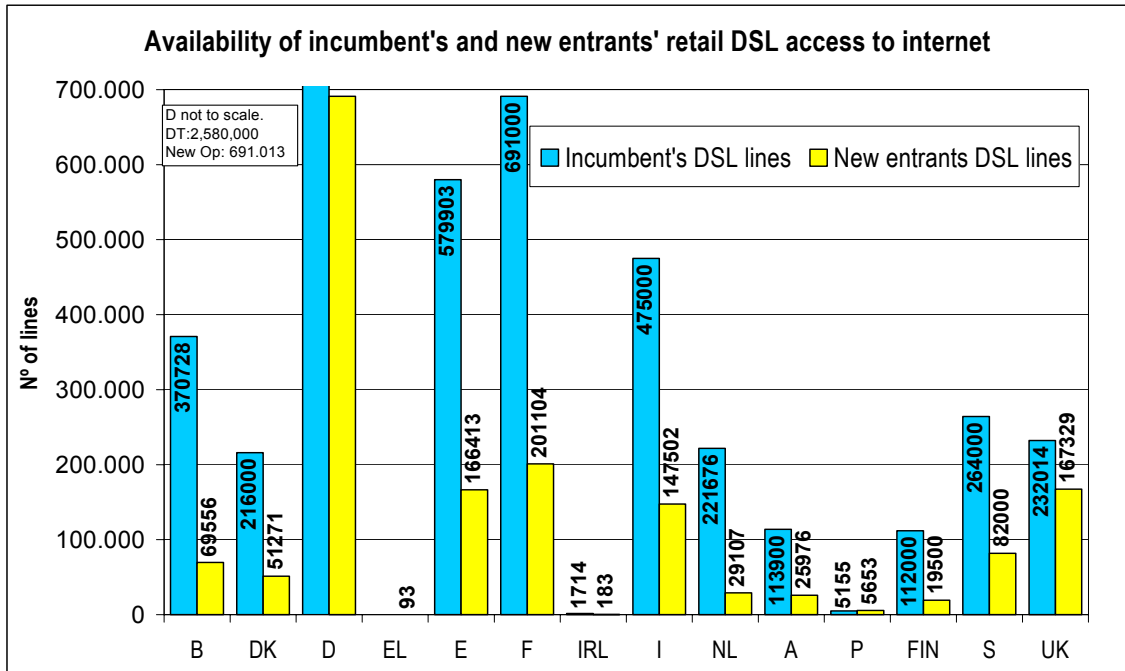


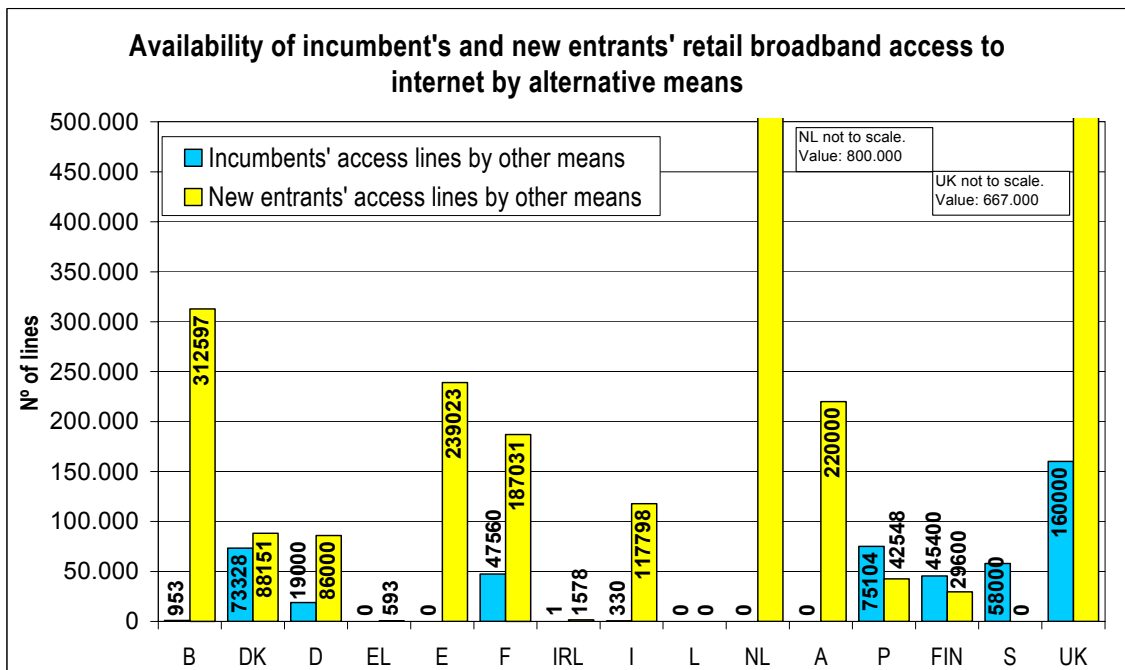
Chart 61



**Chart 62**



**Chart 63**



**5.2.PRICES FOR UNBUNDLED LOCAL LOOP**

This section show the charges per unbundled loop (monthly rental and connection) in case of full unbundled and shared access of the loop. Estimates of total average monthly rental cost (based on the total costs for the first year) is also presented.

In the following we assume that the loop is active and will be used to provide DSL services. In fact some Member States (Belgium, Luxembourg and Portugal) charge a different price for the loop, depending on if it is used for the voice telephony services or for DSL services. Furthermore, Belgium applied a different price for non-active loop and in some Member States charges are different in case of subsequent access.

### 5.2.1. PRICES FOR FULL UNBUNDLED LOCAL LOOP

In Belgium a supplementary fee of 28.29 for disconnection is also charged. It should be noted that a disconnection fee is not charged to the incumbent's own retail market.

Data for the connection fee in Germany refers to a unique payment option.

The connection charge for Italy, also includes the charges for the "verification/preparation of the copper line for the provision of ADSL service", that is always paid by the OLOs, except in the case of an existing customer changing from the incumbent to the OLO.

Data for Finland refer to a weighted average of 44 SMP operators providing ULL. Prices vary between 10 -31 € for the monthly rental and between 105 - 303 € for the connection fee.

Data for connection fee in Sweden refers to the first access. Charges for the following access is 85€.

Figure for the United Kingdom refer to an average based on determined price of 194€ per annum for the monthly rental and on a price of 140€ per annum for connection fee.

Chart 64

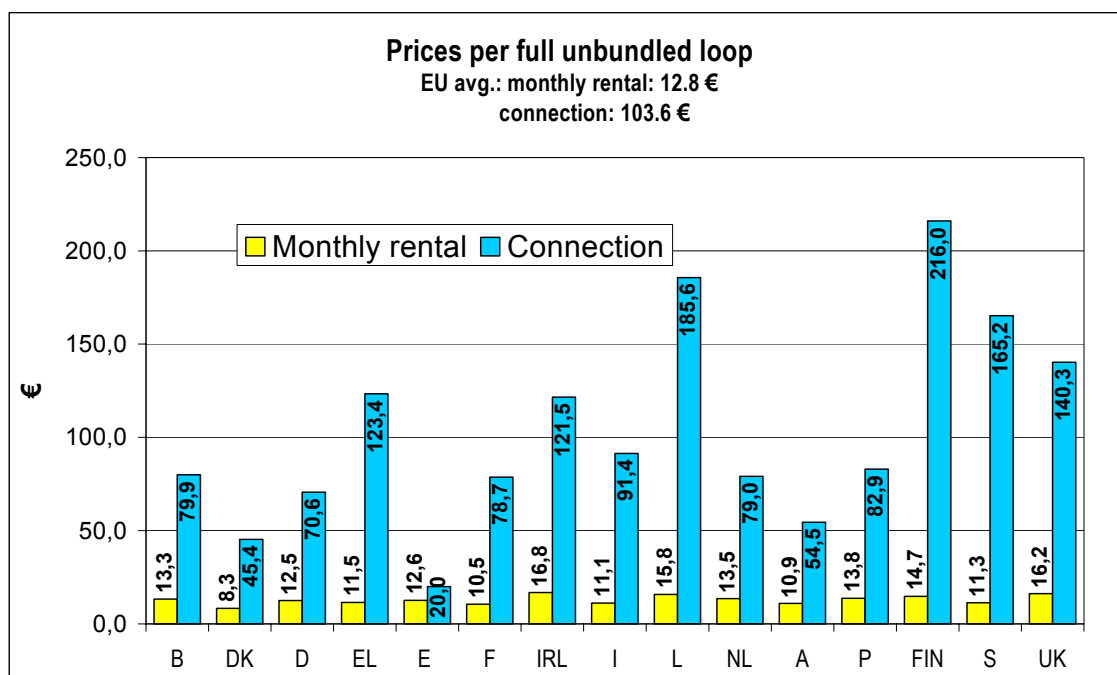
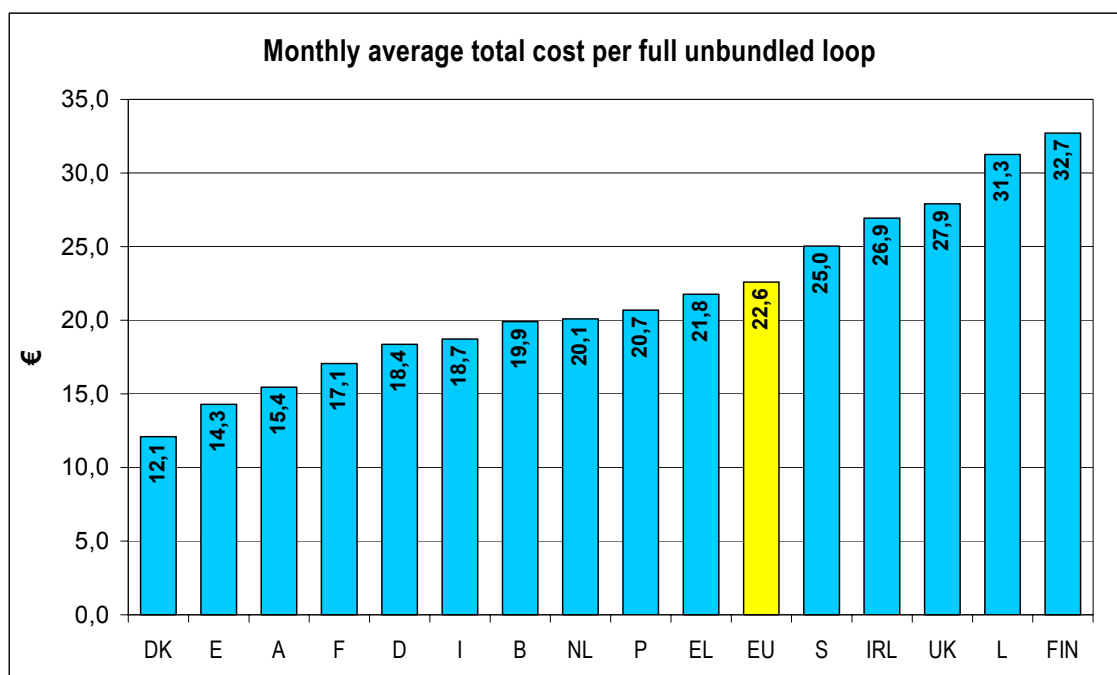




Chart 65



- Estimates are based on the total cost for the loop for the first year.

### 5.2.2. PRICES FOR SHARED ACCESS LOCAL LOOP

In Belgium a supplementary fee of 28.73€ for disconnection is also charged. It should be noted that a disconnection fee is not charged to the incumbent's own retail market.

Connection fee in Denmark decrease to 57€, when taking over an existing shared access connection.

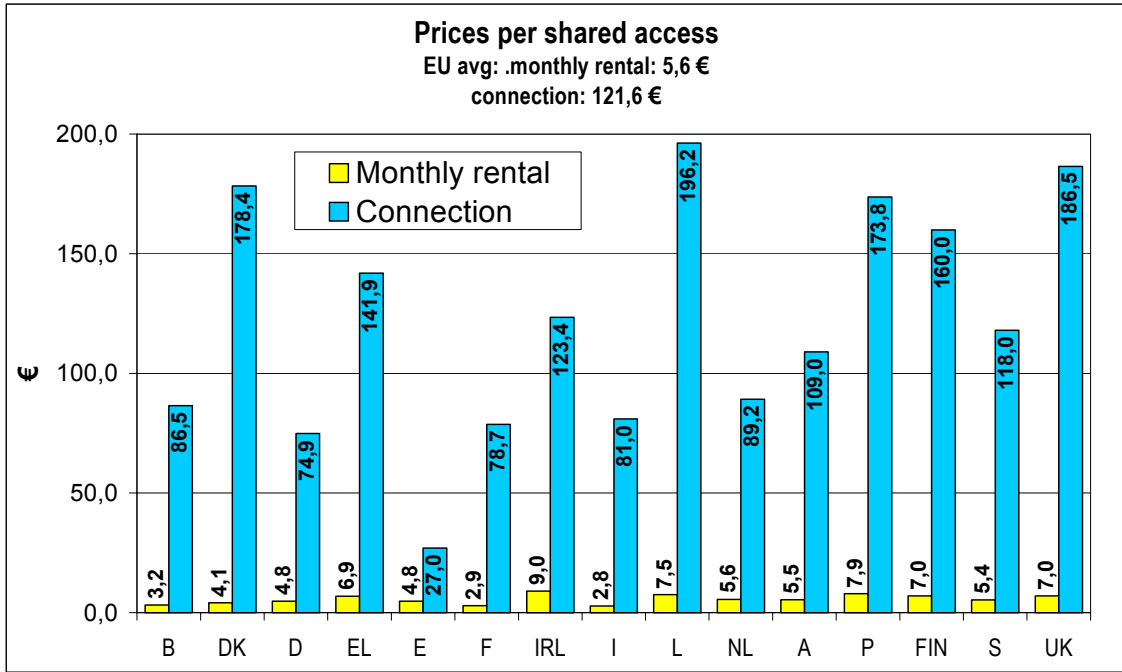
Data for the connection fee in Germany refers to a unique payment option.

Data for Finland refer to a weighted average of 44 SMP operators providing shared access to local loop. According to the Telecom Market Act, monthly rental for shared access may add up to maximum half the price for full unbundling. Prices for connection fees vary between 57€ and 260€.

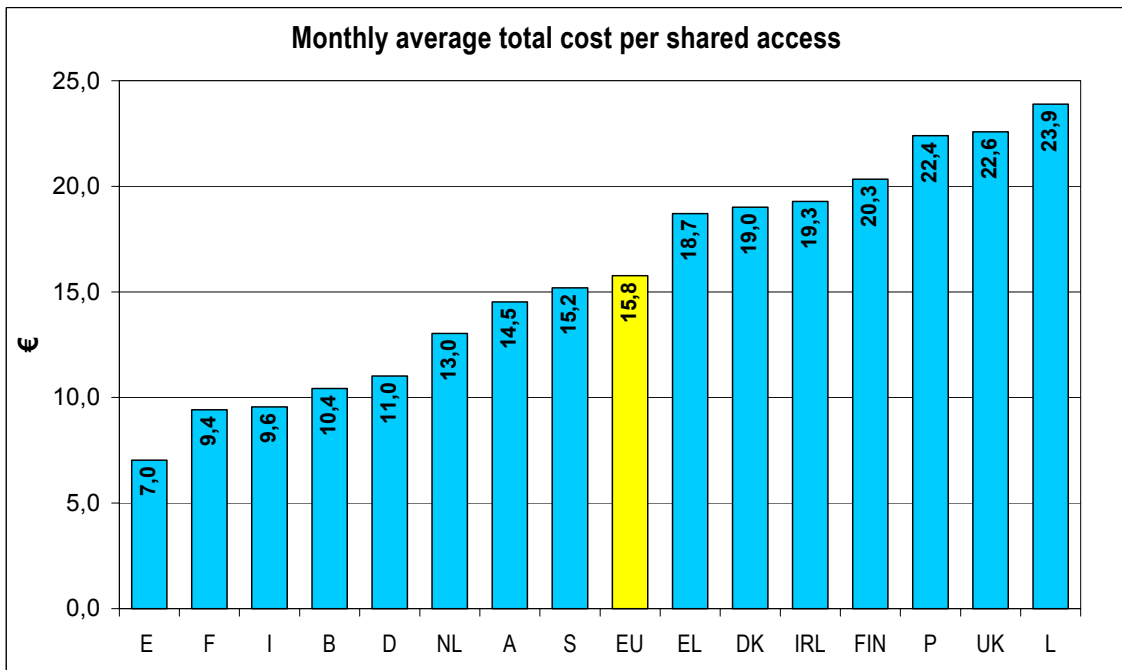
Data for Sweden for connection fee refers to the first access. Charges for the following access is 85€.

Data for the United Kingdom refer to an average based on determined price of 84€ per annum for the monthly rental and on a price of 186€ per annum for connection fee.

**Chart 66**



**Chart 67**



- Estimates are based on the total cost for the loop for the first year.



## 6 INTERNET SERVICES

### 6.1. INTERNET MARKET DATA

This section provides information about the penetration of the internet in European households as well as about the number of Internet Service Providers (ISPs).

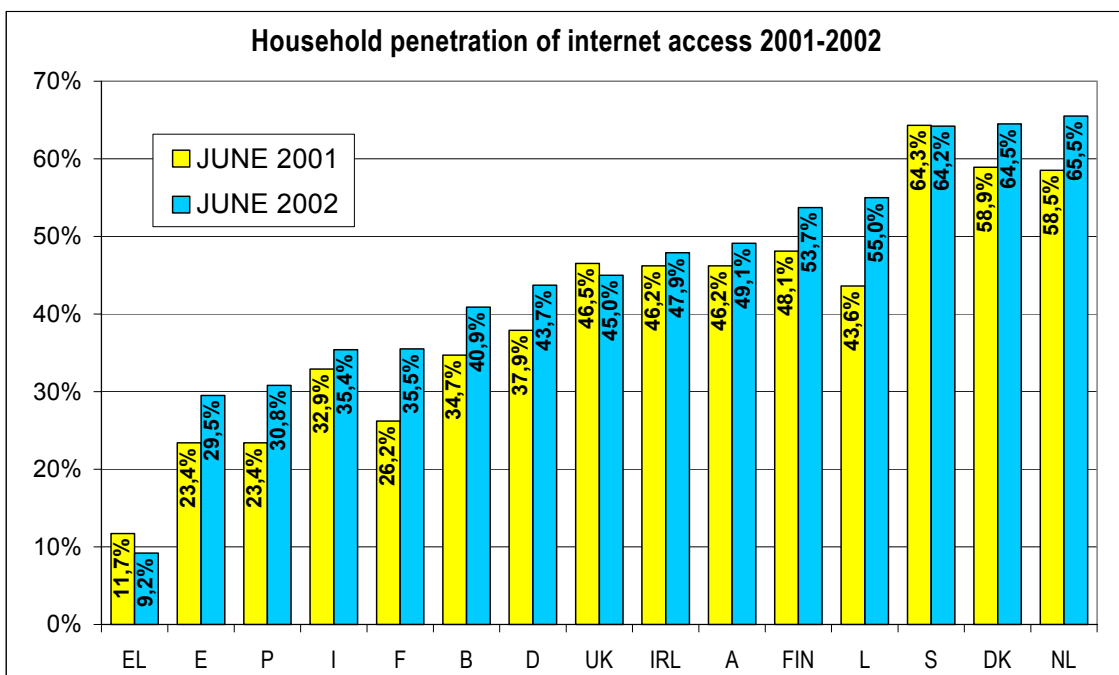
The following chart shows the percentage of households having internet access, irrespective of the technologies used: normal public switched telephone network (PSTN) or broadband access (DSL, cable modem, ISDN, WLL).

The source of the data on internet penetration is the Flash Eurobarometer 'Internet and the public at large' carried out for the Commission by EOS GALLUP Europe between May and June 2002.

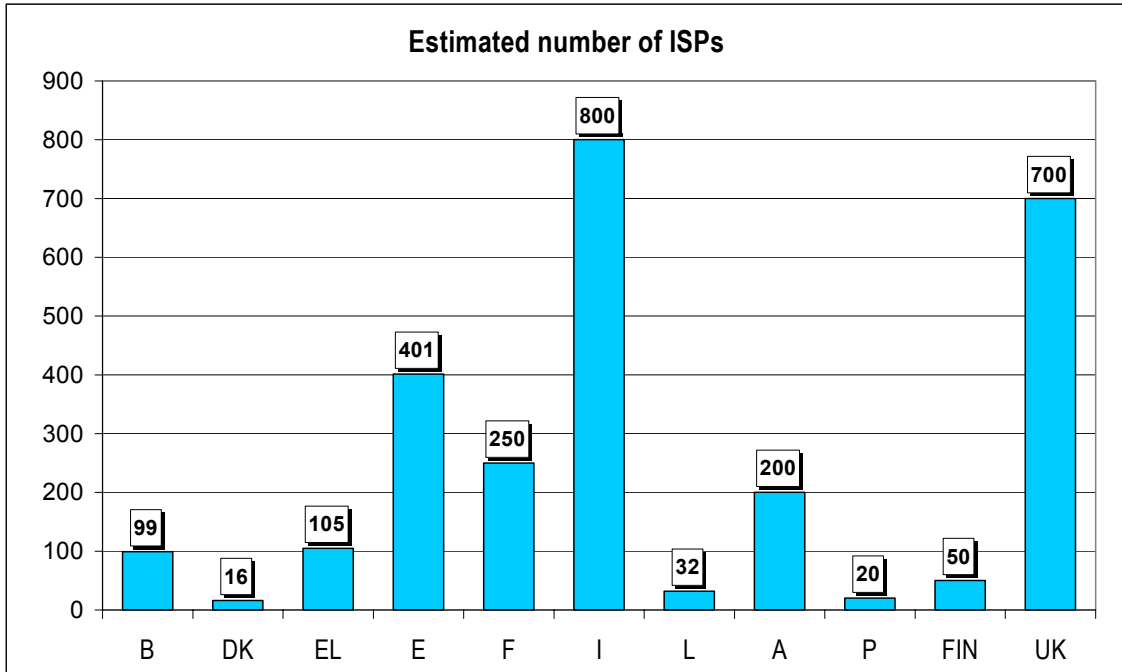
A new survey will be carried out in November 2002 for which data will be available in December 2002.

The data on the number of ISPs and the availability of broadband access have been provided by the national regulatory authorities.

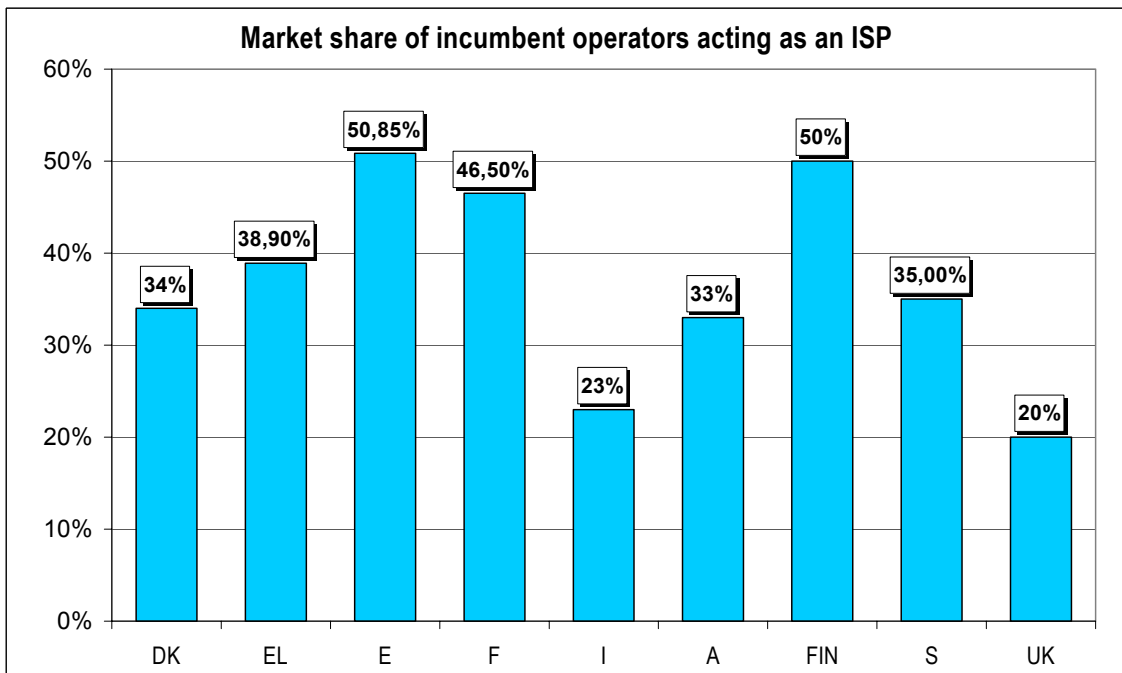
Chart 68



**Chart 69**

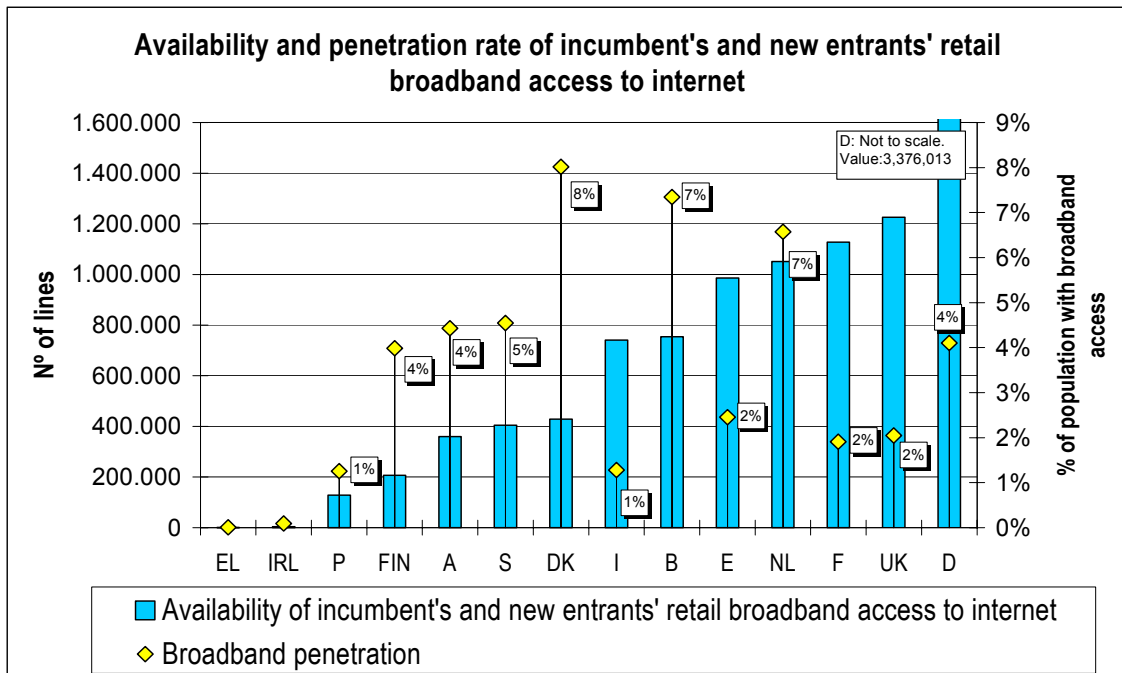


**Chart 70**



- Data for B, D, IRL, L, NL and P are not available.

**Chart 71**



## 6.2. INTERNET ACCESS PRICING

This section deals with the cost of internet usage for residential (20 hours off-peak time usage) and business (40 hours peak time usage of 40 ) through dial-up modems for access.

The figures and information are taken from a study carried out for the European Commission by Total Research Teligen and give the position as at 1 May 2002.

For each profile of usage, the following charts show the lowest prices of dial-up services to ISPs via a standard telephone line in each country. This has required the analysis of the telephony charges in the 15 countries, in addition to the actual ISP charges, in order to find the best overall option for the types of access described by the basket profiles..

The overall summary of the dial-up access information collected covers 92 different providers with 253 packages in the 15 countries.

The criteria for selecting the ISPs were that:

- The top 5 ISPs in each country should be covered;
- Fewer ISPs could be covered as long as the combined market share was at least 80%;
- If the top 5 ISPs had less than 50% of the market, additional ISPs should be covered up to around 80% combined market share.

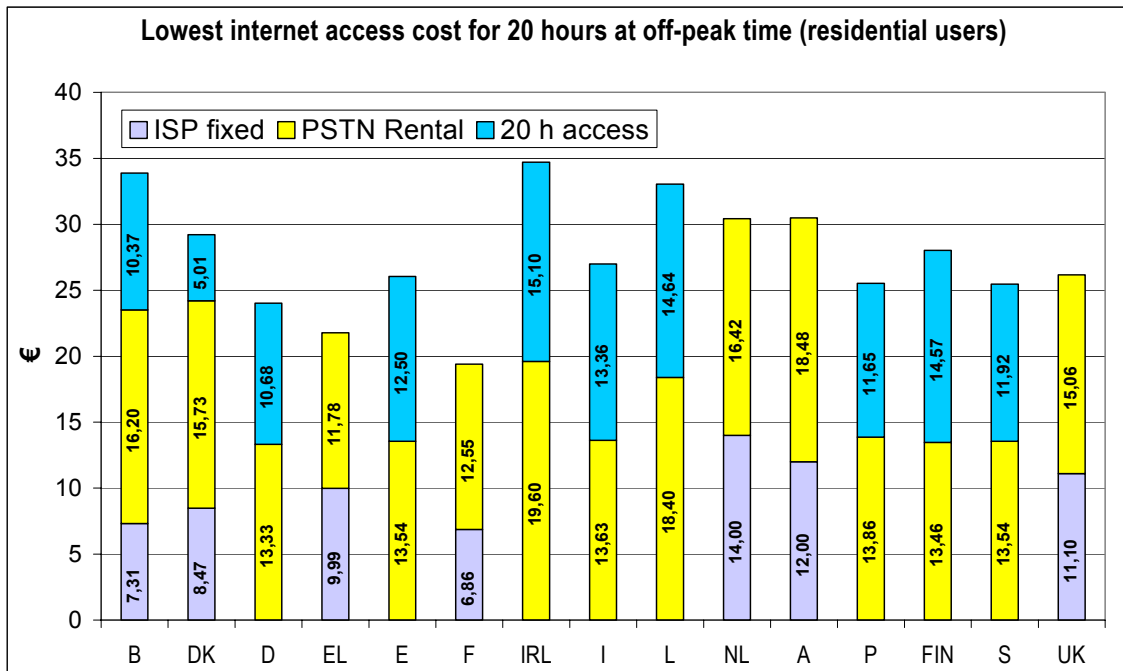
The analysis of dial-up access includes:

- PSTN line rental charges for residential users. Any additional charges related to the selection of the most appropriate tariff package for internet access is also included. This may for example be a telephony charge related to a certain access option;
- PSTN call charges as applicable for internet access, either using the standard local call charges, or charges defined in special internet access tariffs. Additional discounts are also analysed in this context, where they may provide even lower access call charges, for example after a certain period of access time. It should be noted that with many ISP services there are no call charges, or different call charges from the carrier, as determined by the ISP;

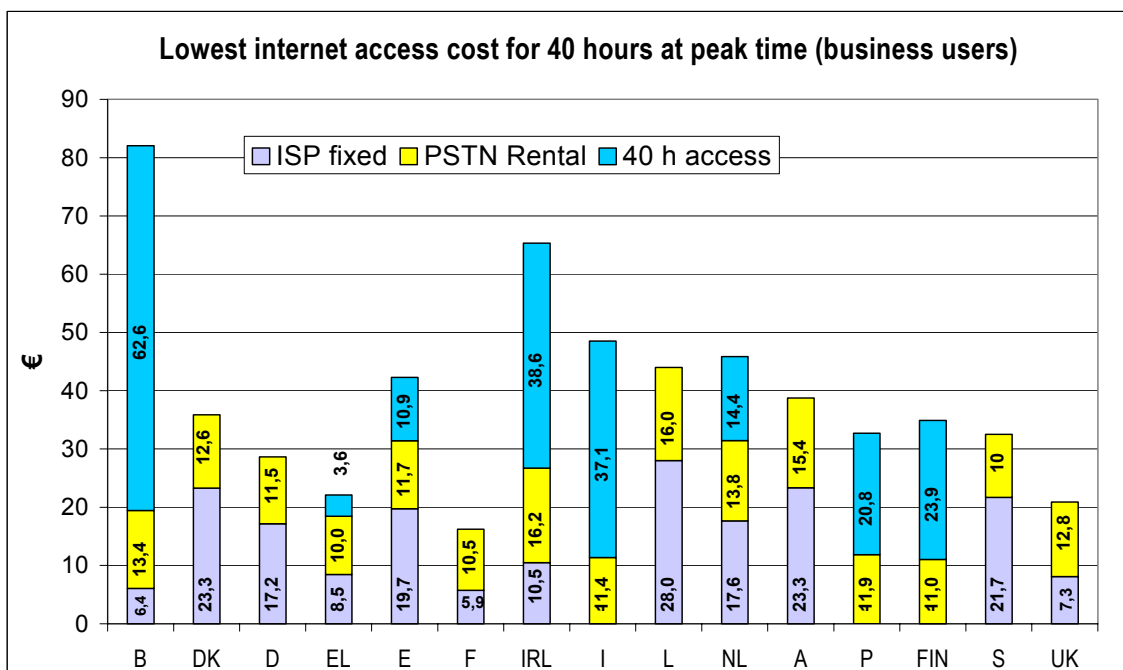
- ISP monthly rental and/or connection charges for each ISP package. Most ISPs identify their packages for use by residential and/or business users;
- ISP charges related to usage. Such charges are normally given on a per hour basis, and are accumulated to the number of hours or minutes of usage per month. Any amount of inclusive time offered with the monthly rental charge is deducted from the actual usage. Many ISP services do not have such charges;

Many operators or ISPs will have special dial up tariffs for internet access, and these have been used where appropriate.

**Chart 72**



**Chart 73**



## INCUMBENTS' RETAIL TARIFFS FOR PUBLIC FIXED VOICE TELEPHONY

This section examines the charging system, the line rental charges and the main tariffs for public fixed voice telephony charged by the incumbent operators in each Member State<sup>17</sup> in August 2002. The price trend over the past four years is also analysed.

The incumbent operators still retain a large market share, but new entrants are increasingly gaining market shares by offering cheaper prices for certain types of calls (usually long-distance or international) or destination. The prices charged by incumbents do not necessarily, therefore, represent the lowest prices available. A comparison between the rates charged by incumbents and alternative operators for a sample of countries is shown at the end of this section.

The figures and information are taken from a study carried out for the Commission by Total Research-Total Research Teligen. The data are collected from primary sources (i.e. directly from the incumbent operators).

Different sets of charges for fixed national voice telephony services are shown in the following sections:

- the minimum costs for different types of calls (local, long-distance, international calls and calls towards mobile networks), depending on the charging system adopted;
- the monthly rentals charged by incumbent operators;
- the charges for a composite basket of calls (local, long-distance, international fixed calls and calls to mobile), that gives an estimate of the average monthly spending by a typical "European business/residential user" for the whole range (national and international) of calls;
- the charges for a basket of national calls, that gives an estimate of the average monthly spending by a typical "European business/residential user" for fixed national calls;
- the basket of international calls for each country that indicates the average price of a single call from the originating country to all other OECD destinations. In addition, the price of individual calls to specific destinations are also shown.
- the price of some individual calls (3- and 10-minute local, long-distance and international calls) at peak time, inclusive of any initial charge. Furthermore, for incumbents which apply unit-based charging, the price of a whole unit is calculated.

For the various types of calls, a benchmark based on a comparison with US and Japan is also included. For the USA, the prices for national calls are those charged by Nynex/Bell Atlantic/Verizon (in New York city)<sup>18</sup> and the prices for international calls are those charged by

<sup>17</sup> The incumbent operators considered are the following: Belgacom for Belgium, Tele Denmark for Denmark, Deutsche Telekom for Germany, OTE for Greece, Telefonica for Spain, France Telecom for France, Eircom for Ireland, Telecom Italia for Italy, P&T Luxembourg for Luxembourg, KPN for the Netherlands, Telekom Austria for Austria, Portugal Telecom for Portugal, Sonera for Finland, Telia for Sweden, British Telecom for the United Kingdom.

<sup>18</sup> The operator has changed name twice during the past five years. Prices for the same operator may vary depending on the specific user location in the area covered by the local operator. We have taken the prices for New York city.



AT&T. For Japan, the national call prices are those charged by NTT and the international call prices are those charged by KDD.

The EU average tariffs shown in the charts are weighted average (by population of the Member States in 1999) rather than simple averages.

## **7.1.CHARGING SYSTEM**

The billing system for public voice telephony services usually comprises two components: an initial charge applied at the beginning of a call and a charge for the remainder of the call (that may not depend on the type of initial charge used).

### **7.1.1. Initial charges**

There are different types of charges applied at the beginning of a call, either alone or in combination. The charging method used for the remainder of the call may not depend on the type of initial charge used. The types of charges are:

Call set-up charge raised at the start of the call (when the call is answered). This charge does not offer any call time.

Initial charge that is used in the same way as call set-up, but in addition includes a certain number of seconds call time before normal time-based charging starts.

Unit charge does in effect work the same way as the initial charge. A full unit is charged at the beginning of the call, providing a certain number of seconds call time until the next unit is charged. Depending on the principle used by the operator (synchronous / asynchronous) the number of seconds call time in the first unit may be less than the specified unit duration.

Minimum charge is normally used with per second billing, to ensure the operator minimum revenue per call. If the call duration is short, the actual call charge may be less than the minimum charge. In such cases the minimum charge will be applied.

### **7.1.2. Charging system during the call**

There are in principle 3 ways of charging calls. The fact that most operators tend to publish the duration charges on a per minute basis does not itself indicate which system is used. The 3 principles are:

Real time charging (also known as per second billing) allows the cost of the call to be calculated to the exact duration of the call (normally nearest second). Call set-up charge, initial charge or minimum charge may be applied to this structure, in addition to the duration charge.

Unit based charging uses a fixed price unit. The duration of this unit will vary with the destination of the call and time of day. Call duration will always be raised to a multiple of whole units, so the user will nearly always pay for more time than is used. Call set-up charge may be applied to this structure, but is relatively rare.

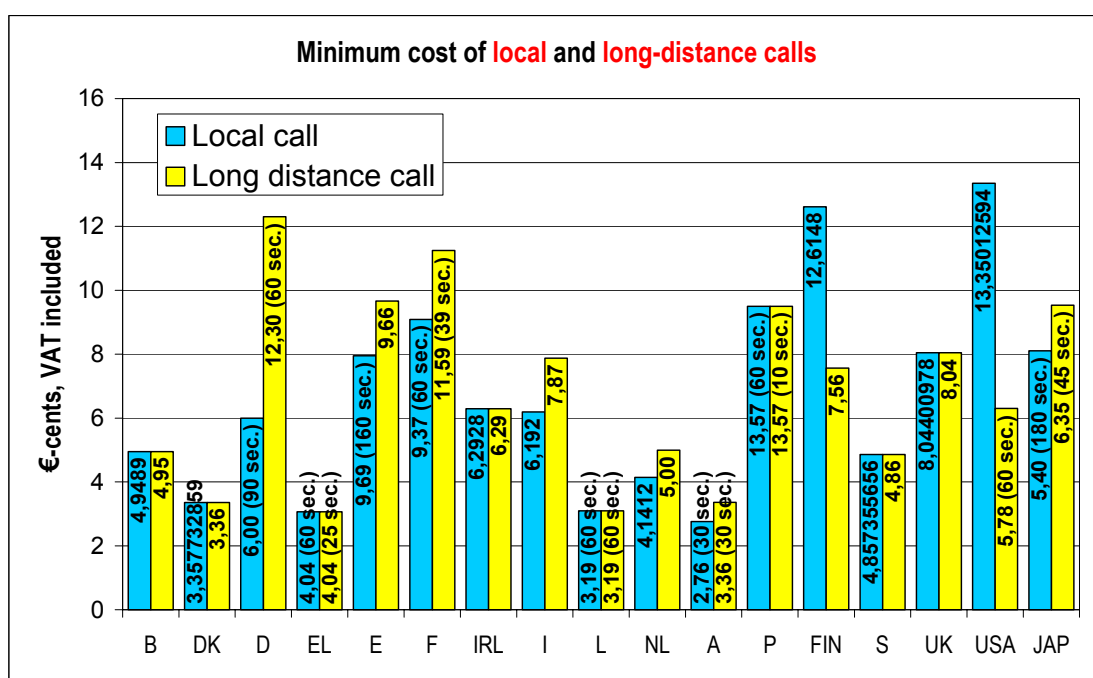
Fixed period charging uses a variable price, but fixed duration unit. The call is normally charged on a per minute basis, or per 6 seconds. The price for the period will vary with destination and time of day. The charged duration of the call will be raised to a multiple of whole periods. A call set-up charge or initial charge is often implemented in the form of a higher charge for the first minute or period. This initial charge may vary with destination and time of day.

In August 2001 only the incumbents in Greece, Luxembourg, Austria and Germany (for local and international calls<sup>19</sup>) still use a unit-based charging system. No changes are reported since the situation in August 2001.

Call set-up charges may vary according to the type of call (local, long-distance, international, calls to mobile), and for international calls according to destination. In the case of international calls, the minimum cost of a call may change according to the destination.

The following charts show the minimum cost, due to initial charges, for local, long-distance and international calls and calls to mobile charged by the incumbent operators. The free call time (i.e. the number of seconds of call time before normal time-based charging starts) is shown in brackets. Values are expressed in €, including VAT. It should be noted that while some operators apply identical set-up charges to local and long-distance calls, the free call times can vary, as is the case in Austria and Portugal.

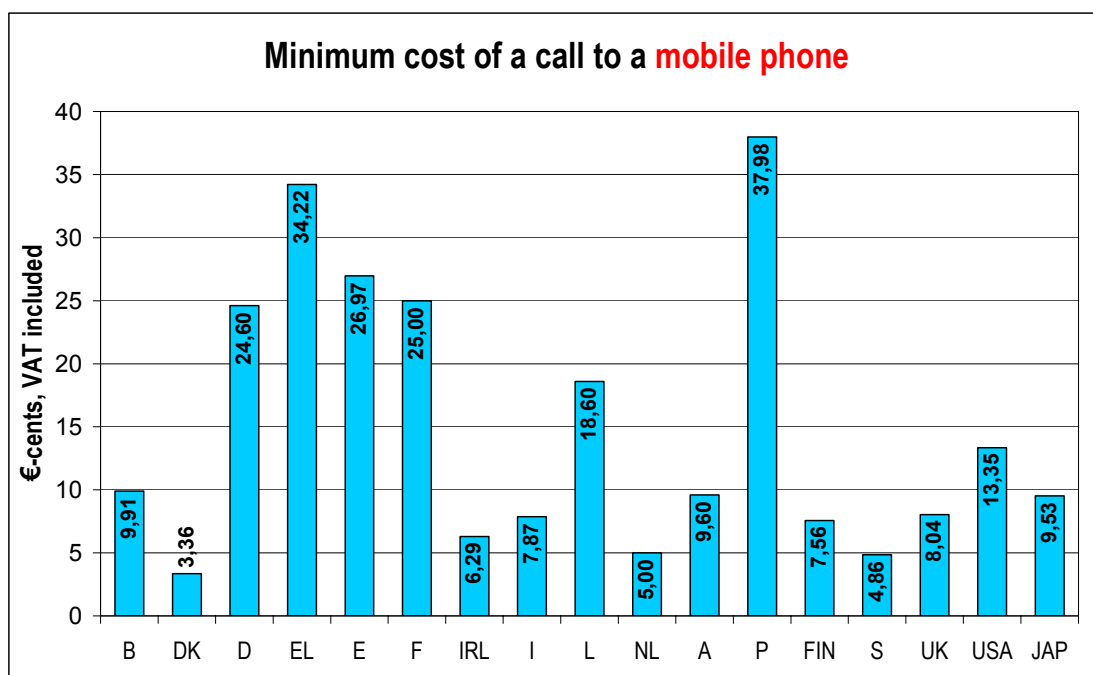
Chart 74



- Austria: Peak time

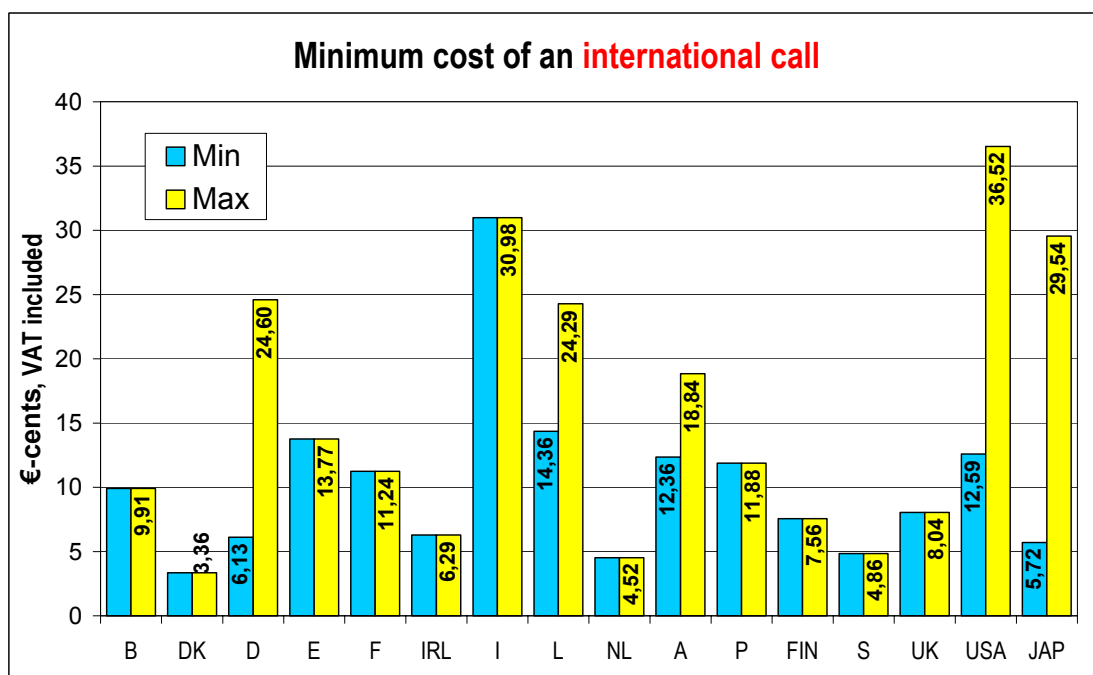
<sup>19</sup> National calls and calls to mobile are charged per minute rather than the normal unit.

Chart 75



- Austria: Peak time

Chart 76



- Data for EL not available

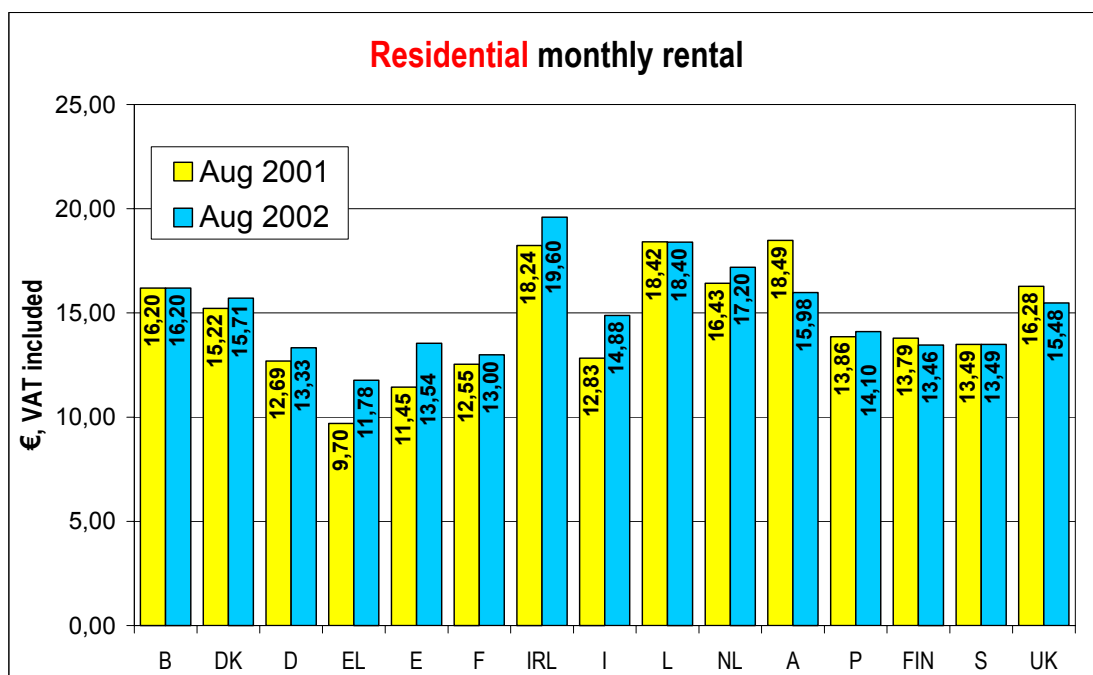
## 7.2. MONTHLY RENTAL CHARGED BY THE INCUMBENT OPERATORS

The following charts show the incumbent's monthly line rental charges for residential and business users in August 2002 and the variation in nominal terms in each country since August 1998. In order to reflect the real charges actually paid by users, values are expressed in €, including VAT for residential users and excluding VAT for business users.

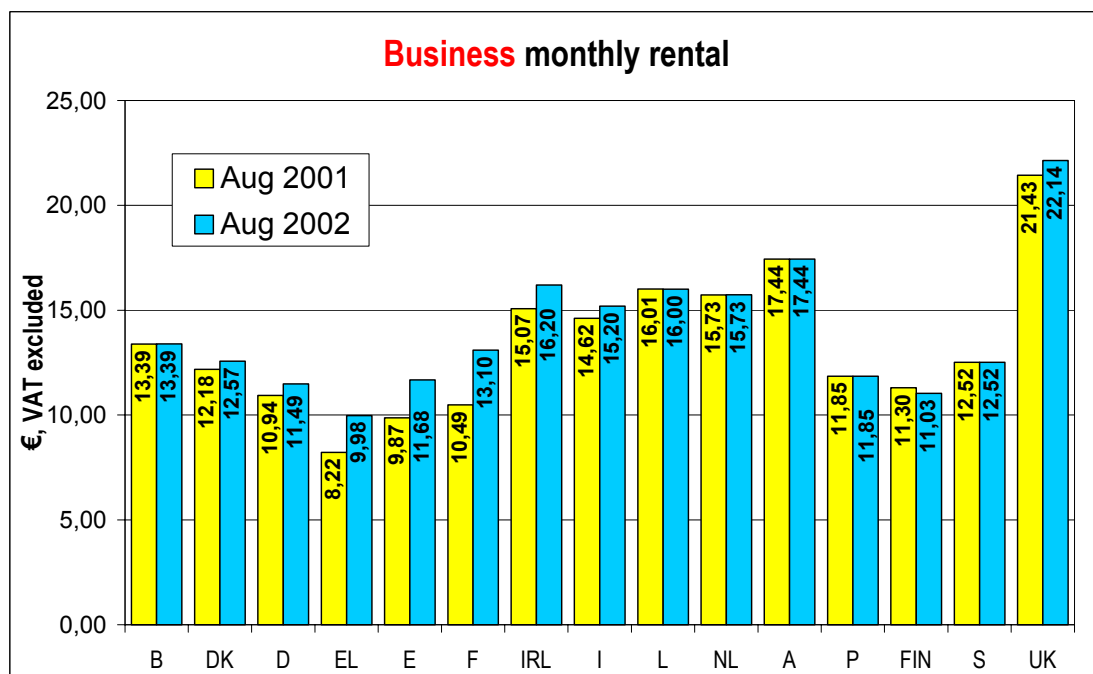
The incumbent operators in Italy, Sweden and the United Kingdom apply different monthly line rental charges for residential and business users. In the Netherlands and Austria two different

packages have been chosen for residential and business users, hence different charges. In the other countries the differences between the types of users are due only to the exclusion of VAT for business users.

**Chart 77**



**Chart 78**



The following charts show the EU weighted average variation in nominal terms of the residential and business monthly line rental charge.

Chart 79

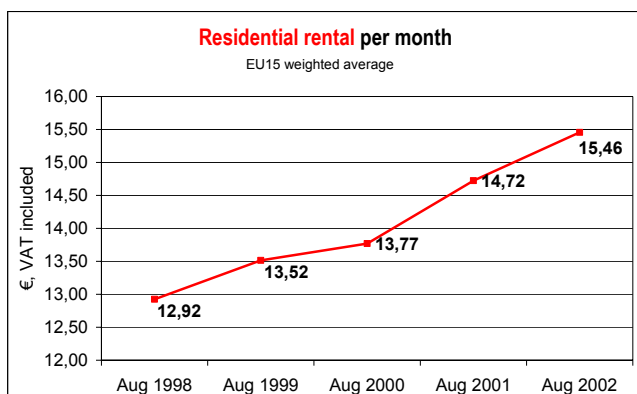
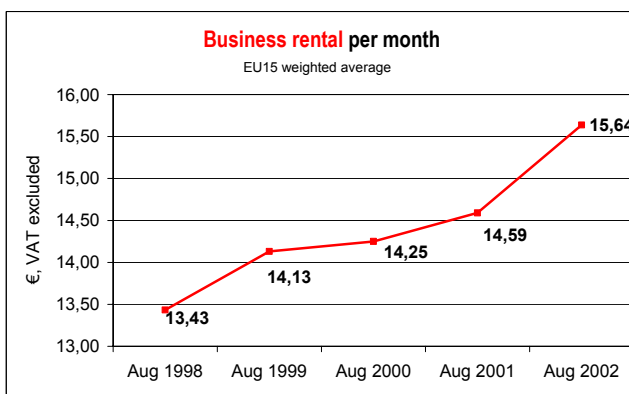


Chart 80



### 7.3.AVERAGE MONTHLY EXPENDITURE (composite call basket)

The figures presented in this section are intended to provide an estimate of the average monthly expenditure of a “standard” European consumer (business and residential). The Basket Methodology for Telecommunications Cost Comparison has been devised by the OECD and accepted in most countries as the most stable and neutral method of comparison<sup>20</sup>.

The user is assumed to have a contract for the provision of voice telephony services with the incumbent operator, and to use only this operator for all types of calls (local, long-distance, international, calls to mobile). Since consumers are making increasing use of call-by-call carrier selection, in particular for specific highly discounted types of calls (i.e. international and long-distance), the figures given below are purely indicative, and do not necessarily reflect the cheapest solution available.

The charts below show the average monthly expenditure for standard residential and business users as of August 2002, expressed in €, based on the standard tariffs charged by the incumbent operators (i.e. excluding any discount packages). This means that lower costs can be achieved if the user subscribes to one or more discounted packages.

The basket of calls used to estimate average monthly expenditure is the new “composite OECD basket”<sup>21</sup>, which includes not only fixed national calls (as did the old basket), but also fixed international calls and calls to mobile networks.

The OECD residential/business baskets are defined as follows (on an annual basis):

The fixed (i.e. non-recurring) charges include the annual line rental charge plus the charge for the installation of a new line (depreciated over 5 years). Fixed charges for residential users include VAT, while for business users VAT is excluded.

The usage charge for residential users refers to a basket of 1.200 national calls to fixed lines, plus 120 calls (with an average duration of 2 minutes) to mobile networks<sup>22</sup>, plus 72 international calls<sup>23</sup>. The usage charges for national calls to fixed lines are calculated with a weighted distribution<sup>24</sup> over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 2.5 to 7 minutes, depending on time and distance. The

<sup>20</sup> A full description of the methodology can be found in “Performance indicators for public telecommunications operators”, ICCP Series No.2.2, OECD 1990.

<sup>21</sup> The revised OECD baskets were adopted in May 2000.

<sup>22</sup> Representing 10% of the number of calls to fixed lines.

<sup>23</sup> Representing 6% of the number of calls to fixed lines.

<sup>24</sup> A full description of the revision to the baskets and the weighted distribution (distances, time and day points and call duration) can be found in the document ‘OECD Telecommunications Basket definitions’, June 2000, available at <http://www.oecd.org/pdf/M00005000/M00005340.pdf>

usage for residential users is weighted towards off-peak hours, and with typically long calls. Only 36% of the calls are within normal business hours; 64% are for distances below 10 km; 9% are for distances above 100 km.

The usage charge for business users refers to a basket of 3 600 national calls to fixed lines plus 360 calls (with an average call duration of 2 minutes) to mobile networks<sup>22</sup>, plus 216 international calls<sup>23</sup>. The usage charges for national calls to fixed lines are calculated with a weighted distribution<sup>24</sup> over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend), and with a call duration of 3.5 minutes regardless of time of day and distance. The usage for business users is weighted towards business hours, and with typically short calls. Over 86% of the calls are within normal business hours; 64% are for distances below 10km; 12.5% are for distances above 100 km.

**Chart 81**

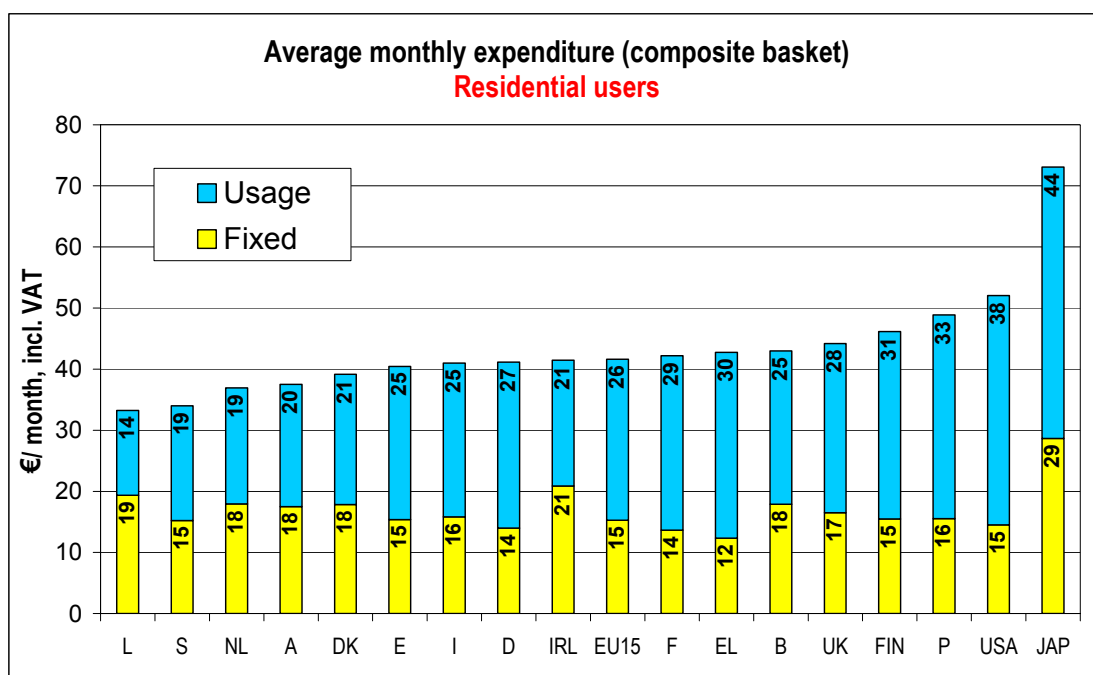
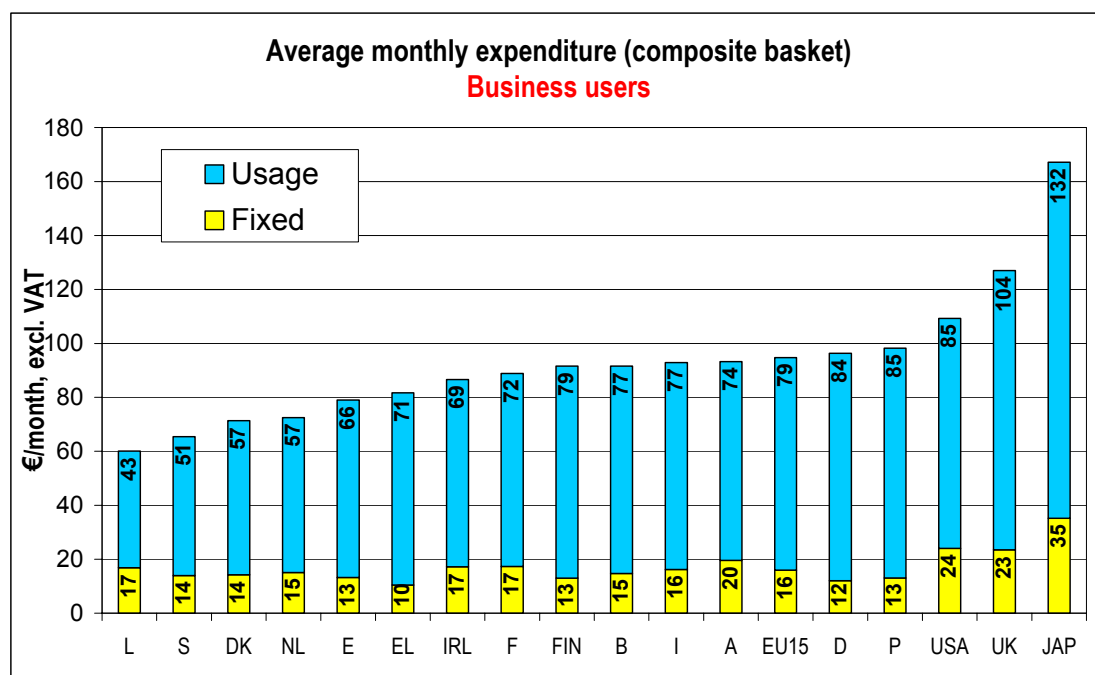


Chart 82



#### 7.4. FIXED NATIONAL CALLS

##### 7.4.1. Prices charged by the incumbent operators for individual fixed national calls

This section shows the prices charged by the incumbent operators for individual fixed calls (the same call prices apply to business and residential users). Where the incumbent operator uses a unit-based charging system, the price of calls of different duration and/or distances may in some cases be identical, where both calls are charged the same number of units. Any call set-up charges, minimum charges and/or call specific duration allowances have been taken into account.

Prices refer to peak hours (weekdays 11.00) and are expressed in € including VAT. Except where otherwise specified, the figures refer to August 2002.

Prices are indicated for three-minute and 10-minute calls over two distances: 3 km (equivalent to a local call) and 200 km (equivalent to a national call). In several countries the tariff changes at exactly one of these distances: in these cases, the rates for the lower distance band are used.

The price of a three-minute call is more affected by the magnitude of the call set-up charge than the price of a 10-minute call.

Where different tariff packages exist (Austria and the Netherlands), the basic, residential package is selected<sup>25</sup>. Otherwise the standard tariff is used. No discount packages are taken into account.

The EU average value is the average of the EU countries weighted according to population in 1999.

<sup>25</sup> The 'Tik-Tak Privat' Tariff Package offered by Telekom Austria has been used in this corrigendum for the 2002 values. In the initial version of this annex the 'Standard Tariff' was used.

Chart 83

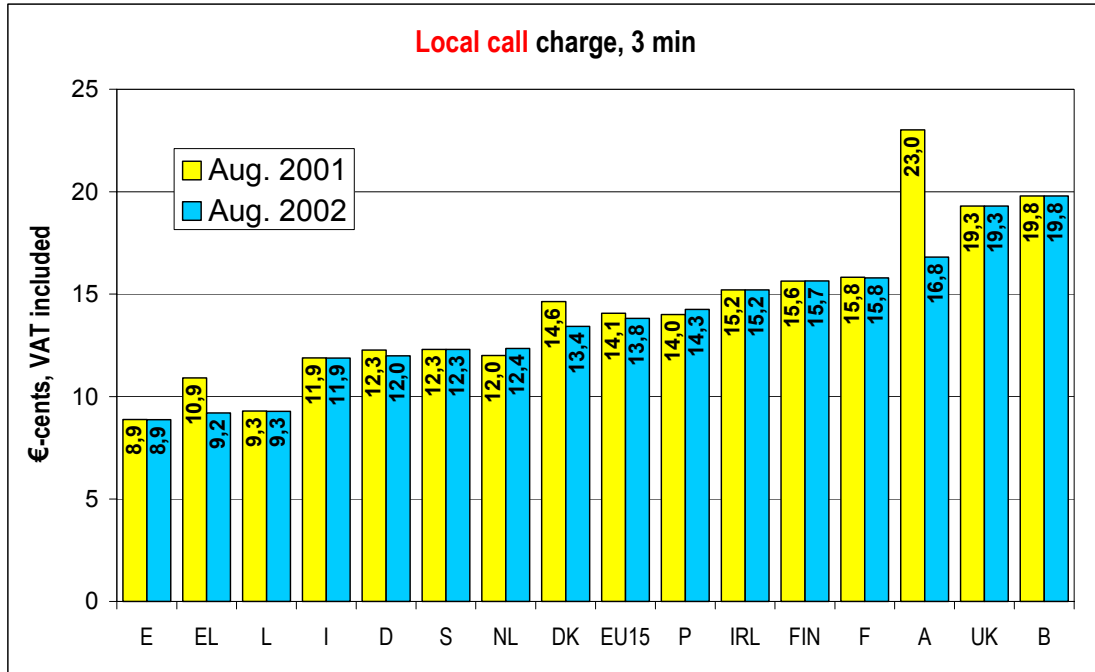


Chart 84

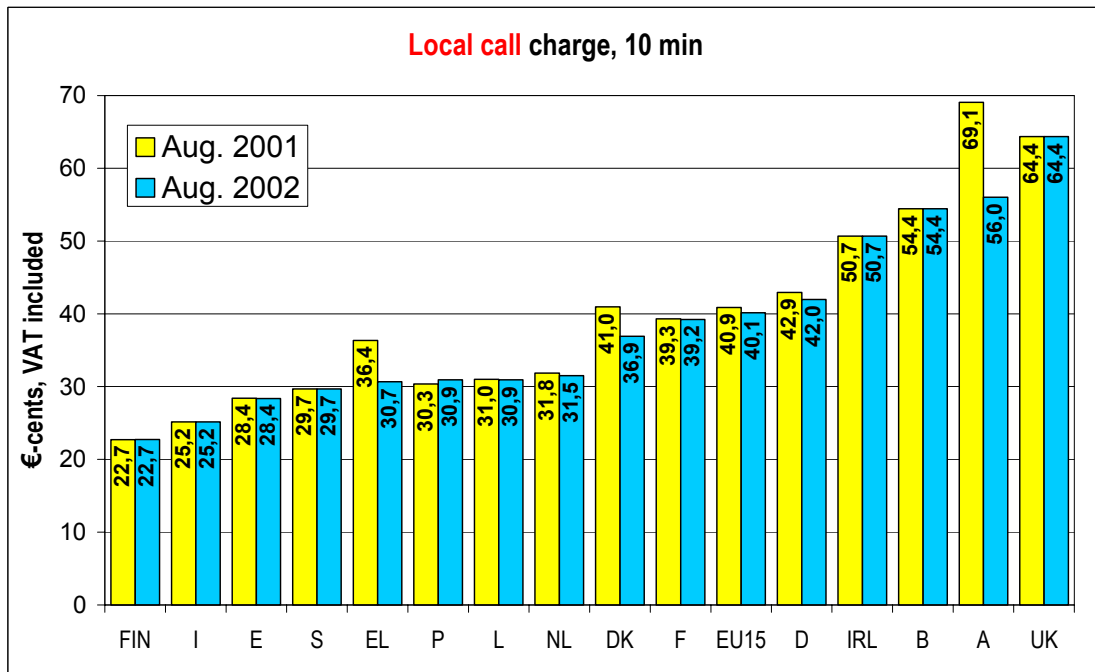




Chart 85

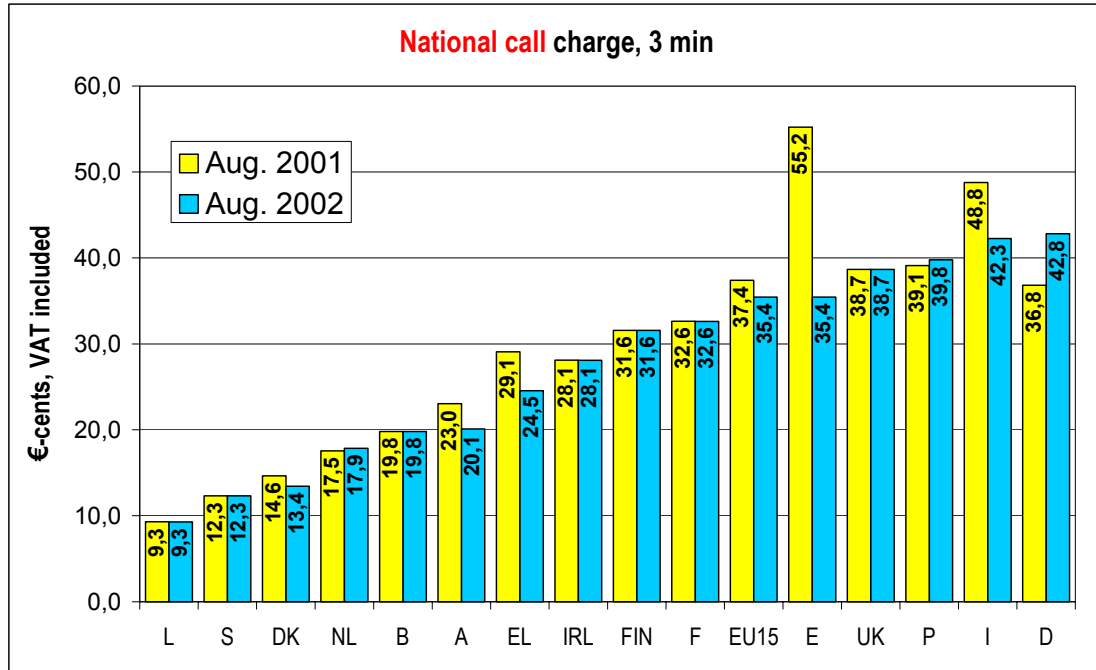
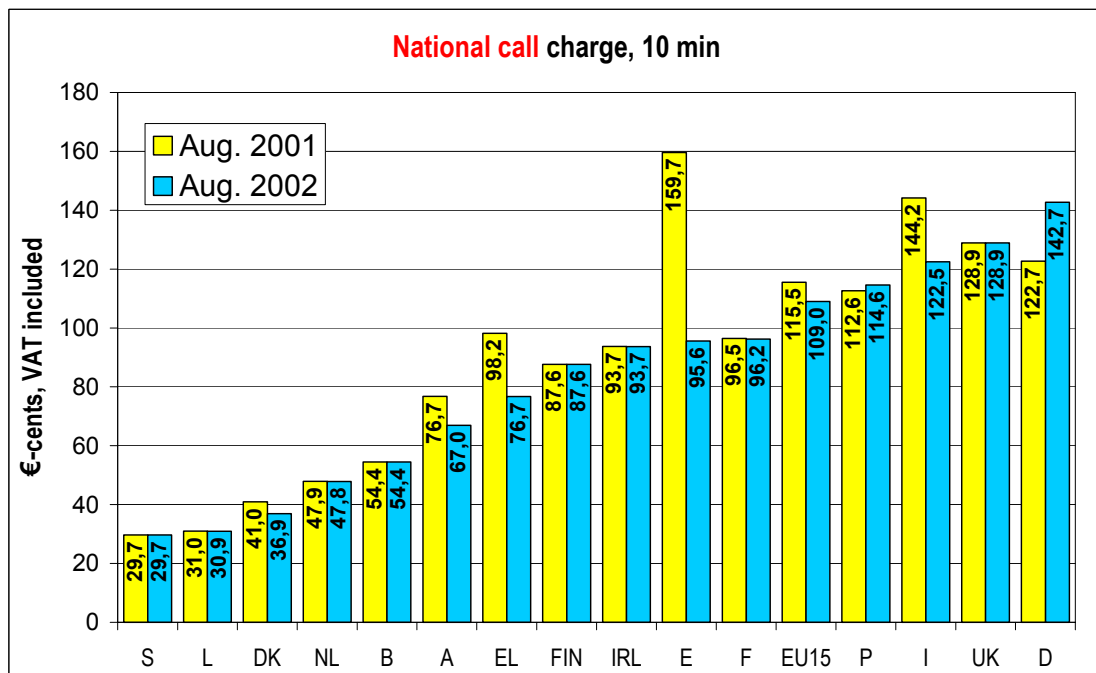
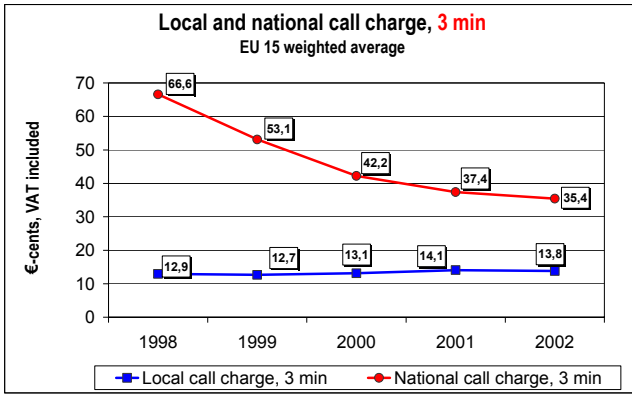


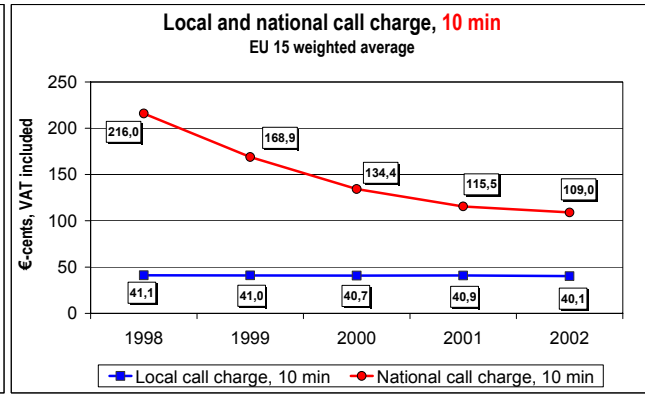
Chart 86



**Chart87**



**Chart88**

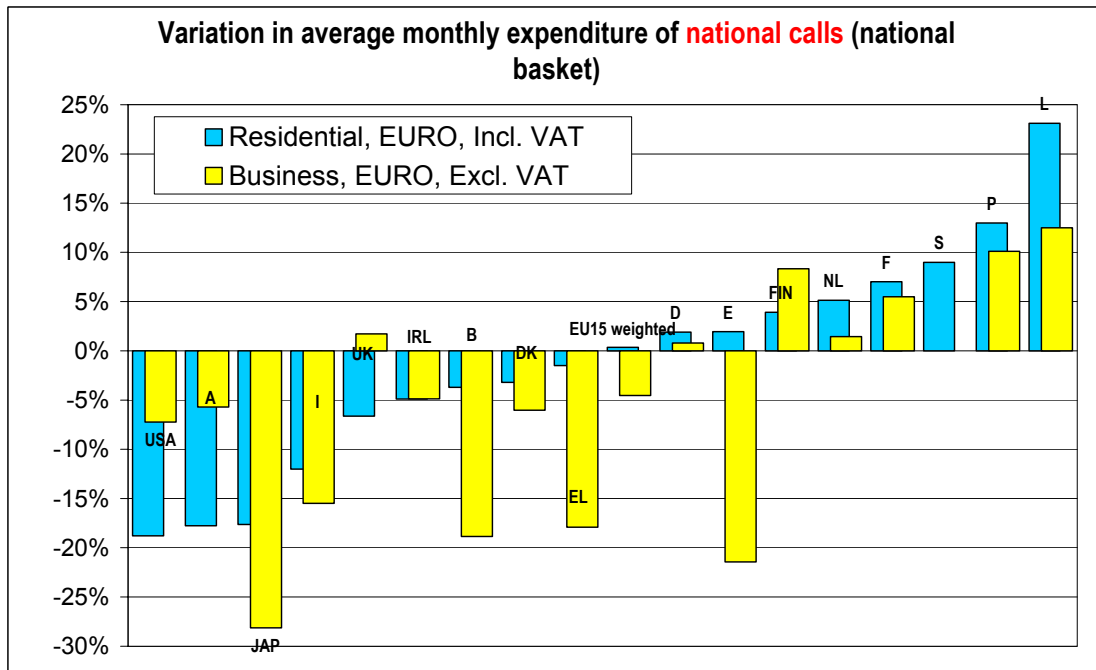


**7.5.TREND OF THE BASKET FOR FIXED NATIONAL CALLS (NATIONAL BASKET)**

The following charts show the variation of the monthly expenditure of residential and business users on fixed national calls between August 2000 and 2002 (in order to maintain consistency over time, the “old” OECD basket<sup>26</sup> is used, which, unlike the “composite”, does not include international calls).

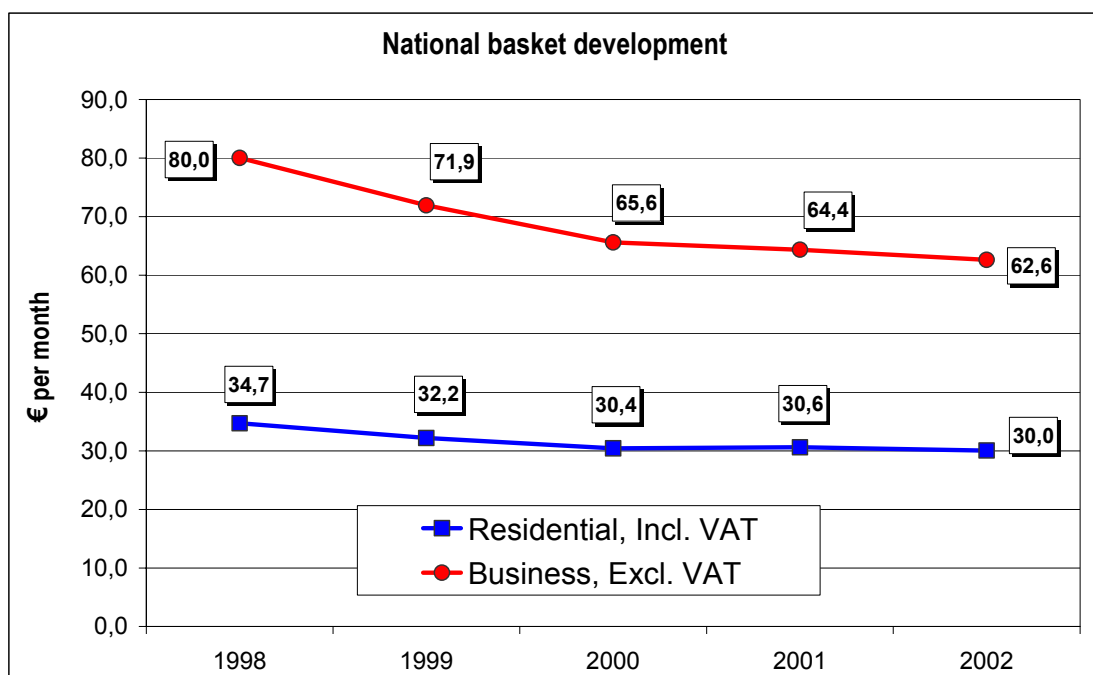
The variation in the international basket is shown in section 7.

**Chart 89**



<sup>26</sup> A full description of the methodology can be found in “Performance indicators for public telecommunications operators”, ICCP Series No.2.2, OECD 1990.

Chart 90



### 7.6.ALTERNATIVE NATIONAL OPERATORS

This section compares the prices charged for public voice telephony services by the incumbent operators in a sample of EU Member States and by the biggest competitor in each Member State.

Chart 91

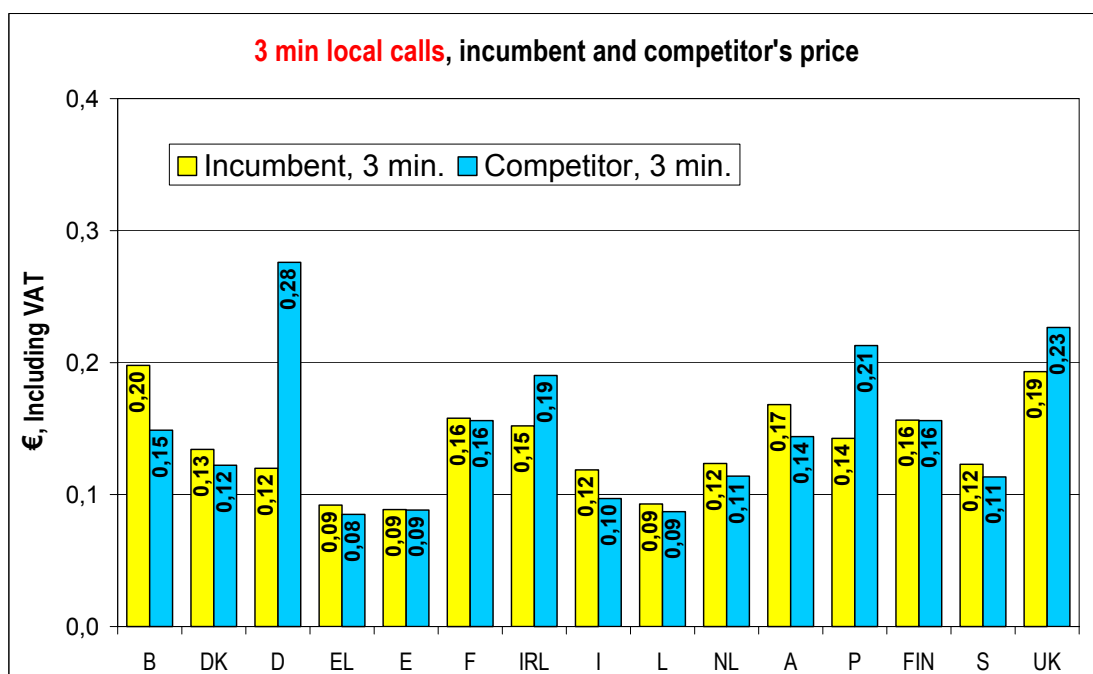


Chart 92

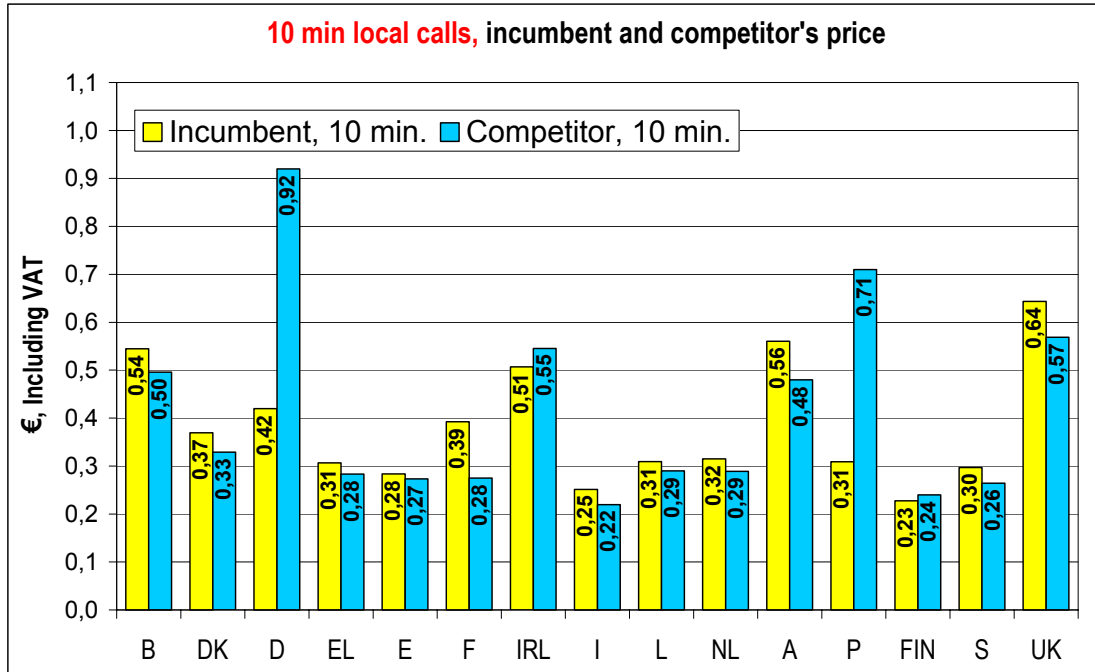


Chart 93

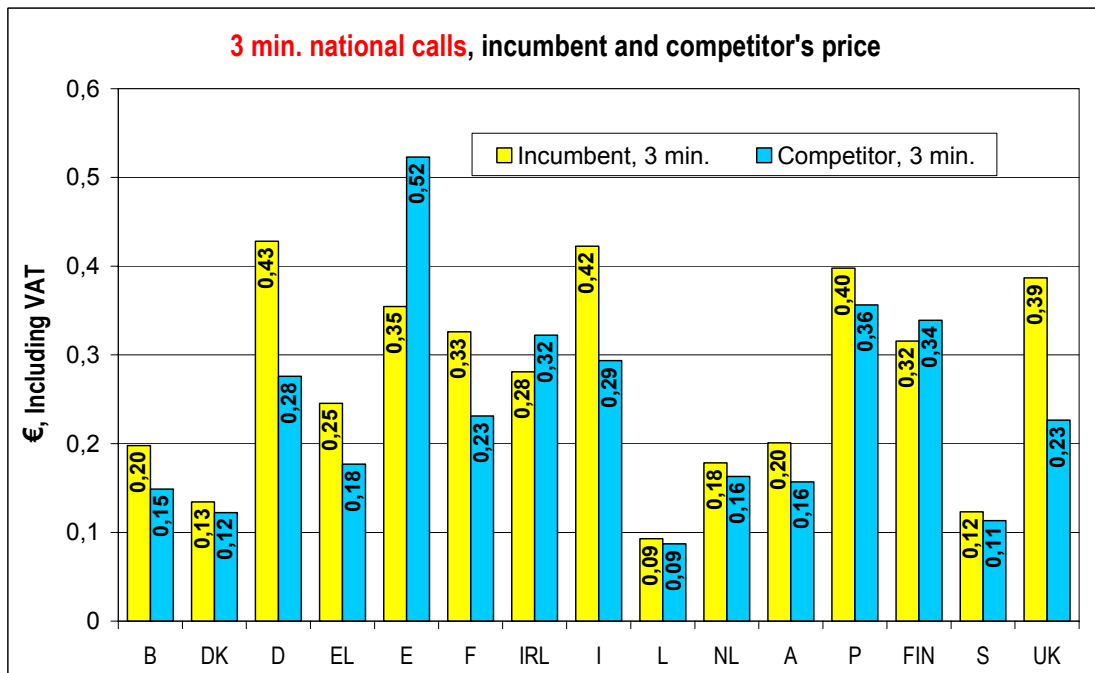
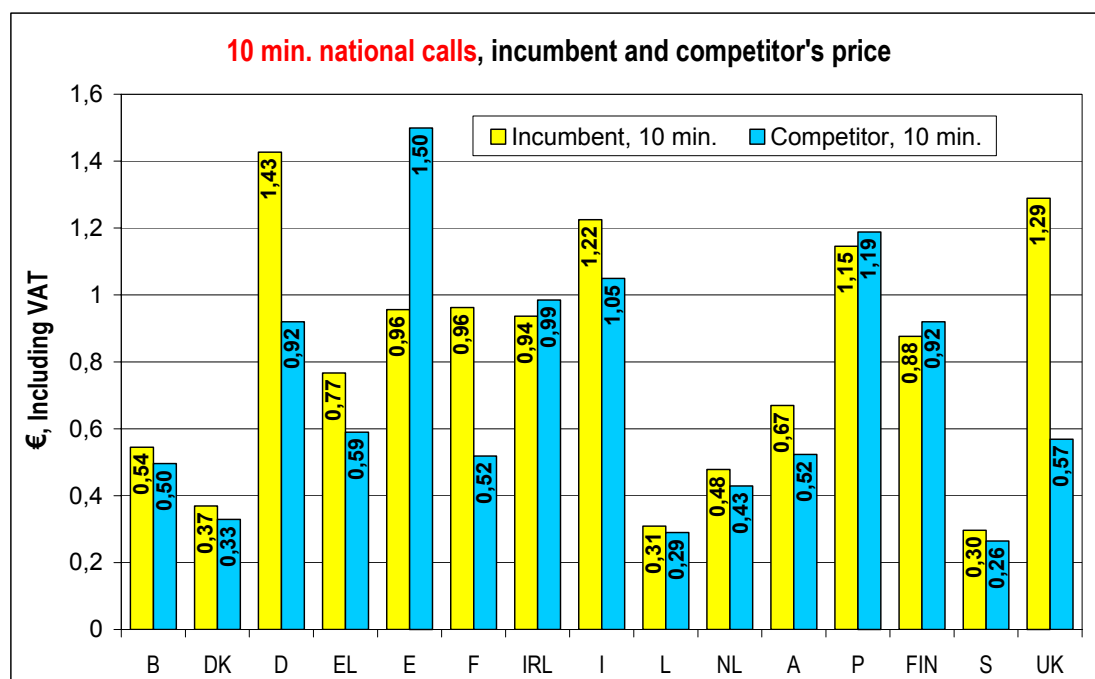


Chart 94



## FIXED INTERNATIONAL CALLS

The following charts show the prices of the international call basket (an estimate of the average cost of an international call in each country) and the actual price of a 10-minute call to specified destinations (within Europe, to Japan and to the USA).

### 7.7.PRICE OF AN AVERAGE FIXED INTERNATIONAL CALL (international call basket)

The basket of international calls for each country provides an estimate of the average cost of an international call.

For the basket comparison of international PSTN call charges, the OECD Traffic weight basket methodology is used. The basket<sup>27</sup> calculates **an average charge** for calls to all OECD destination countries.

The residential basket includes VAT. Call charges are weighted between peak and off-peak hours: 25% for peak hours and 75% for off-peak hours. The business basket excludes VAT. Call charges are weighted 75% for peak hours and 25% for off-peak hours. The average price of an international call is lower for business users than for residential users because of the heavier weighting given to three-minute peak-hour calls, which are on average cheaper than five-minute off-peak calls, and because VAT is excluded for business users but included for residential users.

International call charges vary widely with the destination, and the basket results are based on a weighted average call charge. Traffic weighting is used, as defined by the OECD for the destination weighting, as per the revision in 2000. This method applies a weight to each destination based on the traffic volumes reported on that route (ITU statistics).

The EU average value is the average of the EU countries weighted according to population in 1999.

<sup>27</sup> A full description of the revision to the baskets and the weighted distribution (distances, time and day points and call duration) can be found in the document 'OECD Telecommunications Basket definitions', June 2000, available at <http://www.oecd.org/pdf/M00005000/M00005340.pdf>

Chart 95

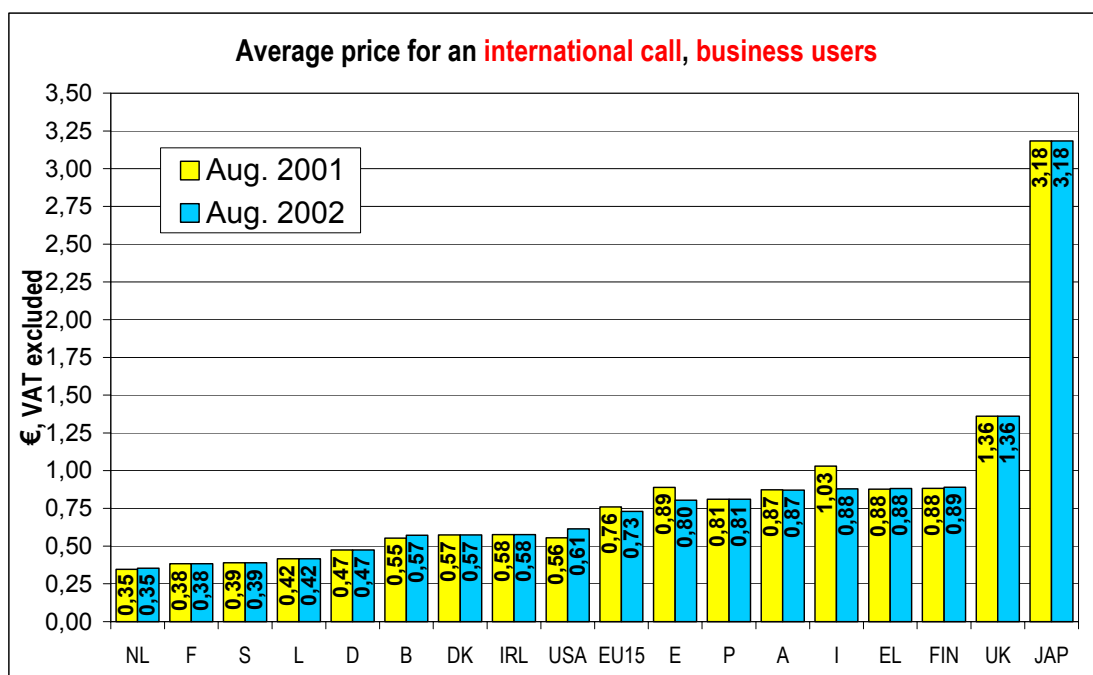


Chart 96

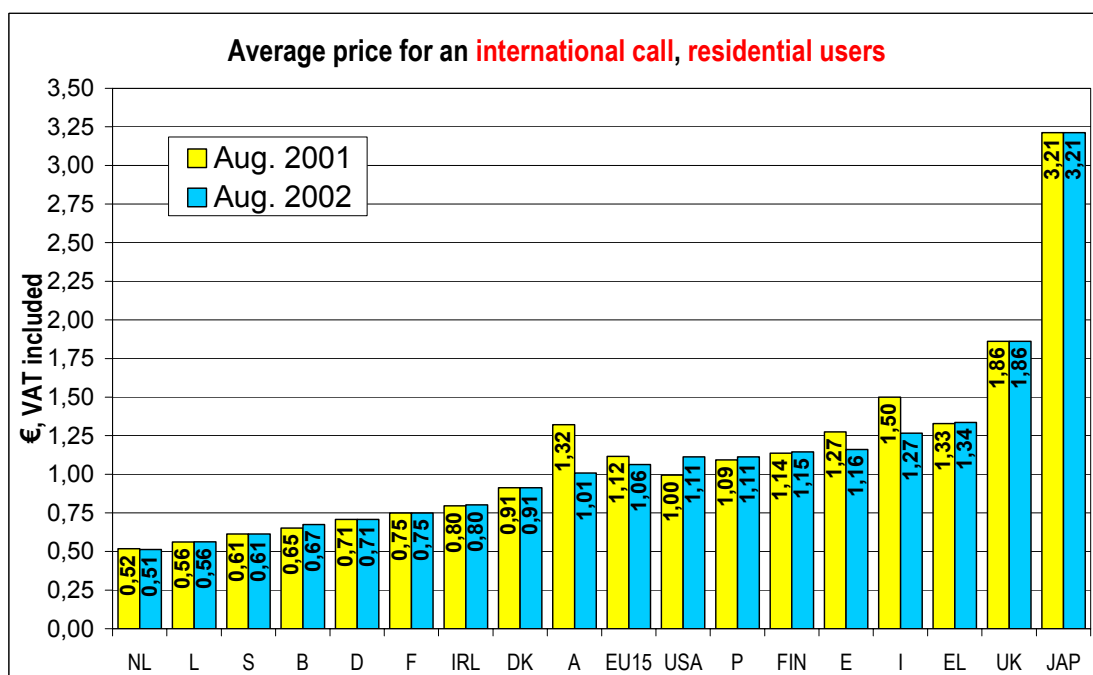
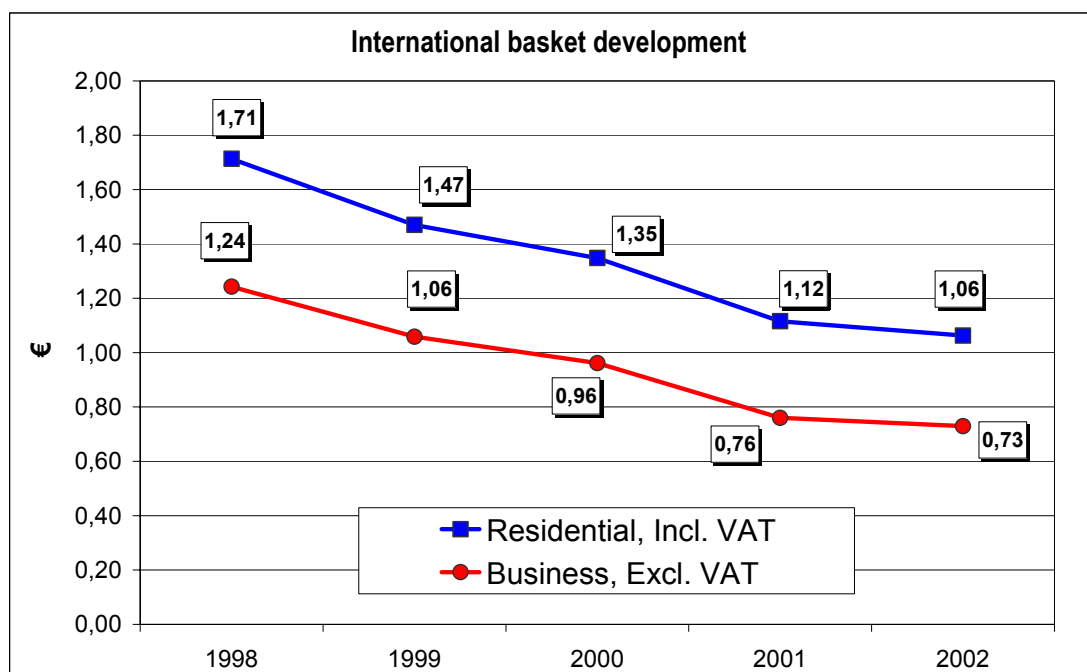


Chart 97



### 7.8.PRICE OF CALLS TO EU, JAPAN, USA

The following two charts show the prices of a 10-minute international call (including VAT) during peak hours (weekday 11.00) to four different destinations: neighbouring country<sup>28</sup> (near EU), more distant country<sup>29</sup> (far EU), Japan and the USA.

Figures are expressed in € at August 2002 values, including VAT, and they refer to the European incumbent operators and the EU weighted average.

<sup>28</sup> The neighbouring countries are defined as: France for Belgium (and *vice-versa*);, Germany and the United Kingdom; Sweden for Denmark and Finland; Italy for Greece (and *vice-versa*); Portugal for Spain (and *vice-versa*); the United Kingdom for Ireland, the USA and Japan; Germany for Luxembourg, the Netherlands and Austria.

<sup>29</sup> The more distant countries are defined as: Greece for Belgium, Denmark, Germany, France, Ireland, Luxembourg, the Netherlands, Austria, Finland, Sweden, the United Kingdom, the USA and Japan; Denmark for Greece, Spain, Italy and Portugal.

Chart 98

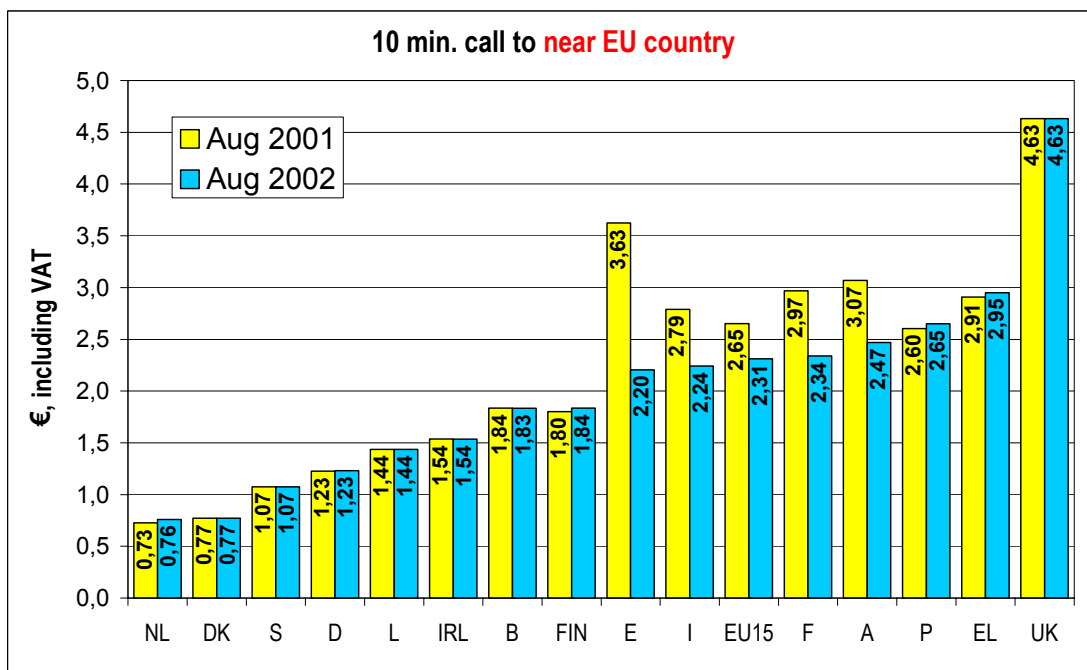
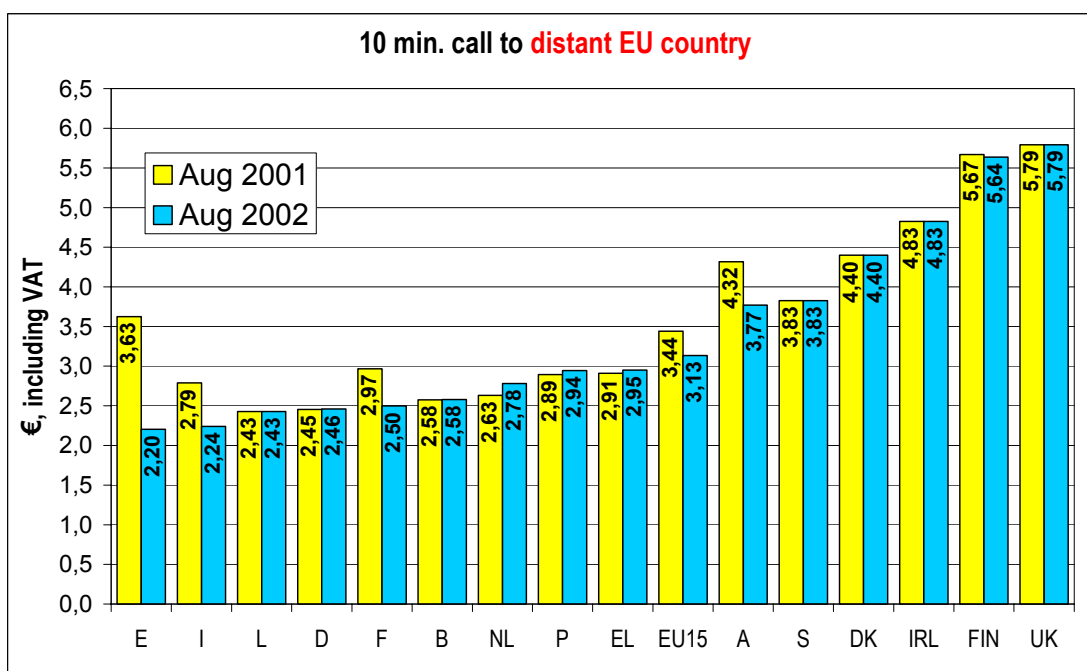
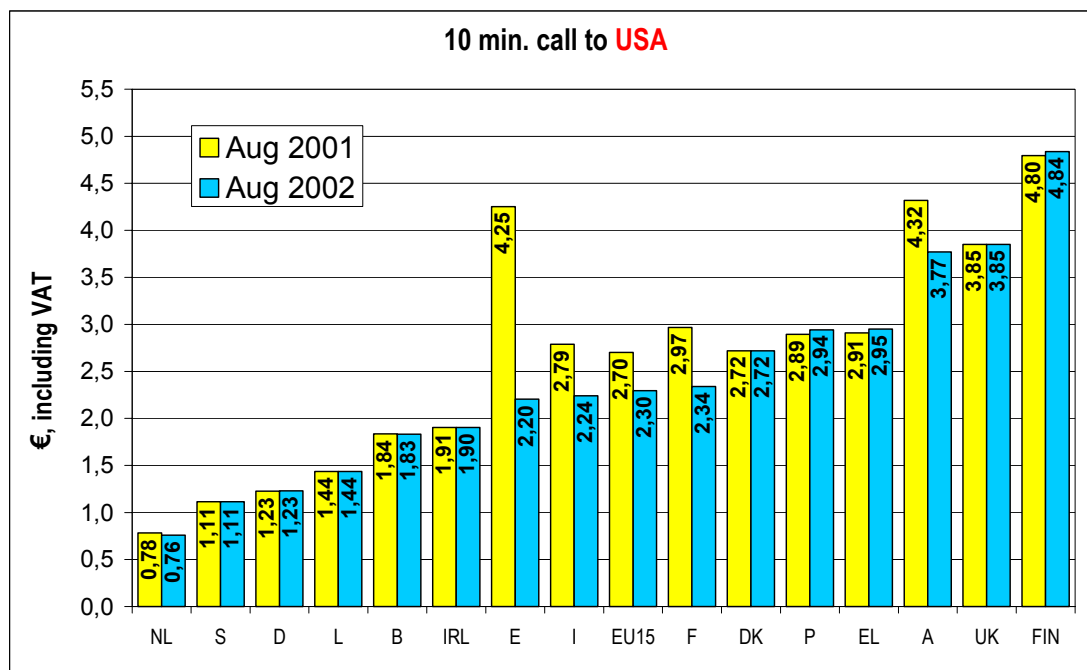


Chart 99

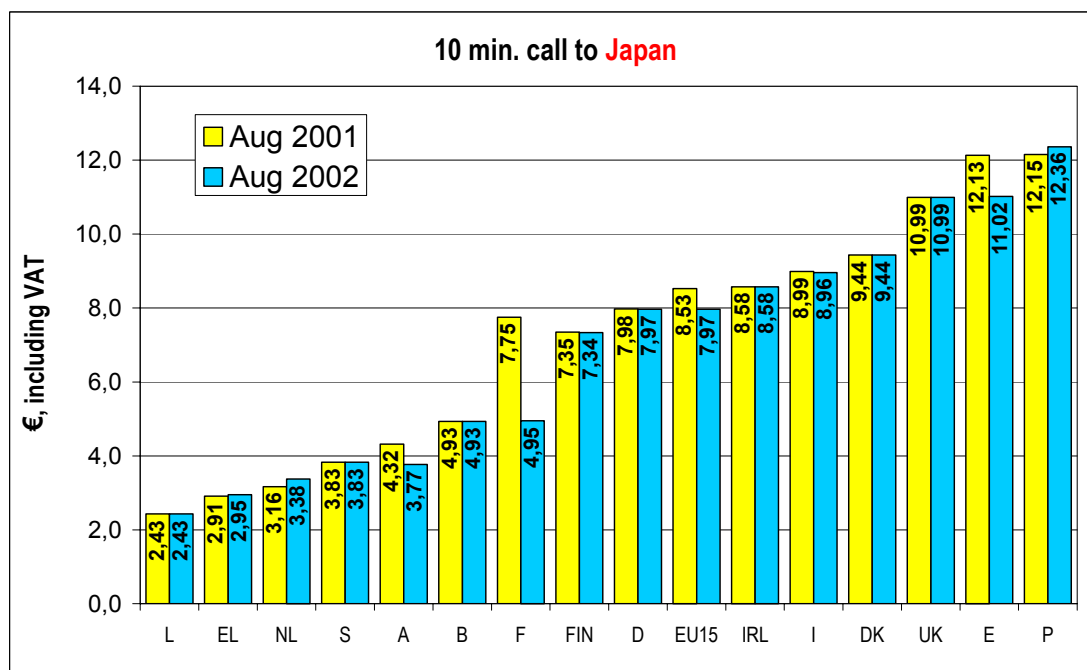




**Chart 100**



**Chart 101**



### 7.9.ALTERNATIVE INTERNATIONAL OPERATORS

The equivalent prices for competitor providers in the EU countries are shown in the charts below. One competitor per country has been analysed. The prices are shown for a 10 minute call, at peak time weekdays.

Prices include VAT and are applicable for August 2002.

Chart 102

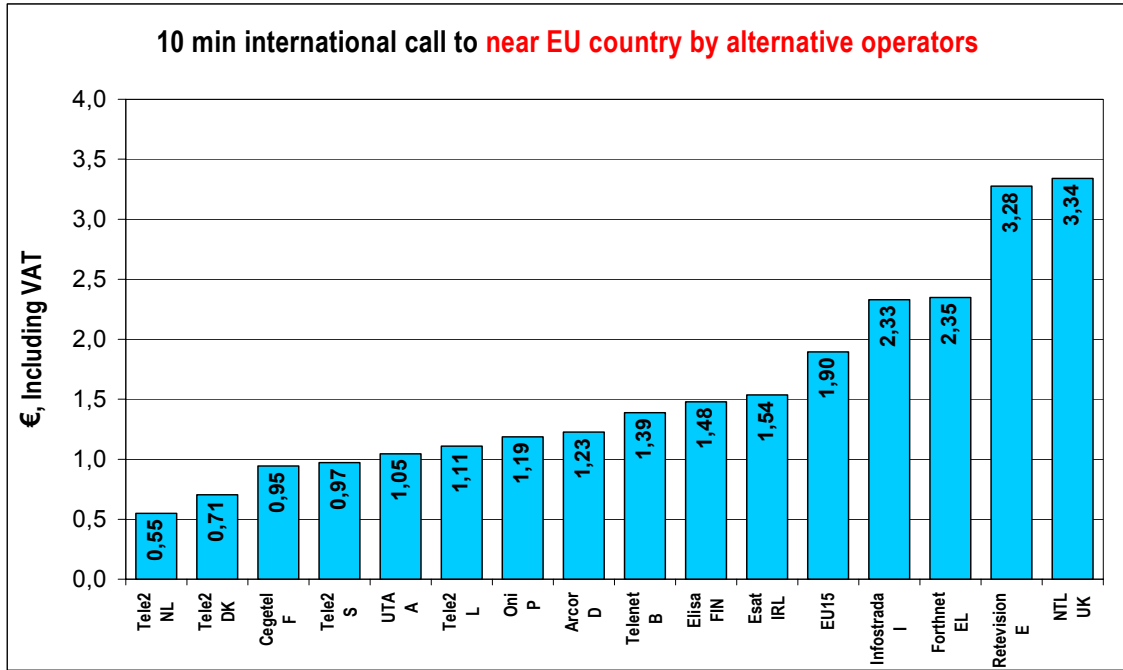


Chart 103

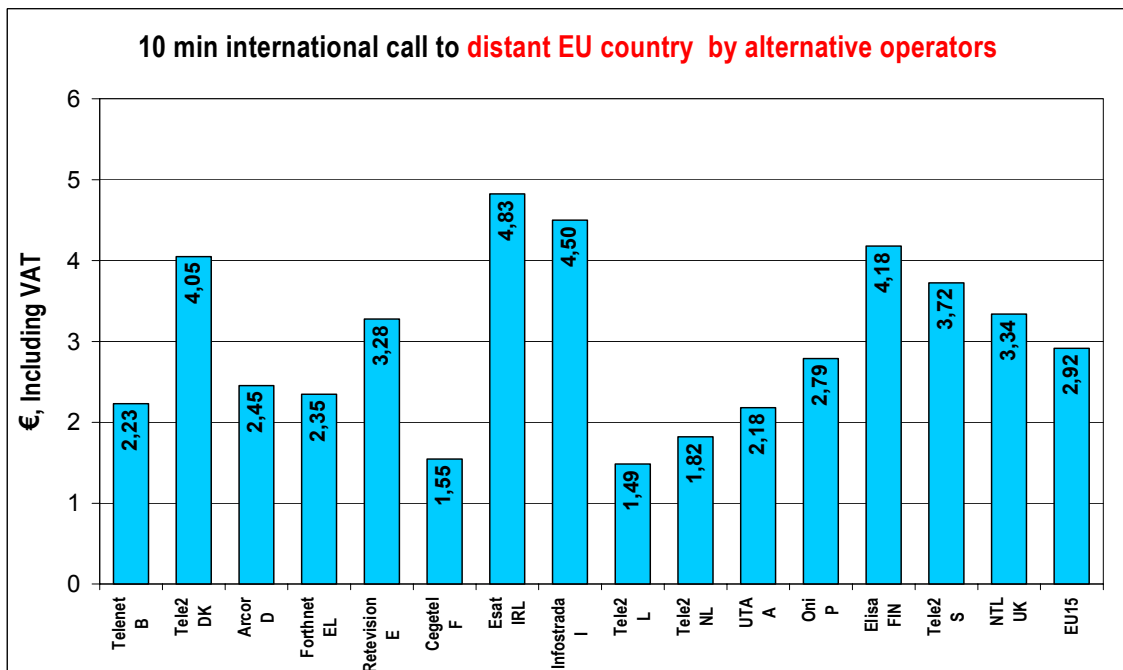


Chart 104

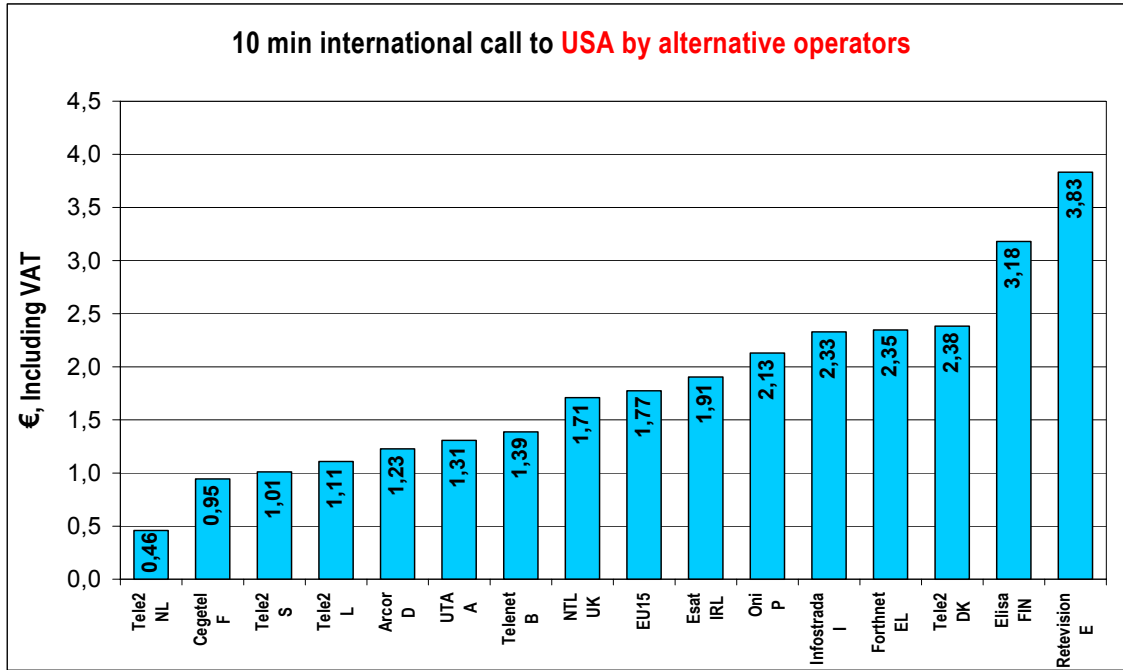
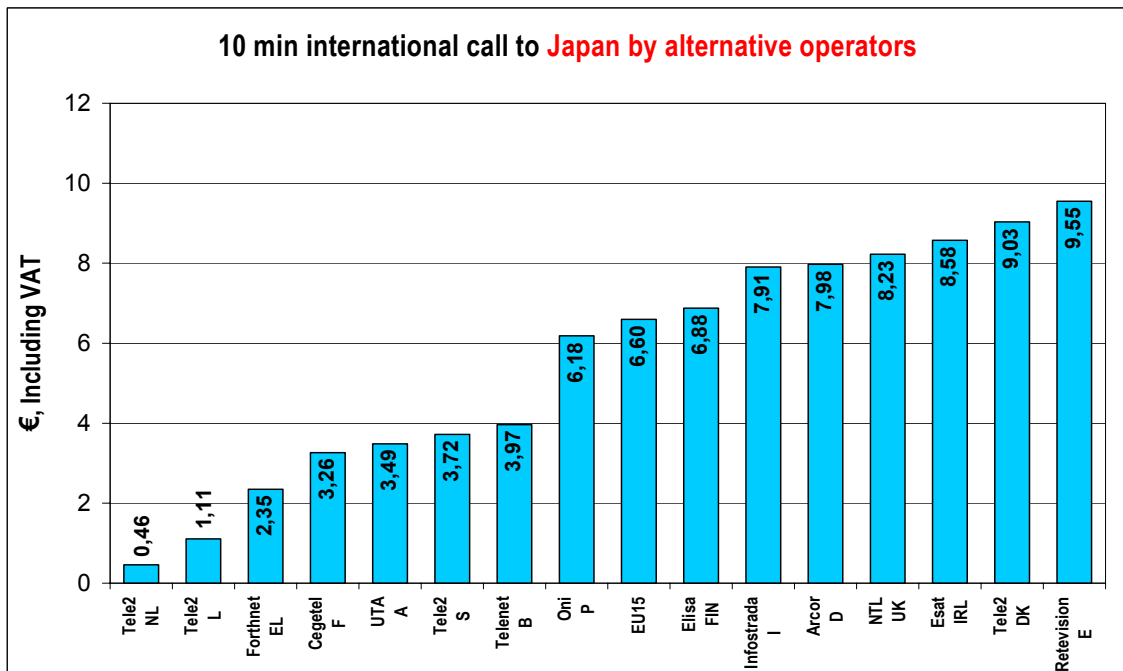


Chart 105



## 8 LEASED LINES RETAIL TARIFFS

This section contains an overview of prices charged by incumbent operators in each Member State for national and international leased line services as at 1 August 2002 to end users. Figures do not cover wholesale prices. Price developments are also analysed over the period August 1998-2002.

The figures and the information are taken from a study carried out by Total Research-Total Research Teligen for the Commission. Data on standard retail prices charged by incumbent operators have been collected in each country.

### 8.1. INCUMBENTS' NATIONAL LEASED LINES

National leased line data is provided from 1998 onwards. 2 distances are covered: 2 km (local circuits), and 200 km. Tariffs are taken from the incumbent operator in each country. Other operators may offer other prices.

In order to properly reflect the tariff structures used in some countries the circuits may be considered in one of two different ways, depending on tariff structure. The one to apply will differ from carrier to carrier. The principles used in this report for calculating the price of a full circuit are:

|                | 1: When tariff specifies local tail prices separately, in addition to main circuit. |                     | 2: When tariff specifies a single price for the circuit, end to end, including local tails. |                     |
|----------------|---|---------------------|---|---------------------|
|                | Local tail length   | Main circuit length | Local tail length   | Main circuit length |
| 2 km circuit   | 1 km  | 0                   | 0   | 2 km                |
| 200 km circuit | 2 km  | 196 km              | 0   | 200 km              |

Note: The local tail length is per tail, i.e. there will be 2 such tails with each circuit.

Where several tariff options exist depending on type of location, the criteria for choice is as follows:

- 2 km circuits are always within a major city (usually the Capital)
- 200 km circuits are between a major city and a “minor” city

As the definitions vary between countries, the type of tariff option chosen will also vary. The countries where the price may vary with location or other non-distance related definitions, are: Belgium, France, Austria, Finland, Sweden and the UK.

Some operators apply termination charges per local end, without necessarily covering the local tail circuit within that charge.

4 types of circuits are covered: 64 kb/s, 2 Mb/s, 34 Mb/s and 155 Mbit/s. As not all carriers publish tariffs for all these bitrates and all years, there may be some gaps in the information, especially for higher bitrates.

Some carriers offer 2 Mb/s circuits as both structured and unstructured. In this analysis only unstructured circuits are included.

Also, some carriers offer different types of leased lines, often in the form of “basic circuits” and circuits in a managed network. Only “basic circuits” are included in this analysis, as the managed network services are not comparable between carriers.

Lately a few carriers have decided not to publish their prices for some or all types of leased lines. This makes it increasingly difficult to present a full overview of the prices in all 15 EU countries.

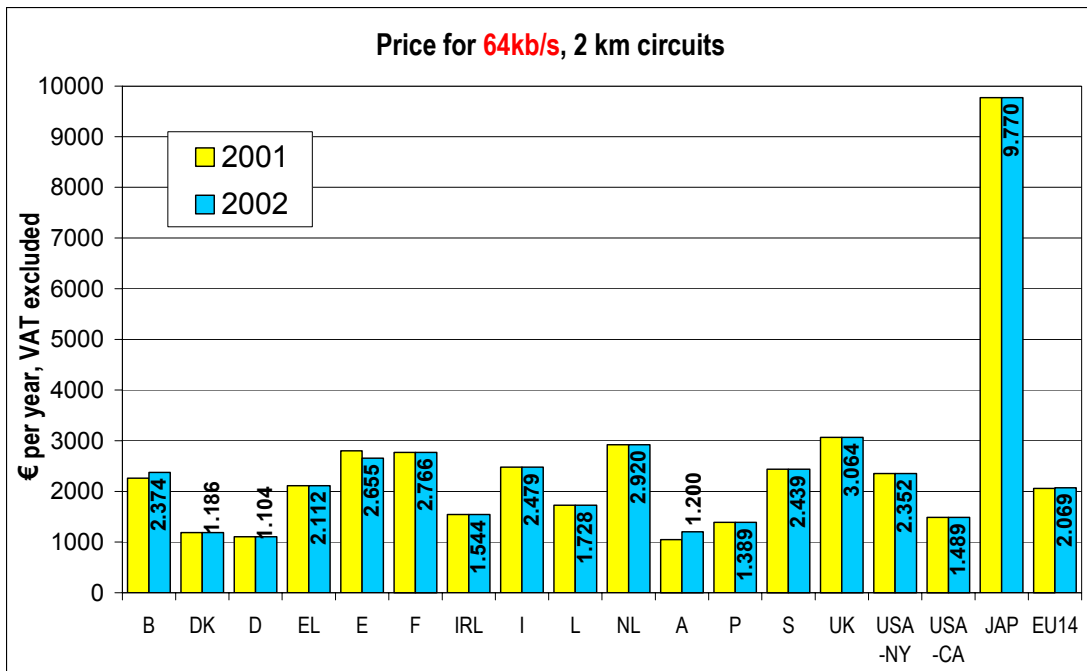
For the USA the prices of Verizon intra-LATA circuits for New York state have been used. The bitrates of leased lines offered in some countries may be different from the ones found in most EU member States. Some operators may offer 56 kb/s instead of 64 kb/s, 1.5 Mb/s instead of 2 Mb/s, 45 or 50 Mb/s instead of 34 Mb/s, and 140 or 150 Mb/s instead of 155 Mb/s. Prices shown in the tables and graphs in this section of the report have been adjusted according to the difference in capacity.

All prices are presented in EURO per month, excluding VAT.

National leased lines prices as at 1 August 2002.

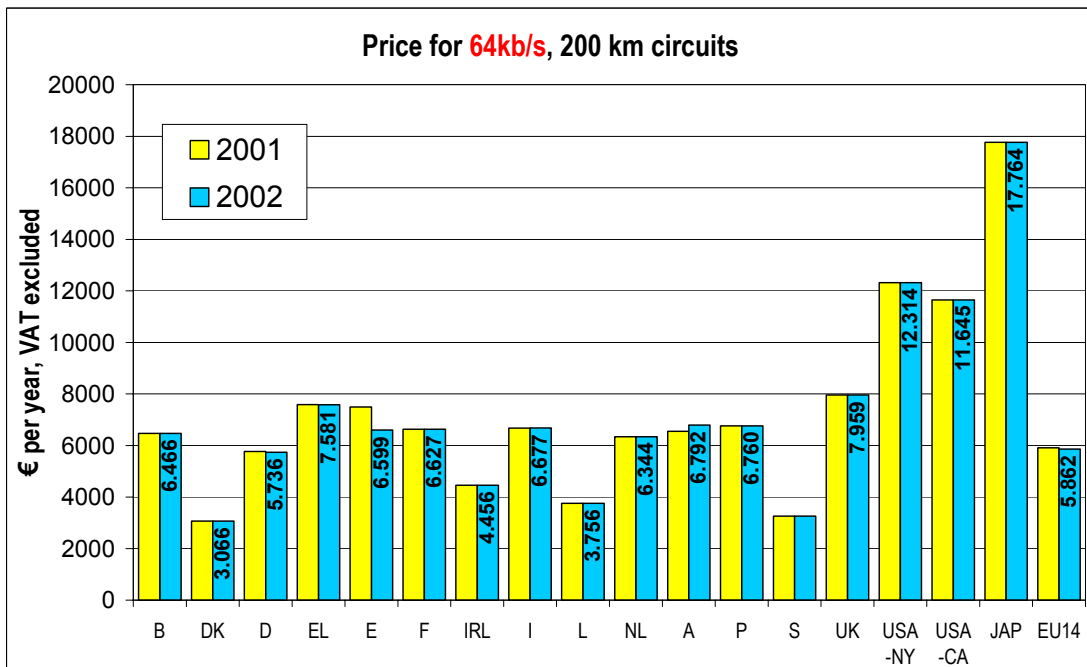
8.1.1. 64 Kbit/s

Chart 106



- Data for Finland not available.

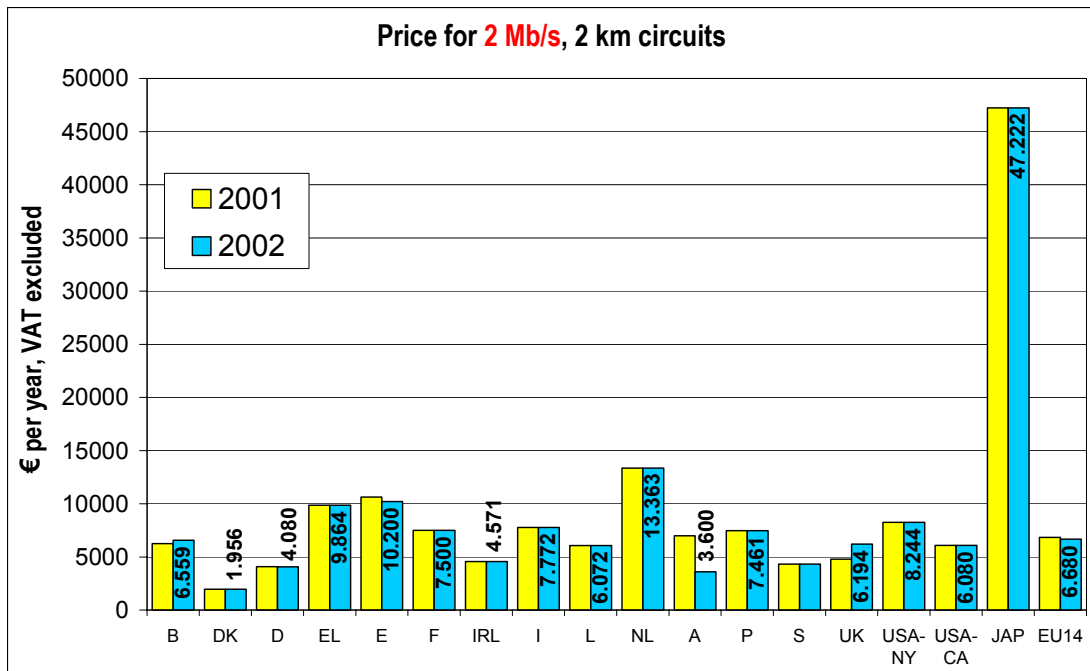
Chart 107



- Data for Finland not available.

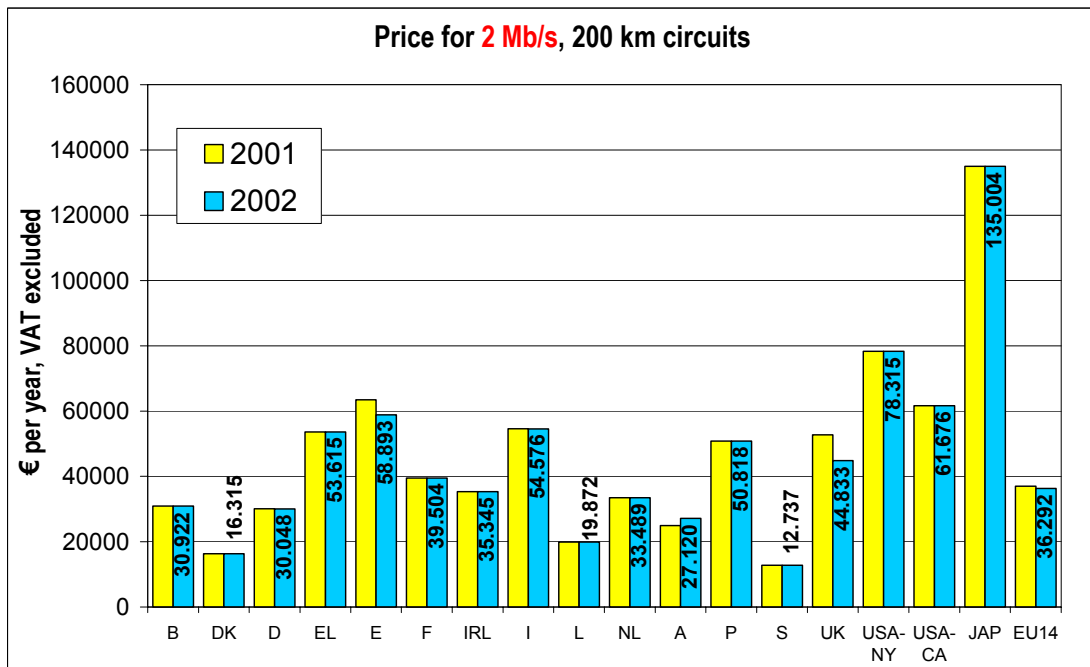
8.1.2. 2 Mbit/s

Chart 108



- Data for Finland not available.

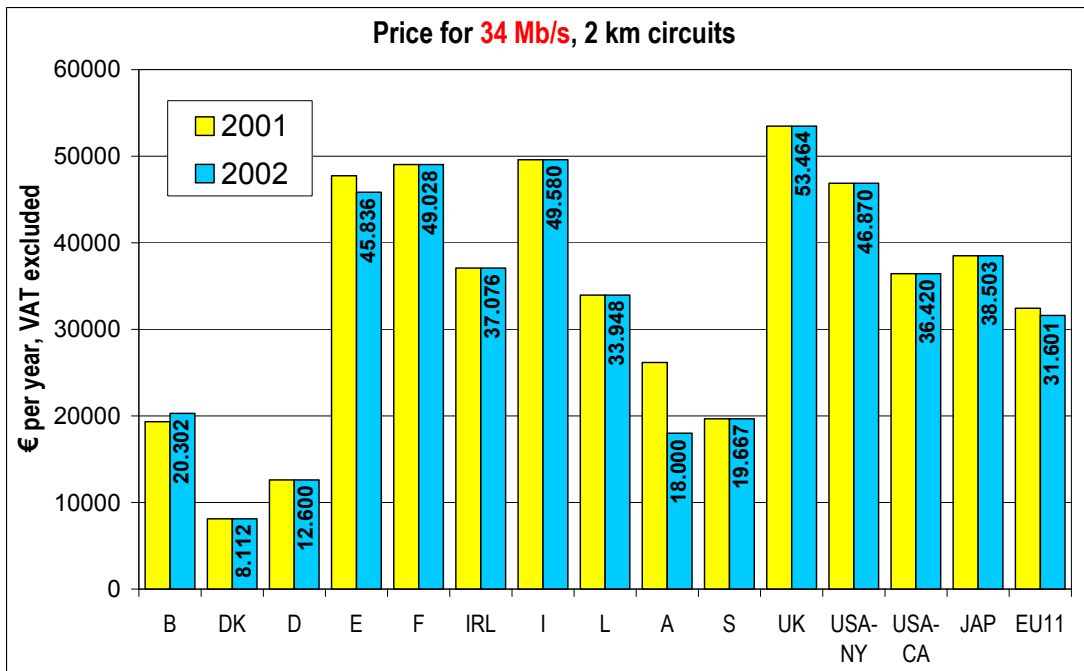
Chart 109



- Data for Finland not available.

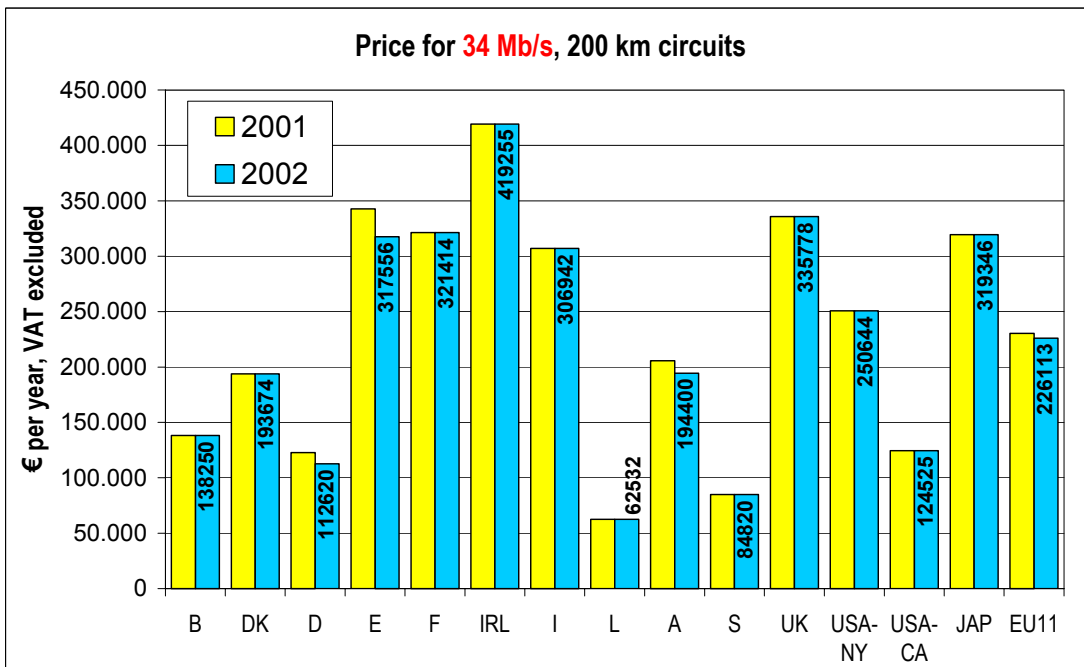
8.1.3. 34 Mbit/s

Chart 110



- Data for EL, NL, P and FIN not available.

Chart 111

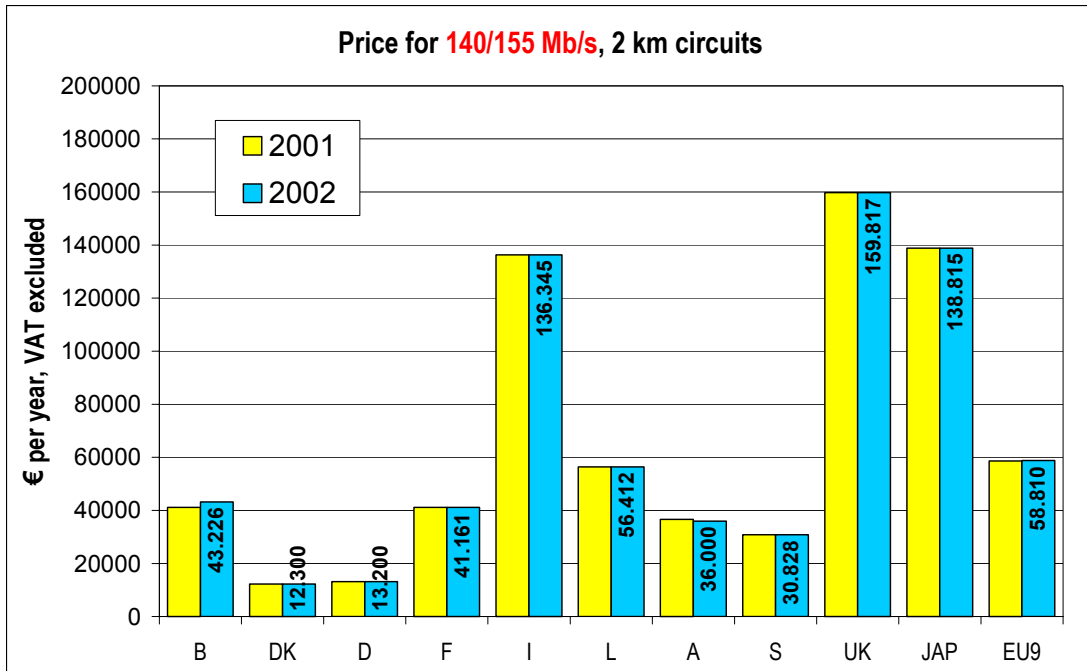


- Data for EL, NL, P and FIN not available.



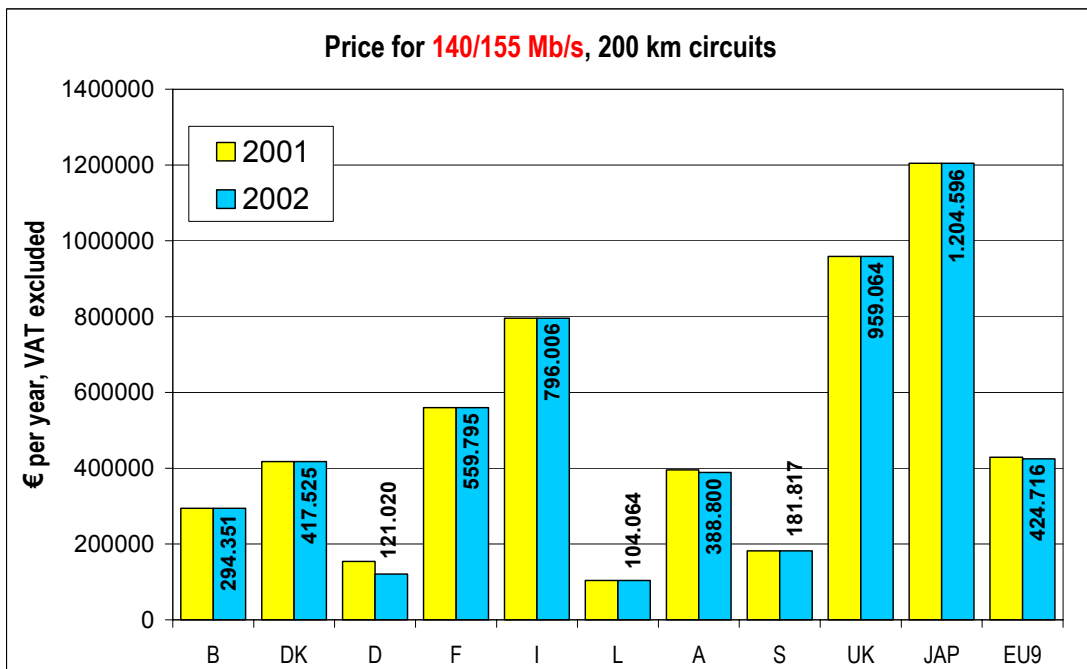
8.1.4. 155 Mbit/s

Chart 112



- Data for E, EL, IRL, NL, P and FIN not available.

Chart 113



Data for E, EL, IRL, NL, P and FIN not available.

8.2.NATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2002)

Chart 114

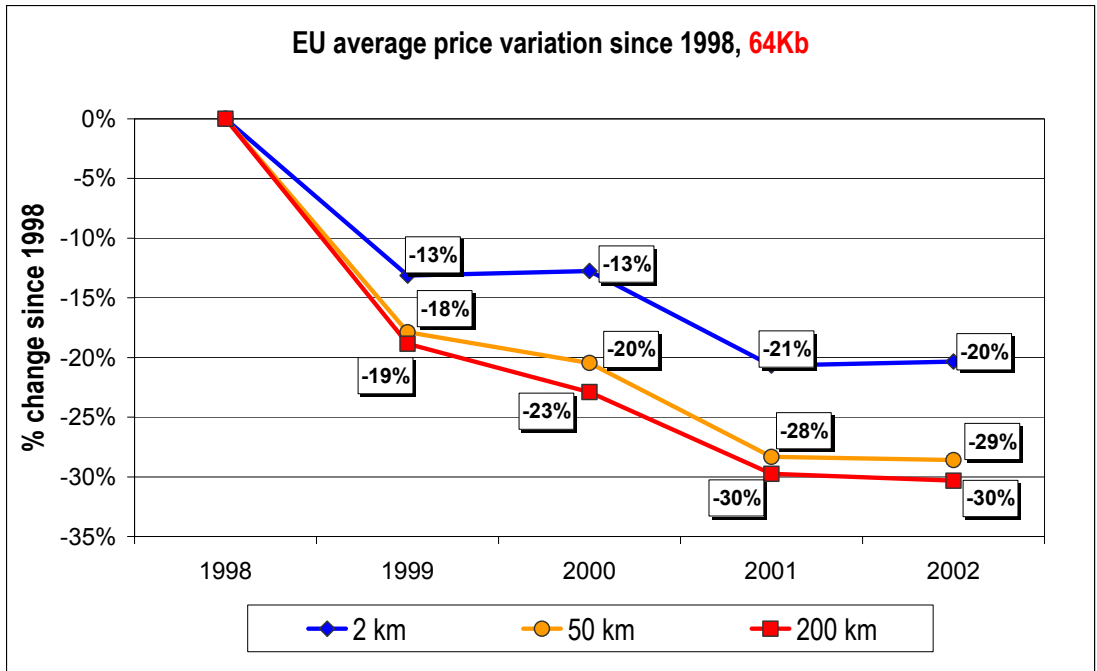


Chart 115

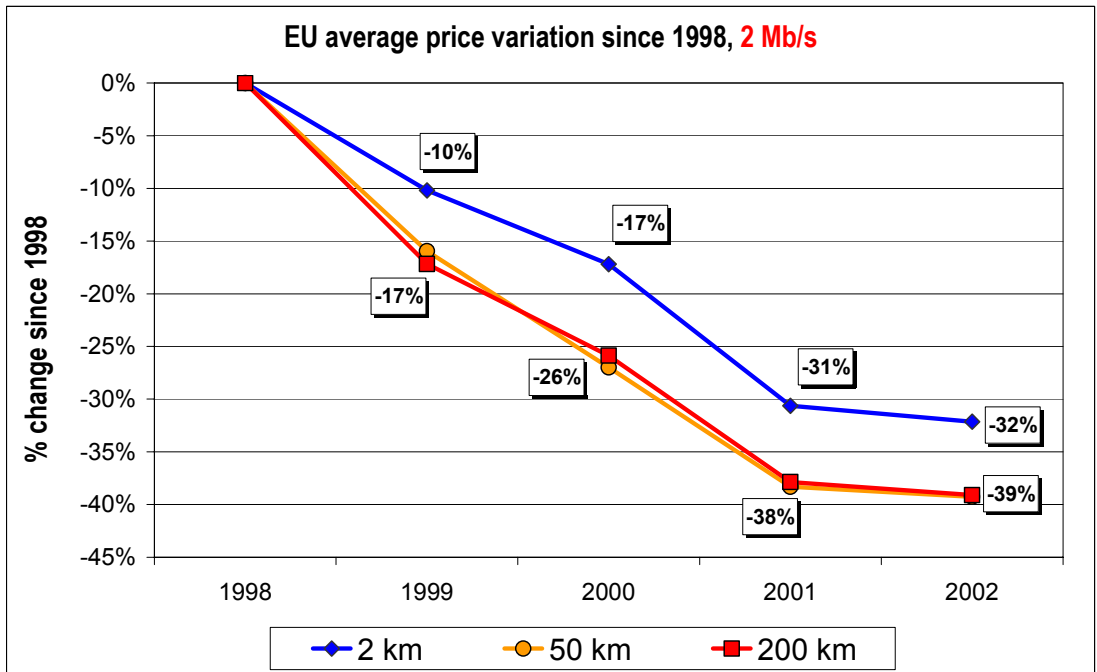
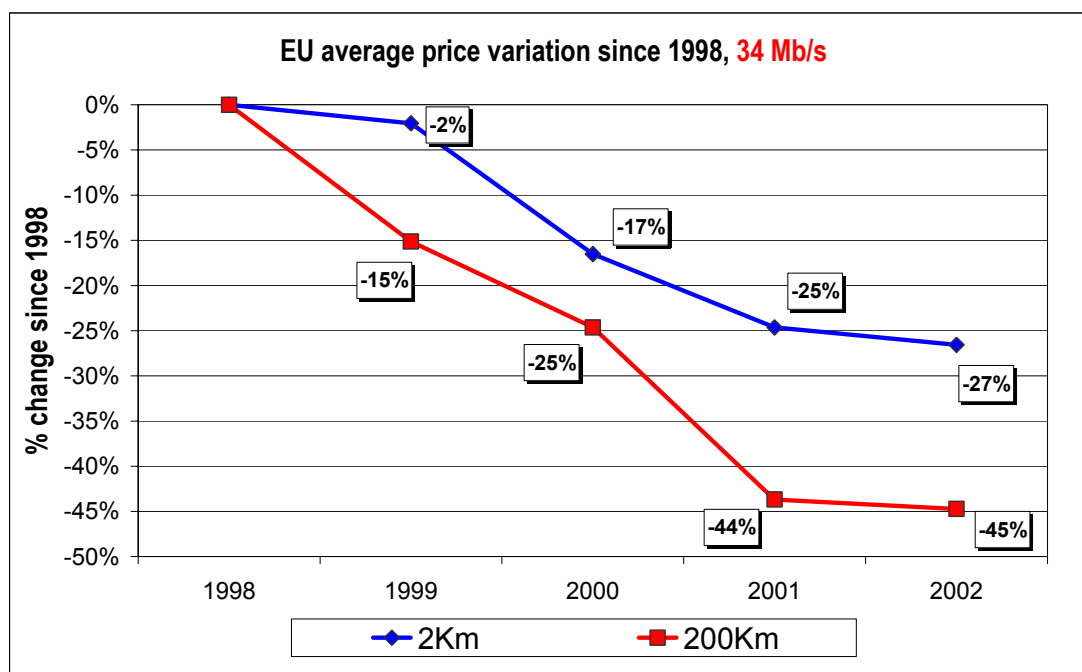


Chart 116



### 8.3. INTERNATIONAL LEASED LINES PRICES

This section examines the standard retail prices (annual rental) for international leased line services (half-circuits in each country) charged by the incumbent operators in each Member State. An analysis of the price development over the period from August 1998 to August 2002 is also included.

Three destinations are covered: international half circuits to the nearest EU country (hereafter “near EU”), to the most distant EU country (“far EU”) and to the USA.

Three types of circuits are considered: digital 64 Kbit/s, 2 Mbit/s and 34 Mbit/s. Given that price information on 155 Mbit/s international lines is only available for a few Member States, the analysis of these circuits is omitted.

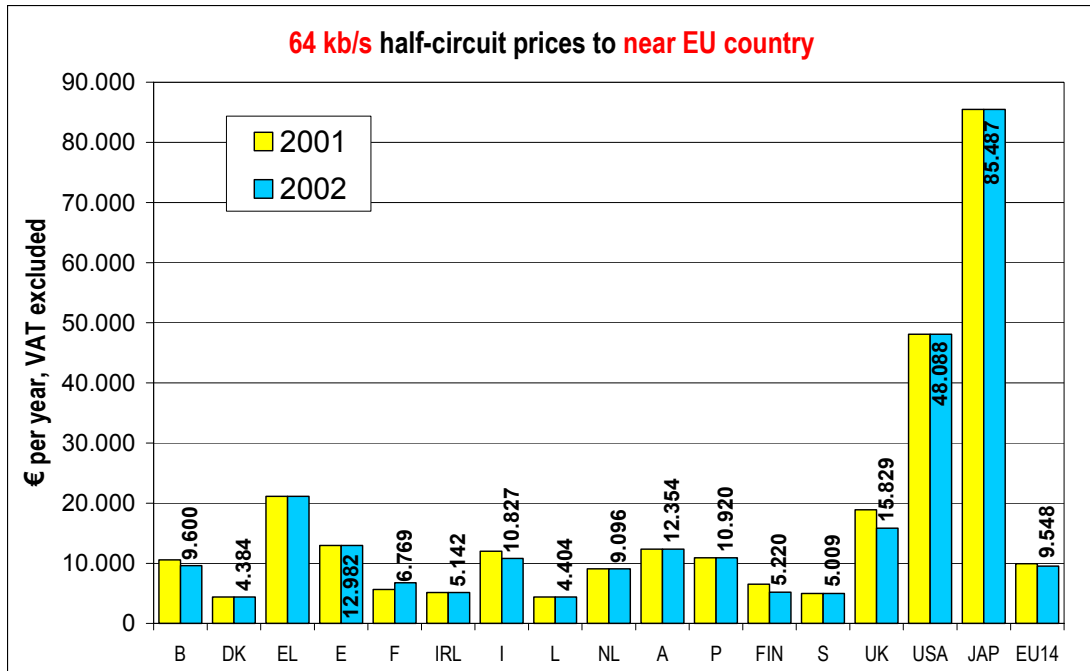
The data is presented with the following parameters:

- All charges in Euro per month
- Excluding VAT
- Germany is not included in the analysis because Deutsche Telekom does not publish prices for international half circuits.
- The years from 1998 are covered
- Variable / 1 year contract (shortest term available).
- AT&T prices are used for USA

Data refer to January for A, February for EL, F, I, NL and FI, April for B and DK, May for E, June for S and UK, and July for IRL, L, and P.

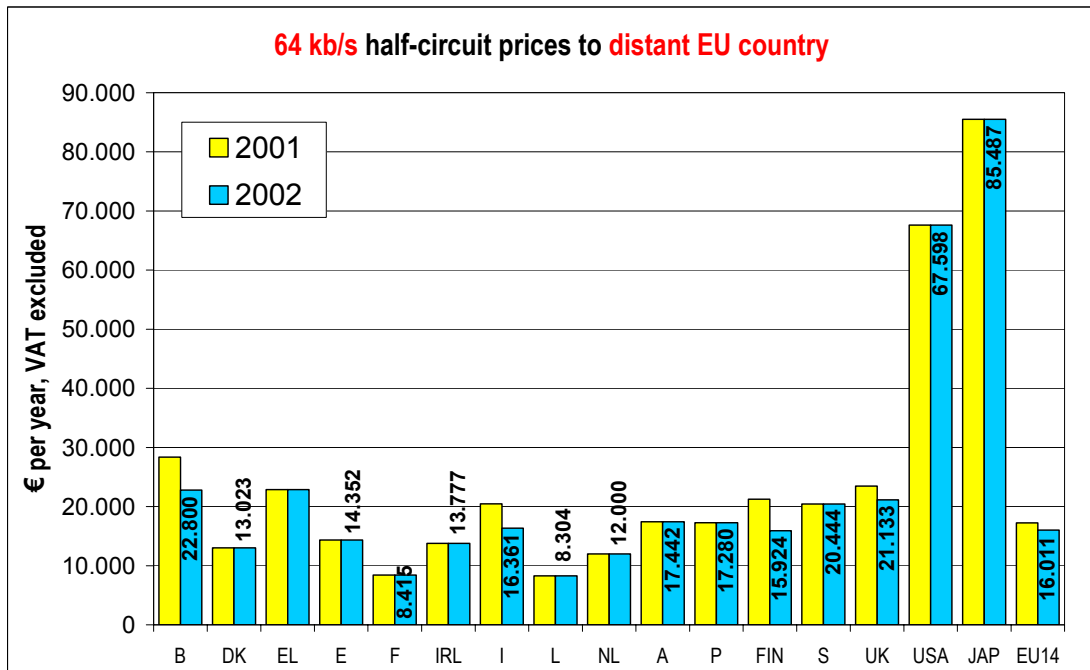
### 8.3.1. 64 Kbit/s

Chart 117



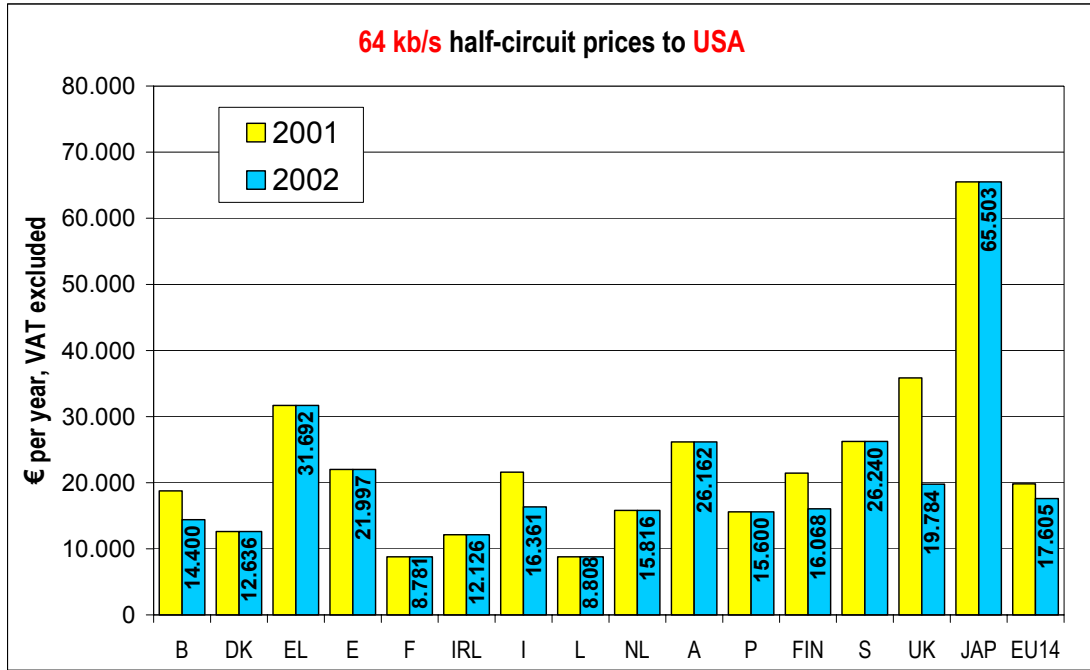
- Data for D not available.

Chart 118



- Data for D not available.

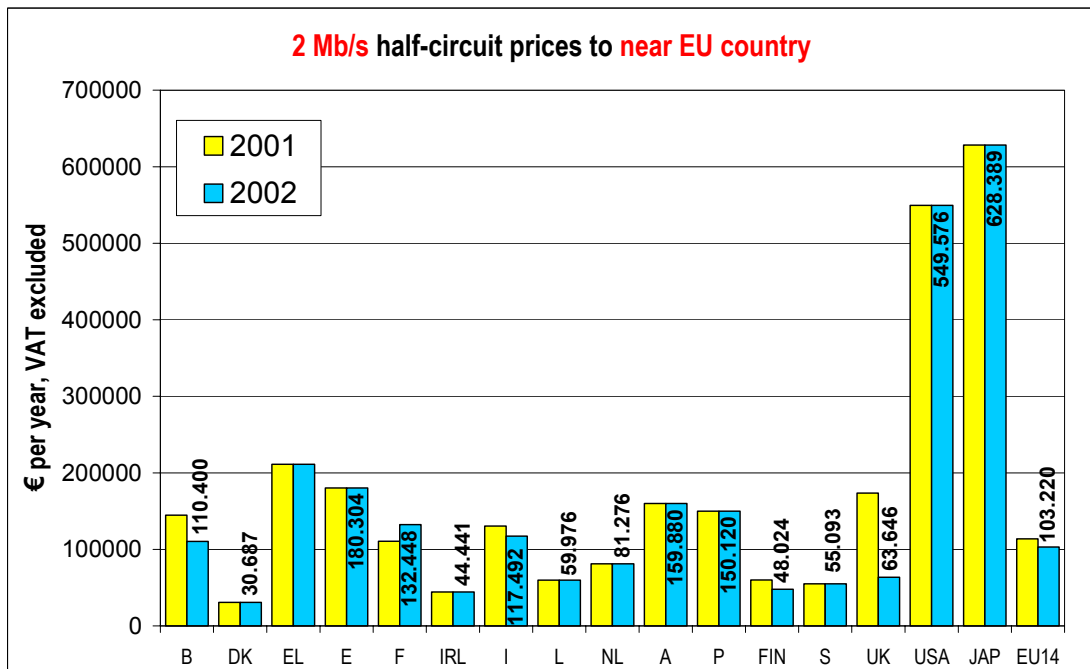
Chart 119



- Data for D not available.

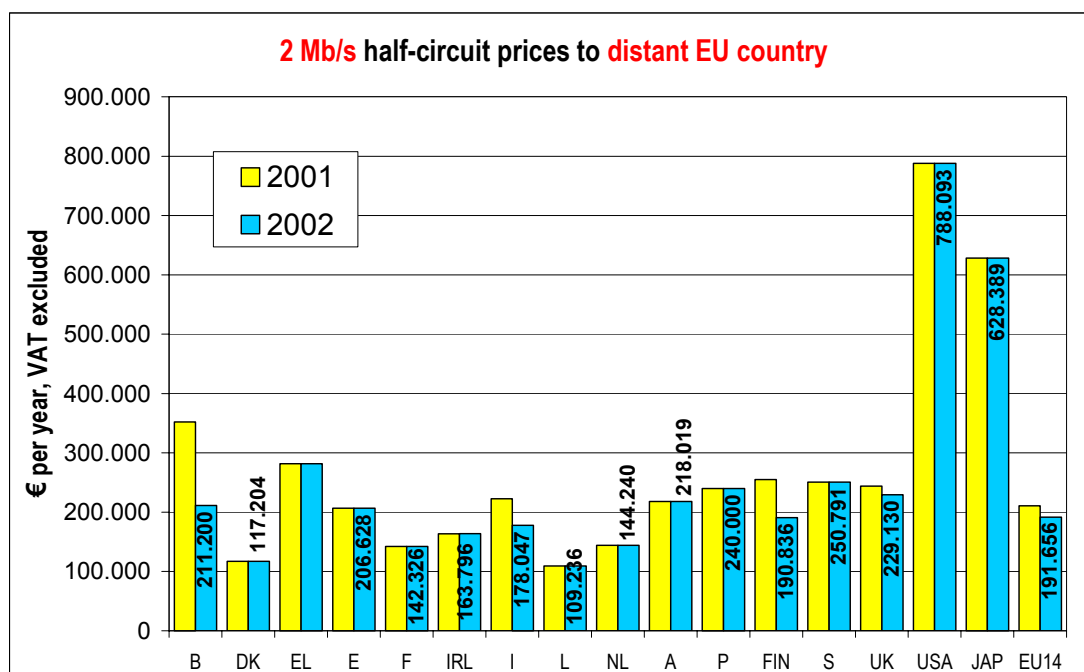
8.3.2. 2 Mbit/s

Chart 120



- Data for D not available.

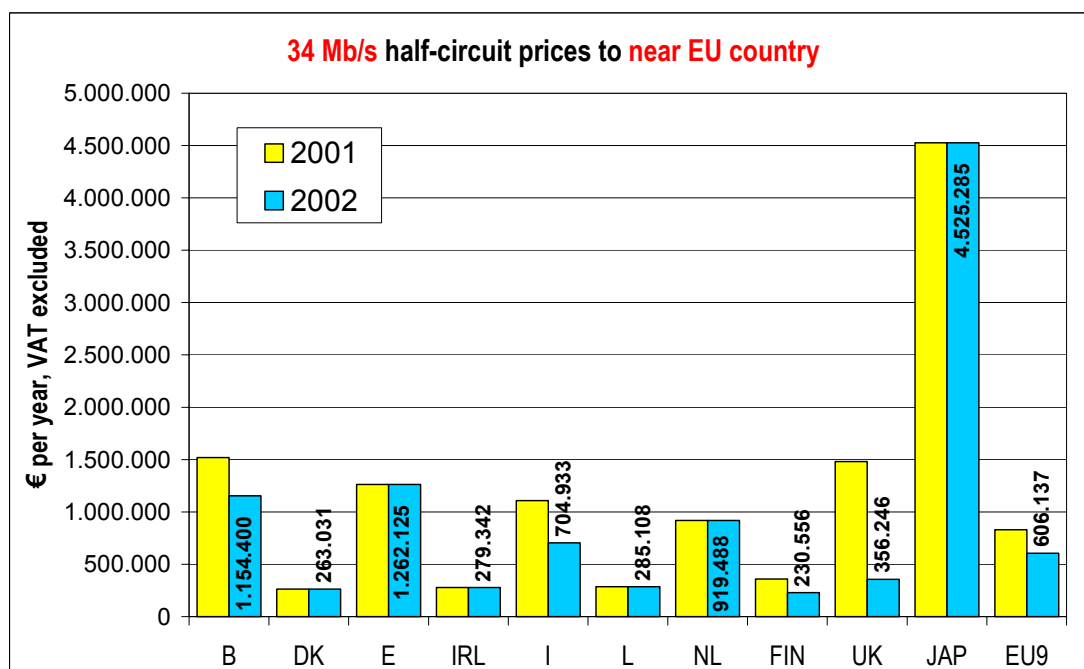
**Chart 121**



- Data for D not available.

**8.3.3. 34 Mbit/s**

**Chart 122**



- Data for D, EL, F, A, P and S not available.

## 8.4.INTERNATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2002)

Chart 123

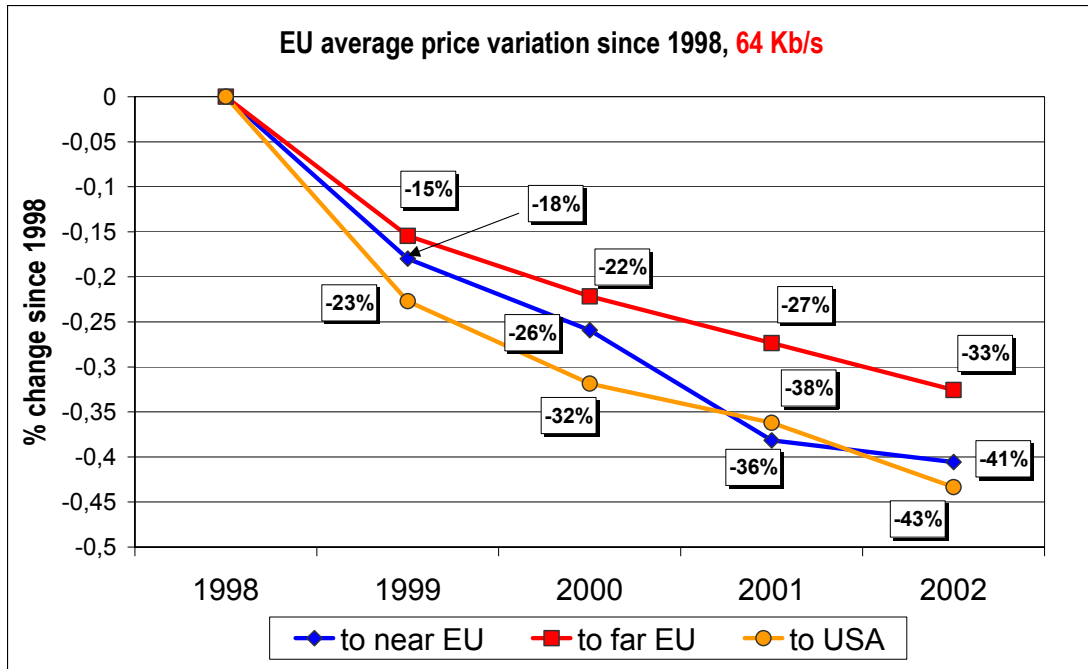
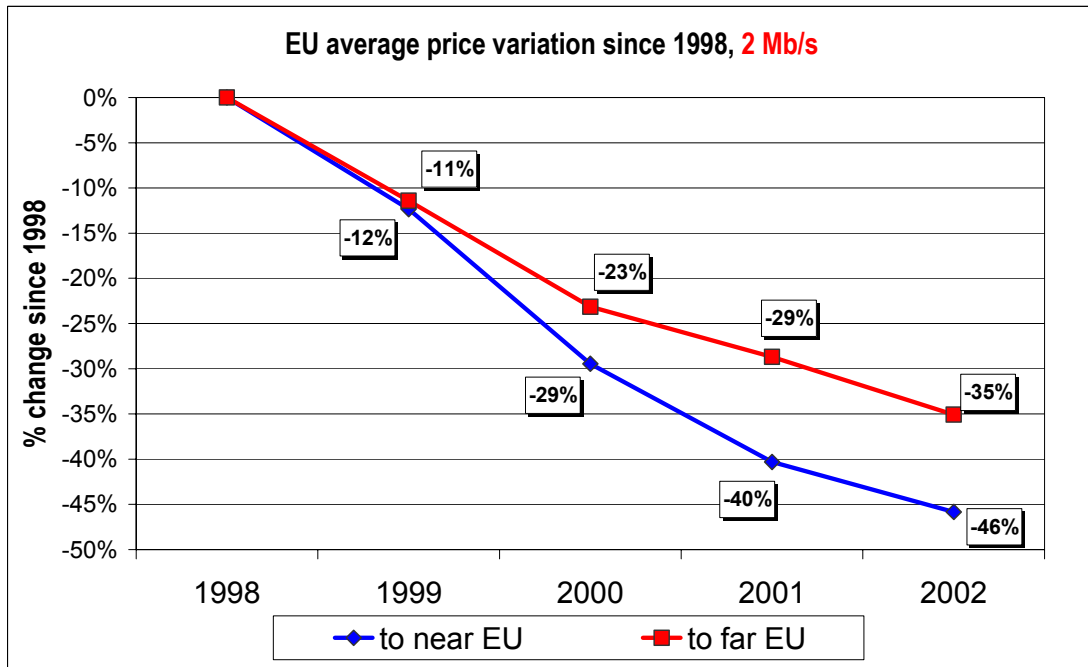


Chart 124



## 9 EXCHANGE RATES

This section explains the exchange rates used in Annexes I and II.

### 9.1. EXCHANGE RATE USED IN SECTION 6 ON INTERNET, SECTION 7 ON PUBLIC VOICE TELEPHONY TARIFFS AND SECTION 8 ON LEASED LINE TARIFFS.

Table 5 Exchange rates, national currency to Euro

|             | Exchange rate to<br>euro <= 2001 | Exchange rate to<br>euro => 2002 |
|-------------|----------------------------------|----------------------------------|
|             | EURO                             | EURO                             |
| Austria     | 0.07267283                       | 1                                |
| Belgium     | 0.02478935                       | 1                                |
| Denmark     | 0.13430931                       | 0.13430931                       |
| Finland     | 0.16818878                       | 1                                |
| France      | 0.15244832                       | 1                                |
| Germany     | 0.51129972                       | 1                                |
| Greece      | 0.0029347                        | 1                                |
| Ireland     | 1.26968004                       | 1                                |
| Italy       | 0.00051646                       | 1                                |
| Japan       | 0.00925189                       | 0.00925189                       |
| Luxembourg  | 0.02478935                       | 1                                |
| Netherlands | 0.45378228                       | 1                                |
| Portugal    | 0.00498798                       | 1                                |
| Spain       | 0.00601012                       | 1                                |
| Sweden      | 0.10794124                       | 0.10794124                       |
| UK          | 1.62999185                       | 1.62999185                       |
| USA         | 1.14495077                       | 1.14495077                       |

### 9.2. EXCHANGE RATE USED IN SECTION 1.5 ON ADMINISTRATIVE AND NUMBERING FEES

The exchange rate to Euro used in section 1.5 on administrative and numbering fees are the same as in table 5, except for the following:

|         | EURO      |
|---------|-----------|
| Denmark | 0.1346058 |
| Sweden  | 0.1146319 |
| UK      | 1.4993537 |

### 9.3. EXCHANGE RATE USED IN SECTION 3 ON INTERCONNECTION AND SECTION 5.2 ON PRICES FOR LOCAL LOOP

The exchange rate to Euro used in section 3 on interconnection and section 5.2 on price for local loop are the same in table 5, except for the following:

|         | EURO       |
|---------|------------|
| Denmark | 0.13460581 |
| Sweden  | 0.10729038 |
| UK      | 1.59387950 |





# **ANNEX 1**

## **MARKET OVERVIEW**



## TABLE OF CONTENTS

|          |   |            |
|----------|---|------------|
| <b>1</b> | <b>PLAYERS IN THE FIXED MARKET .....</b>  | <b>7</b>   |
| 1.1.     | LICENSING REGIMES IN THE MEMBER STATES.....   | 8          |
| 1.2.     | NUMBER OF FIXED TELECOMMUNICATIONS OPERATORS .....  | 10         |
| 1.3.     | INCUMBENTS MARKET SHARE ON FIXED TELEPHONY MARKET.....  | 17         |
| 1.4.     | SHARE OF PUBLIC OWNERSHIP IN INCUMBENT OPERATORS.....   | 20         |
| 1.5.     | ADMINISTRATIVE AND NUMBERING FEES FOR THE PROVISION OF PUBLIC VOICE<br>TELEPHONY AND PUBLIC NETWORK SERVICES.....                     | 21         |
| <b>2</b> | <b>CONSUMER'S CHOICE OF FIXED OPERATORS .....</b>   | <b>27</b>  |
| 2.1.     | PERCENTAGE OF SUBSCRIBERS WITH CHOICE OF OPERATORS FOR FIXED CALLS .....  | 27         |
| 2.2.     | PERCENTAGE OF SUBSCRIBERS ACTUALLY USING AN ALTERNATIVE PROVIDER OTHER<br>THAN THE INCUMBENT.....                                     | 29         |
| 2.3.     | FACILITIES USED BY NEW ENTRANTS TO PROVIDE VOICE TELEPHONY .....  | 30         |
| <b>3</b> | <b>PUBLIC NETWORK INTERCONNECTION AND INTERCONNECTION CHARGES .....</b>   | <b>33</b>  |
| 3.1.     | FIXED-TO-FIXED INTERCONNECTION CHARGES .....  | 33         |
| 3.2.     | LEASED LINE INTERCONNECTION CHARGES.....  | 35         |
| 3.3.     | FIXED-TO-MOBILE INTERCONNECTION CHARGES .....   | 40         |
| <b>4</b> | <b>MOBILE MARKET .....</b>  | <b>45</b>  |
| 4.1.     | MOBILE PENETRATION .....  | 45         |
| 4.2.     | PLAYERS IN THE MOBILE MARKET .....  | 47         |
| 4.3.     | OPERATORS' MARKET SHARES .....  | 49         |
| 4.4.     | MOBILE BASKET .....   | 51         |
| <b>5</b> | <b>LOCAL ACCESS AND PRICING.....</b>  | <b>55</b>  |
| 5.1.     | BROADBAND ACCESS.....   | 55         |
| 5.2.     | PRICES FOR UNBUNDLED LOCAL LOOP .....   | 62         |
| <b>6</b> | <b>INTERNET SERVICES .....</b>  | <b>67</b>  |
| 6.1.     | INTERNET MARKET DATA.....   | 67         |
| 6.2.     | INTERNET ACCESS PRICING .....   | 69         |
| <b>7</b> | <b>PUBLIC VOICE TELEPHONY TARIFFS.....</b>  | <b>71</b>  |
| 7.1.     | CHARGING SYSTEM .....   | 72         |
| 7.2.     | MONTHLY RENTAL CHARGED BY THE INCUMBENT OPERATORS .....   | 74         |
| 7.3.     | AVERAGE MONTHLY EXPENDITURE (COMPOSITE CALL BASKET).....  | 76         |
| 7.4.     | FIXED NATIONAL CALLS .....  | 78         |
| 7.5.     | TREND OF THE BASKET FOR FIXED NATIONAL CALLS (NATIONAL BASKET) .....  | 81         |
| 7.6.     | ALTERNATIVE NATIONAL OPERATORS.....   | 82         |
| 7.7.     | PRICE OF AN AVERAGE FIXED INTERNATIONAL CALL (INTERNATIONAL CALL BASKET).....   | 84         |
| 7.8.     | PRICE OF CALLS TO EU, JAPAN, USA .....  | 86         |
| 7.9.     | ALTERNATIVE INTERNATIONAL OPERATORS.....  | 88         |
| <b>8</b> | <b>LEASED LINES RETAIL TARIFFS.....</b>   | <b>91</b>  |
| 8.1.     | INCUMBENTS' NATIONAL LEASED LINES .....   | 91         |
| 8.2.     | NATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2002) .....  | 97         |
| 8.3.     | INTERNATIONAL LEASED LINES PRICES.....  | 98         |
| 8.4.     | INTERNATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2002).....  | 102        |
| <b>9</b> | <b>EXCHANGE RATES .....</b>   | <b>103</b> |
| 9.1.     | EXCHANGE RATE USED IN SECTION 6 ON INTERNET, SECTION 7 ON PUBLIC VOICE<br>TELEPHONY TARIFFS AND SECTION 8 ON LEASED LINE TARIFFS..... | 103        |
| 9.2.     | EXCHANGE RATE USED IN SECTION 1.5 ON ADMINISTRATIVE AND NUMBERING FEES.....   | 103        |
| 9.3.     | EXCHANGE RATE USED IN SECTION 3 ON INTERCONNECTION AND SECTION 5.2 ON PRICES<br>FOR LOCAL LOOP.....                                   | 103        |





## 1 PLAYERS IN THE FIXED MARKET

This section analyses the situation of the market players in the fixed telecommunications market (voice telephony and network services): number of operators authorised to operate a network and to provide public fixed voice telephony, number of players actually active in the market, licence fees for fixed services, market shares and the public ownership in the incumbent operators.

Data are based on the replies to the European Commission questionnaire provided by the national regulatory authorities and gives the situation as at August 2002.

The following definitions apply:

- Public network operators are defined as operators that install, manage and operate a telecommunications transmission network to provide public telephony services or public network services<sup>1</sup> (i.e. provision of leased lines).
- Public fixed voice telephony is defined as a service available to the public for the direct transport on a commercial basis of real-time speech via the public switched network, such that any user can use equipment connected to a network termination point at a fixed location to communicate with another user of equipment connected to another termination point. Voice telephone could be provided on an own self-operated network or on a leased network.
- Public fixed voice telephony (not including the installation of the network): provision of national and international public voice telephony by service providers that operate, control and manage the transmission capacity which is leased from other operators. Simple call-back and calling card services and operators dealing only with marketing, billing, etc., are excluded. The definition of service provider may differ from that used in the national law of individual countries (in some countries non-self operated network operators engage exclusively in reselling activities).
- Public voice telephony on an own self-operated network (not including network services): provision of public fixed voice telephony over a network fully controlled, operated and (wholly or partially) owned by the operator, excluding the provision of network services.
- Local operators are operators authorised to offer telecommunications services only to users located in specific areas (to whom they provide local calls as well as long-distance and international calls through interconnection agreements with other operators).
- National operators are operators authorised to offer telecommunications services without any geographical restriction. They may provide all types of telephony services (local, long-distance and international calls) to users located throughout the national territory.

---

<sup>1</sup> Public fixed network services are defined as the conveyance of calls, messages and signals over a telecommunications network, including any necessary switching. They may be network interconnection services, which are provided to other network operators to enable calls and associated functions to be passed through interconnected networks, or basic retail network services, which are provided to customers such as end-users or service providers.

## 1.1.LICENSING REGIMES IN THE MEMBER STATES

A variety of different national licensing regimes can be identified across Member States: telecommunications operators<sup>2</sup> may have individual licences/authorisations or be subject to registration/notification procedures, or may effectively operate in the market without being subject to any individual licence or declaration procedure. Furthermore, depending on the national licensing regime, in order to provide a particular service, the operators may have to hold (and pay for) a number of different licences or may have to pay for a licence with a wider scope than they require (i.e. nation-wide), even if they do not make full use of it.

Table 1 shows the licensing regimes in the 15 Member States for the four main categories of fixed services. The first column indicates whether the national licence regime provides for geographical restriction on the licence (local or national). The rest of the table shows the type of licence (or licences) required for four types of telecommunications service (see above for the definitions): public fixed voice telephony (not including the installation of the network); operation of a public network and provision of network services (not including voice telephony); public voice telephony on a owned self-operated network (not including the provision of network services); public voice telephony and network services on a owned self-operated network.

In the Netherlands and Finland the licence regimes provide for a registration/notification system. In Sweden both individual licence and registration systems are applied<sup>3</sup>. The Danish licensing regime system does not even require a notification.

In Greece public voice telephony can be provided by way of both an individual licence and a general authorisation, but in the latter case operators are not allowed to use numbers<sup>4</sup>.

The rest of the countries apply a system of individual licences. In the United Kingdom and Ireland a single fixed telecommunications licence exists, whatever the types of public service provided (voice telephony and/or public network)<sup>5</sup>. In Austria a single licence for voice telephony services exists, whether or not the operators self-operate a owned or a leased network. Belgium, Germany, Portugal and Sweden provide only two types of fixed licences (voice telephony services and public network), while the other countries also provide a single licence which combines several categories of more limited individual licences (i.e. public voice telephony on a owned self-operated network; public voice telephony and network services on an own self-operated network)<sup>6</sup>.

---

<sup>2</sup> In the following, “operators” means both network operators and service providers; “authorised operators” means operators that have been granted an individual licence/authorisation or are subject to a declaration/notification procedure.

<sup>3</sup> According to the Swedish licensing regime, a notification is required for the provision (within a publicly available telecommunications network) of telecommunications services (fixed telephony, mobile services, leased lines, etc.) which require allocation of capacity from the telephony numbering plan. An individual licence is required for the provision of telecommunications services if the activity is considered to be of “considerable scope” with regard to the areas covered, the number of users or other comparable factors.

<sup>4</sup> Simple resellers do not need any licence or authorisation.

<sup>5</sup> In Ireland a separate licence for Public Network (basic licence) is also provided.

<sup>6</sup> But in any case the allocation of the two separate licences for voice telephony and for public networks gives the same right as the “combined” licence.



**Table 1. Licensing regime for public fixed services**

|            | Distinction between national and local licence/registration | Type of fixed telecommunications services   |   |   |  |
|------------|---|---|---|---|--|
|            |   | Public fixed voice telephony services (not including the installation of the network)                       | Operation of owned public network and provision of network services (not including voice telephony) | Public voice telephony over a owned self-operated network | Public voice telephony and network services over a owned self-operated network |
| <b>B</b>   | No  | VT  | NET   | VT + NET  |  |
| <b>DK</b>  | No  | General Class Licence for Public Telecommunication Networks and Services (operators apply only for numbers) |   |   |  |
| <b>D</b>   | Yes   | VT (class 4)  | NET (class 3)   | VT + NET (class 4 + class 3)                              |  |
| <b>EL</b>  | No  | VT  | NET   | VT and NS on NET <sup>7</sup>                             |  |
| <b>E</b>   | Yes   | VT (type A)   | NET (type C1)   | VT and NS on NET (type B1)                                |  |
| <b>F</b>   | Yes   | VT (L34-1)  | NET (L33-1)   | VT and NS on NET (L34-1 and L33-1)                        |  |
| <b>IRL</b> | No  | VT and NS on NET (General Licence)<br>(NET <sup>5</sup> (Basic Licence))                                    |   |   |  |
| <b>I</b>   | Yes   | VT  | NET   | VTonNET   | VT + NET<br>(or VTonNET+NET)   |
| <b>L</b>   | No  | VT (type C)   | NET (type B)  | VT and NS on NET (type A)                                 |  |
| <b>NL</b>  | No  | VT (registration)   | NET (registration)  | VT + NET (reg.)   |  |
| <b>A</b>   | No <sup>8</sup>   | VTonNET <sup>9</sup>  | NET   | VTonNET   | VTonNET + NET  |
| <b>P</b>   | No  | VT  | NET   | VT + NET  |  |
| <b>FIN</b> | Yes   | VT (registr.)   | NET (registr.)  |   |  |
| <b>S</b>   | No  | VT (lic./reg.)  | NET (lic./reg.)   | VT + NET (lic./reg.)                                      |  |
| <b>UK</b>  | Yes   | VT and NS on NET (PTO licence)  |   |   |  |

**Legend:**

VT (Voice Telephony): individual licence/registration for providing public fixed voice telephony (not including the installation of the network)

NET (Network): individual licence/registration/notification for operation of a public network and for the provision of network services (not including voice telephony services)

VTonNET (Voice Telephony on Network): individual licence/registration/notification for providing public voice telephony on a owned self-operated network (not including network services)

VTandNSonNET (Voice Telephony and Network Services on Network): individual licence/registration/notification for provision of public voice telephony and network services on a owned self-operated network

VT + NET; VTonNET + NET; VTandNSonNET + NET: both licences needed for provision of the services

<sup>7</sup> The Greek licensing regime provides for a list of 6 types of individual licence, among which those for public fixed networks and for public voice telephony. Moreover, at the request of the applicant, the NRA can issue a single licence which combines several categories of individual licence.

<sup>8</sup> The legal framework for the licensing regime in Austria does not distinguish between local and national coverage of licences, although operators can apply for a licence restricted in scope as to the network and/or the services provided.

<sup>9</sup> An individual licence is required for the provision of public voice telephony over a self-operated fixed telecommunication network. The network could either belong to the operators, or could be totally leased from a third-party network operator.

## 1.2. NUMBER OF FIXED TELECOMMUNICATIONS OPERATORS

This section shows the number of operators authorised to provide public fixed network services and public fixed voice telephony, as well as the number of operators effectively active in the market.

The figures include a great variety of operators: fixed network operators, service providers, cable modem access operators and operators with wireless local loop, mobile and satellite operators (for the fixed part of their networks and services).

Depending on the national licensing scheme, for some countries data for both local and national operators are given (see table 1). This does not mean that in the other countries all operators are national, but only that the licensing scheme does not require a licence limited as to its scope (in consequence all the operators have to pay for a national licence even if they are only local operators).

In the following charts, “national operator” means an operator that has been granted either a national licence/authorisation or a non-geographically limited licence under a licensing scheme which does not specify the geographic coverage.

The figure reflect the number of operators, rather than the number of licences. This is particularly true for the cable TV operators that operate their telecommunication licence through local licences granted to their local franchisees; in this case they have been considered as one single operator.

The number of local operators is not strictly comparable between Member States, since it varies considerably between countries depending on the division of the national territory into local areas.

Figures for Denmark may be incomplete due to the fact that there is neither a licensing requirement nor a central register of operators and their activities (operators only apply for numbers).

In Spain, the big increase from last year in the number of operators (46 local and 61 national in 2001) reflects the fact that many cable TV operators have transformed their provisional cable modem access concession into a B1 licence for provision of telecommunication services (voice telephony and network services) over a own network.

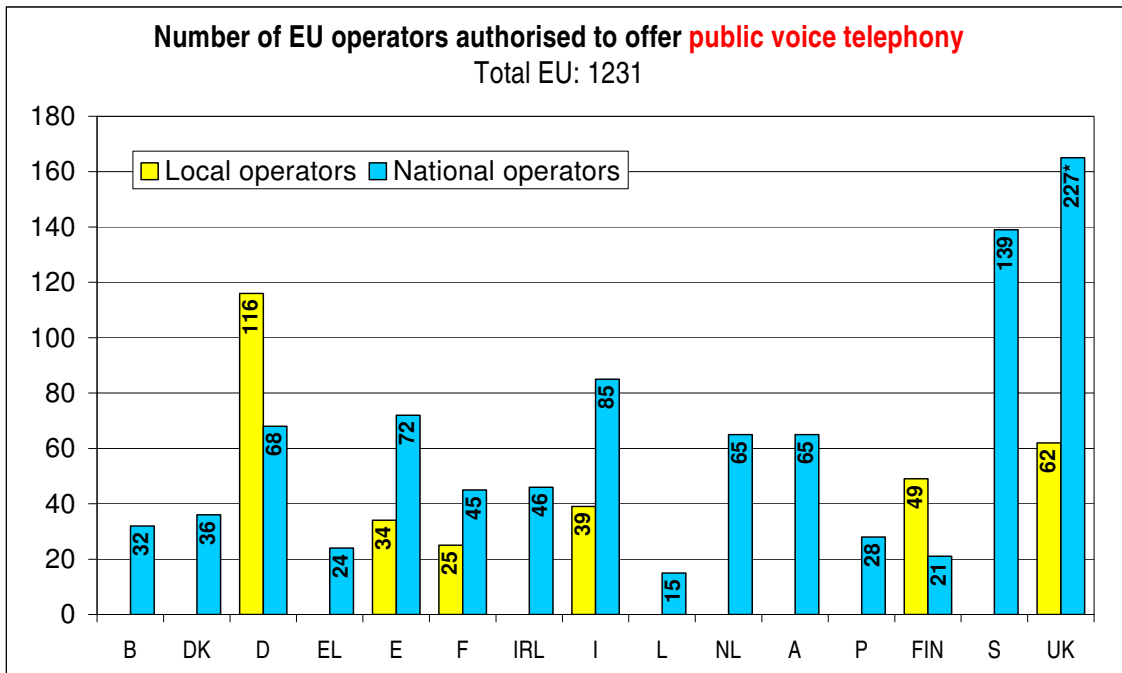
In Finland, 38 of the 48 regional operators are local incumbents and belong to the Finnet Group.

Data for Sweden include both licensed and notified operators.

In the United Kingdom, the 62 local cable franchise operators, owned by 2 companies, must hold (inter alia) a standard PTO licence for the provision of cable modem access services which, in turn, also gives the right to provide public voice telephony/network service. How many of these cable modem access operators are also providing public voice telephony/network services is unknown. From January 2001 the geographical restriction on cable companies ceased to exist and any cable licensee was free to operate outside the area laid down in its licence, but to maintain comparability with previous Reports we will continue to consider these operators as local. The big decrease in the number of local operators (cable modem access) for 2001 (134) and 2002 (62) is due to intensive merger activities in the market.

## PUBLIC VOICE TELEPHONY SERVICES

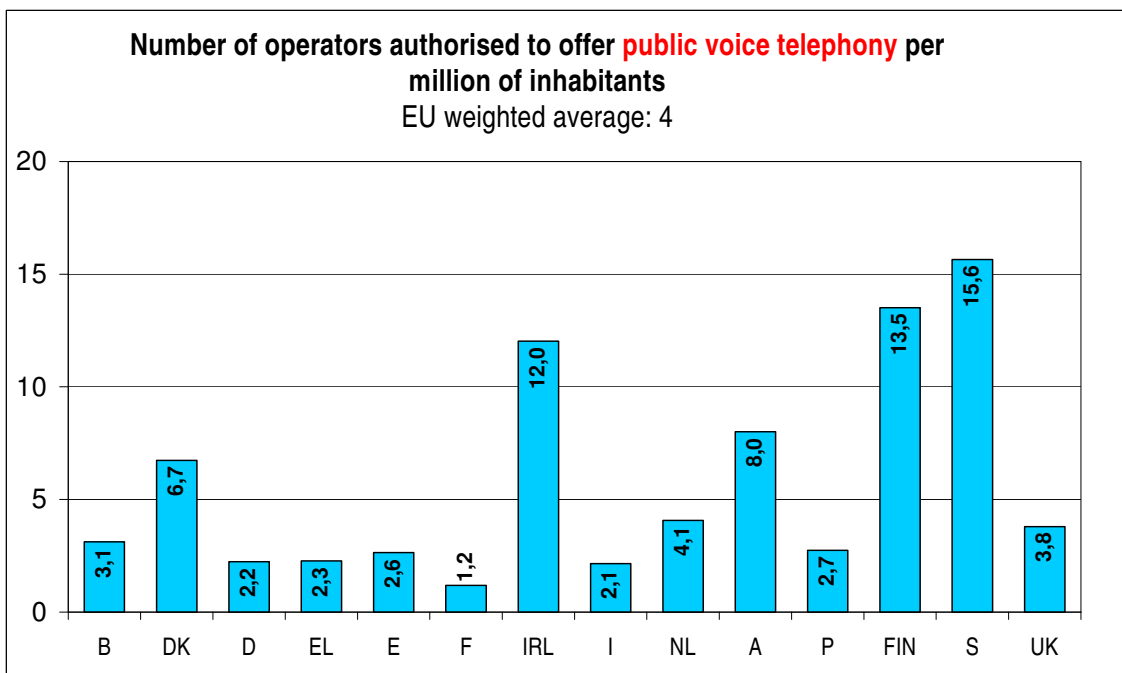
**Chart 1**



\* Figure not to scale

- Due to the registration system, the number of operators authorised to provide public voice telephony figures for Denmark has been estimated using the number of operators that have been allocated geographical numbers and/or access codes. The estimated overall number of operators has declined from 48 in 2001 to 36 in 2002 due to extensive merging and cornering in the Danish telecommunications market. Moreover, the total number of operators has diminished due to a couple of bankruptcies among smaller operators.

**Chart 2**

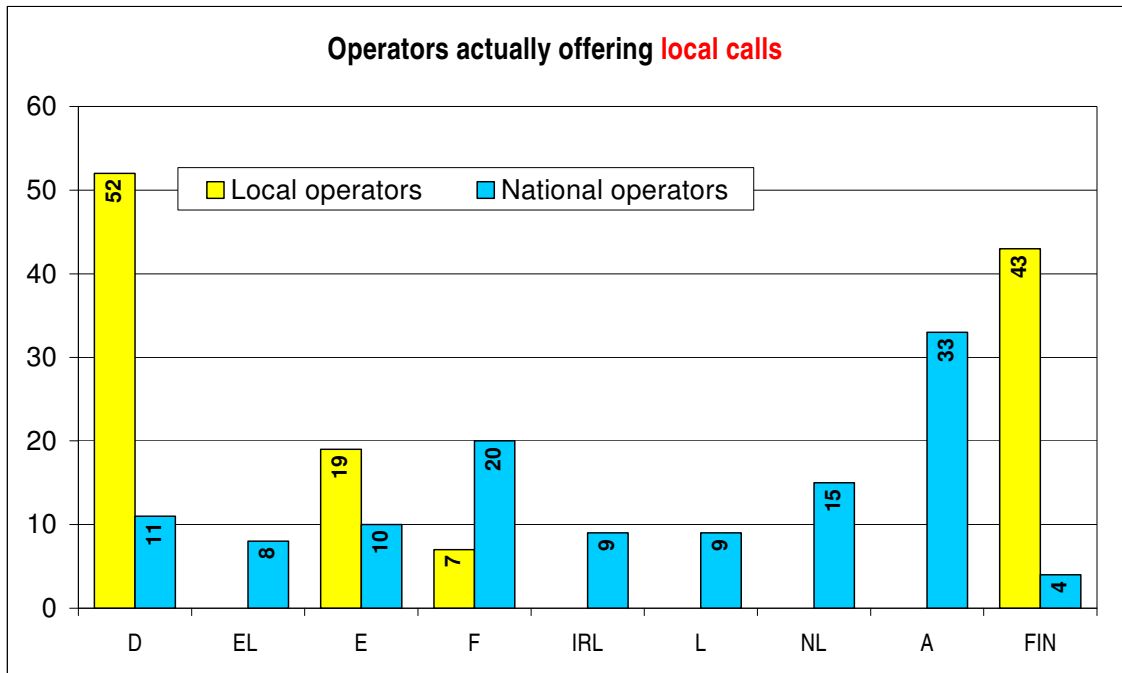


This indicator is not significant for Luxembourg, because of its peculiar characteristic in terms of low percentage of population in relation to the non-physical inhabitants.

The number of operators authorized to offer public fixed telecoms services indicates only the potential for competition in the market rather than the current level of competition. For this reason, where possible, an estimate is given of the number of operators actually active on the market. These figures do not show to what extent the operators are offering services. Many new entrants initially provide only services to business users in the main cities, even if they have a national license allowing them to offer all types of service throughout the country.

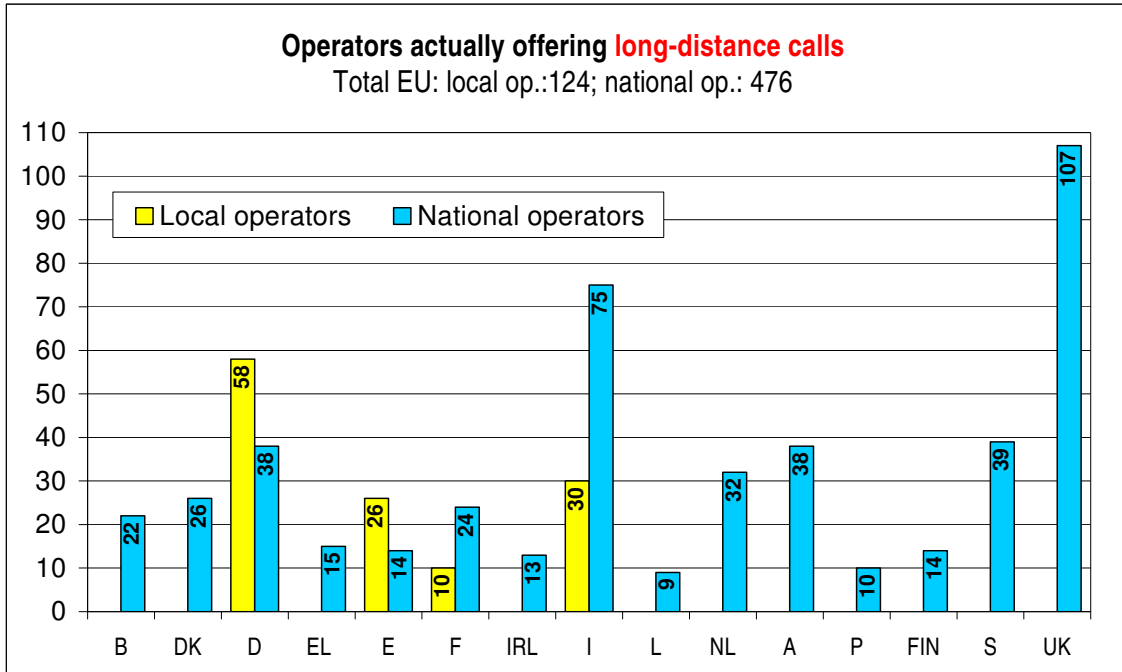
Figures in the following three charts should be read on a service by service bases (local, long-distance and international call markets) and not as country totals, since the same operator is usually authorized to offer more than one type of service.

**Chart 3**



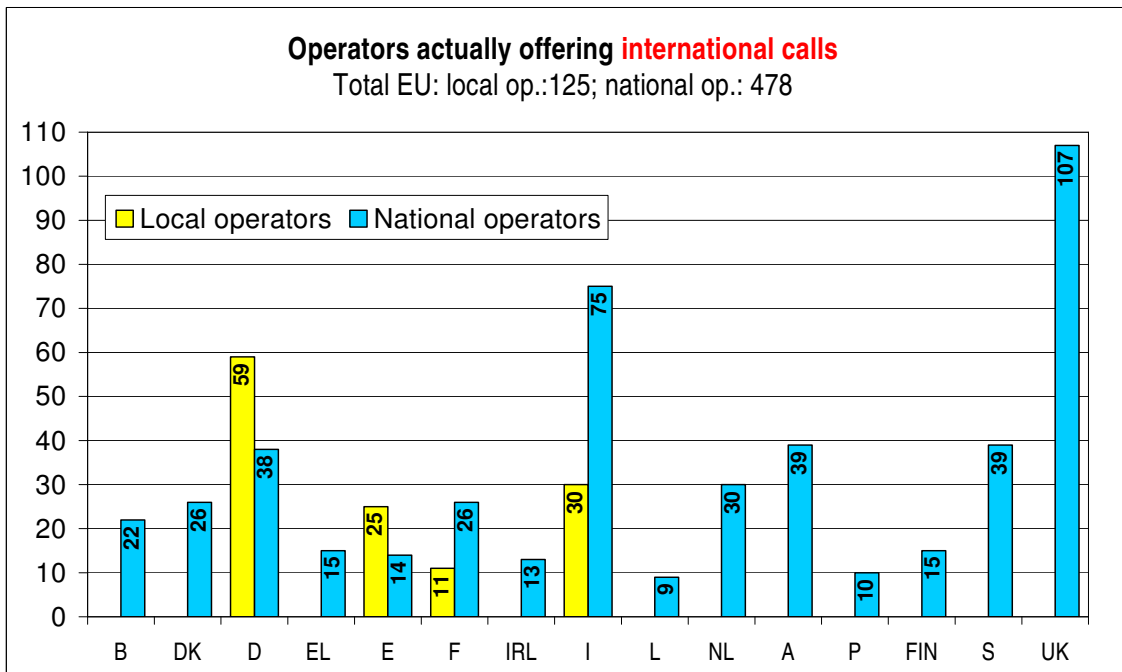
- Because of its small size, no distinction is made in Luxembourg between local and long-distance voice telephony services.
- B, DK, I, P, S and UK do not provide separate figure for the operators effectively providing local calls.

**Chart 4**



- Figure for Denmark should be considered as minimum.
- The figures for B, DK, I, P and S do not distinguish between the type of call provided (local, long-distance, international); the figure for the United Kingdom does not distinguish between local and national operators.

**Chart 5**



- Figure for Denmark should be considered as minimum.
- The figures for B, DK, I, P, S and the UK do not distinguish between the type of call provided (local, long-distance, international); the figure for the United Kingdom does not distinguish between local and national operators.

## PUBLIC NETWORK

The following charts show the number of network operators with a public network licence and/or authorised to offer network services (conveyance of calls, messages and signals over a telecommunications network, including any necessary switching).

The distinction between local and national public network operators concerns the geographical scope of the network, while the provision of network services could be subject to a different geographical limitation. In the following, “local operators” means operators whose network does not cover the whole national territory (whatever the geographical scope of the service).

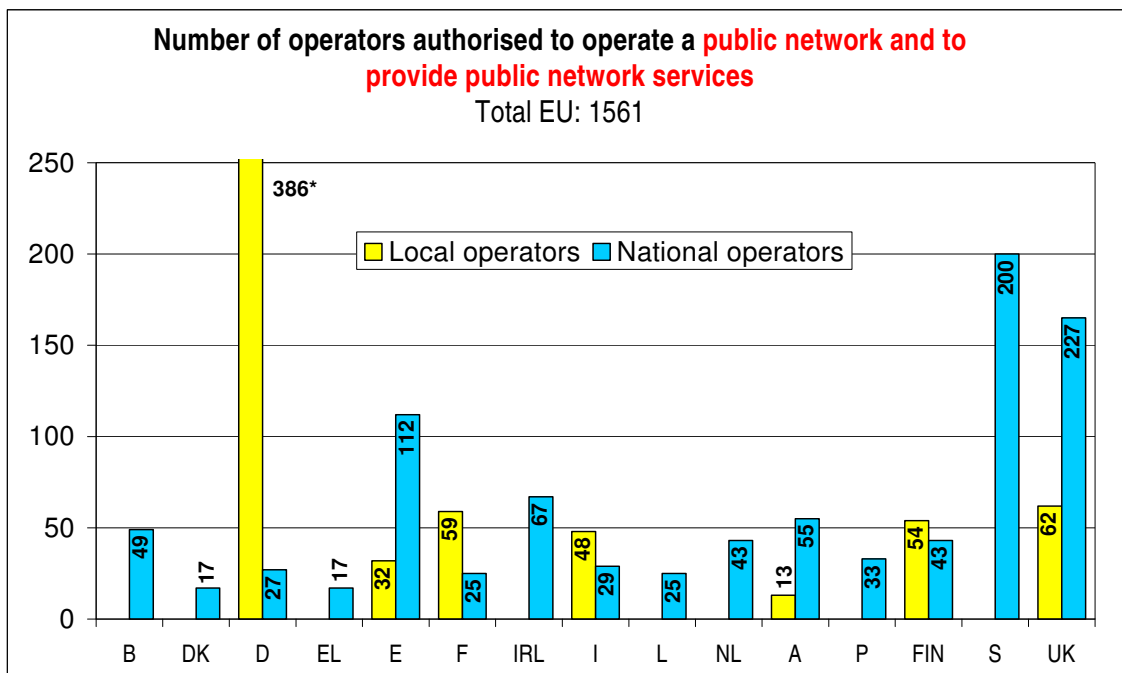
It should be noted that a licence to operate a local/regional public network does not necessarily imply the existence of local network access to customers (“the last mile”. See local loop access section for more details).

Figure for Spain does not include 75 local cable modem access operators, that have transformed their provisional cable modem access concession into a definitive public network licence.

Data for Ireland include both basic and general licences.

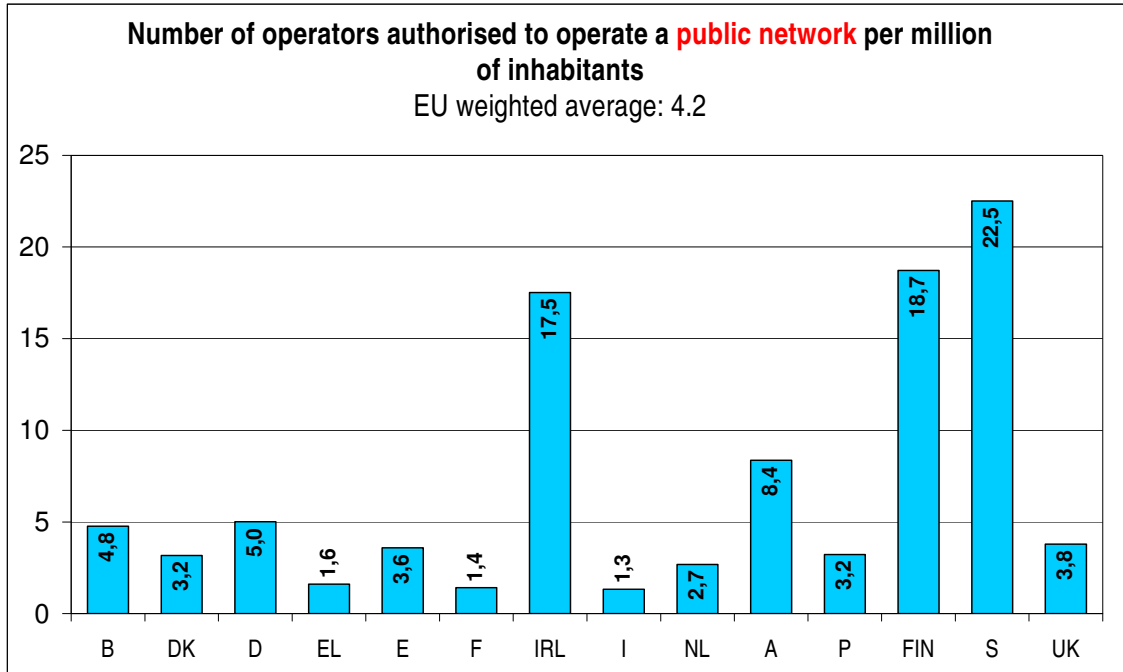
In the United Kingdom, the local operators refer to 62 local cable franchise operators, owned by 2 companies.

Chart 6



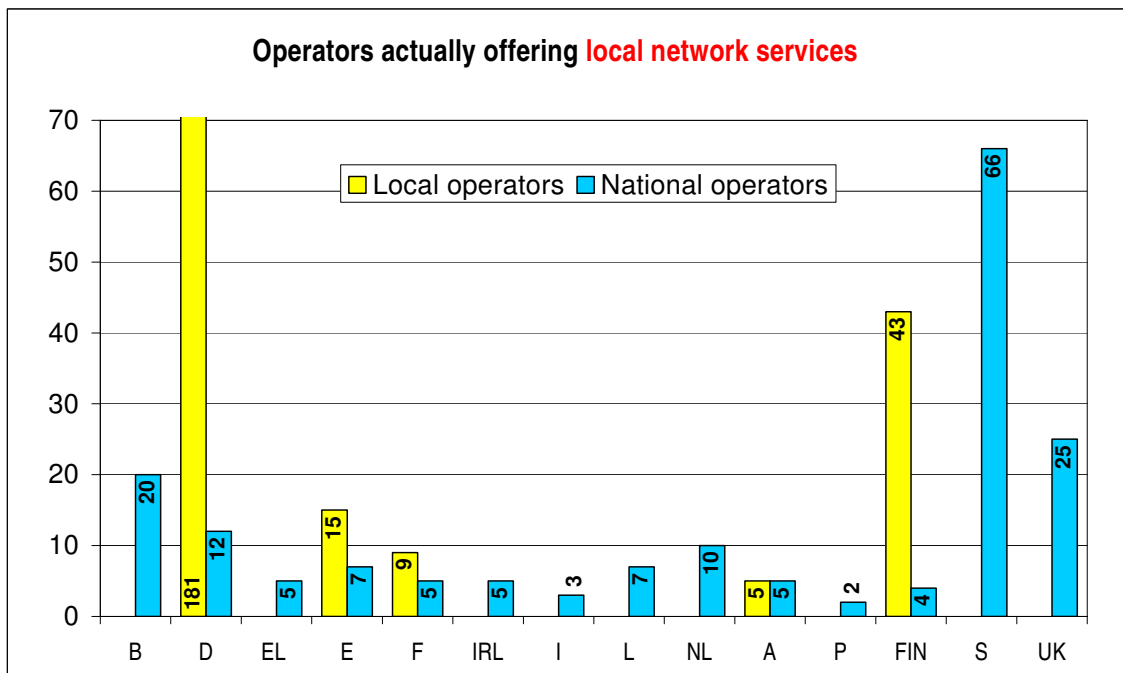
\* Figure not to scale.

**Chart 7**



This indicator is not significant for Luxembourg, because of its peculiar characteristic in terms of percentage of population in relation to non-physical inhabitants.

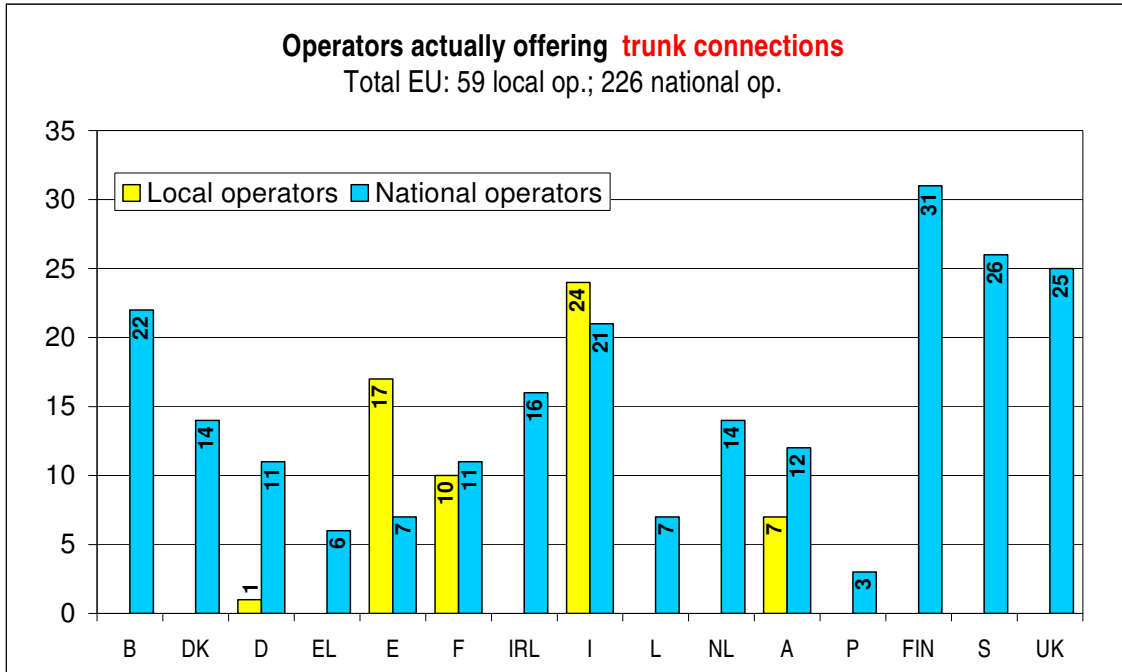
**Chart 8**



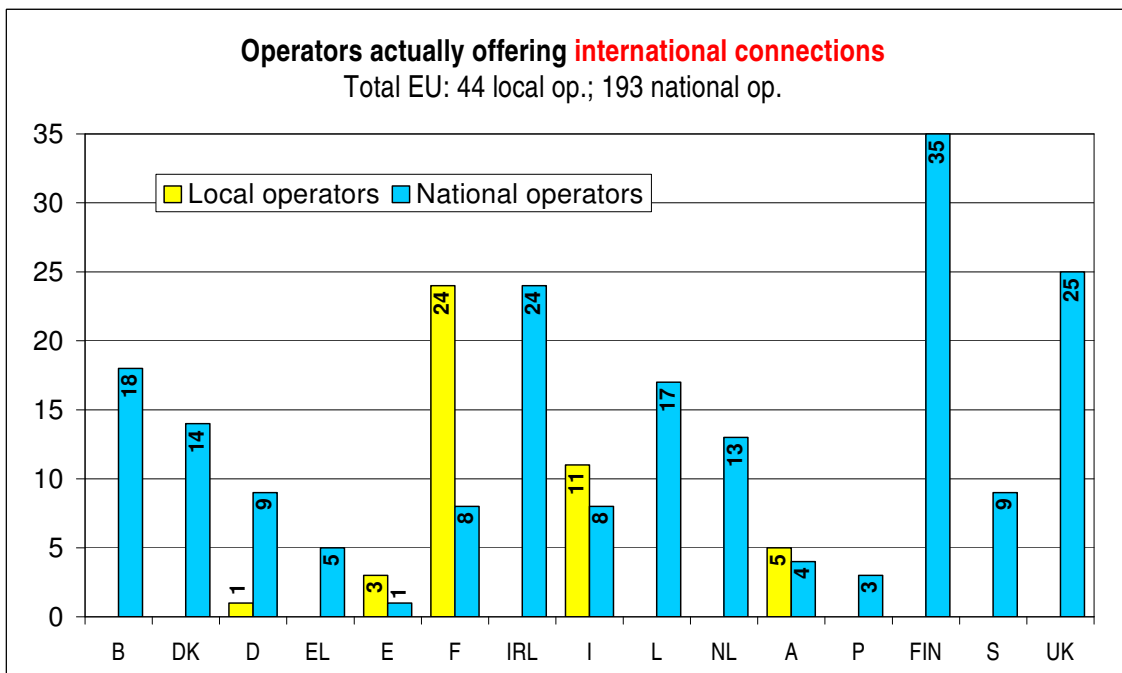
- Value for Germany not to scale.

- Denmark does not provide separate figures for the operators effectively providing local network connections.

**Chart 9**



**Chart 10**



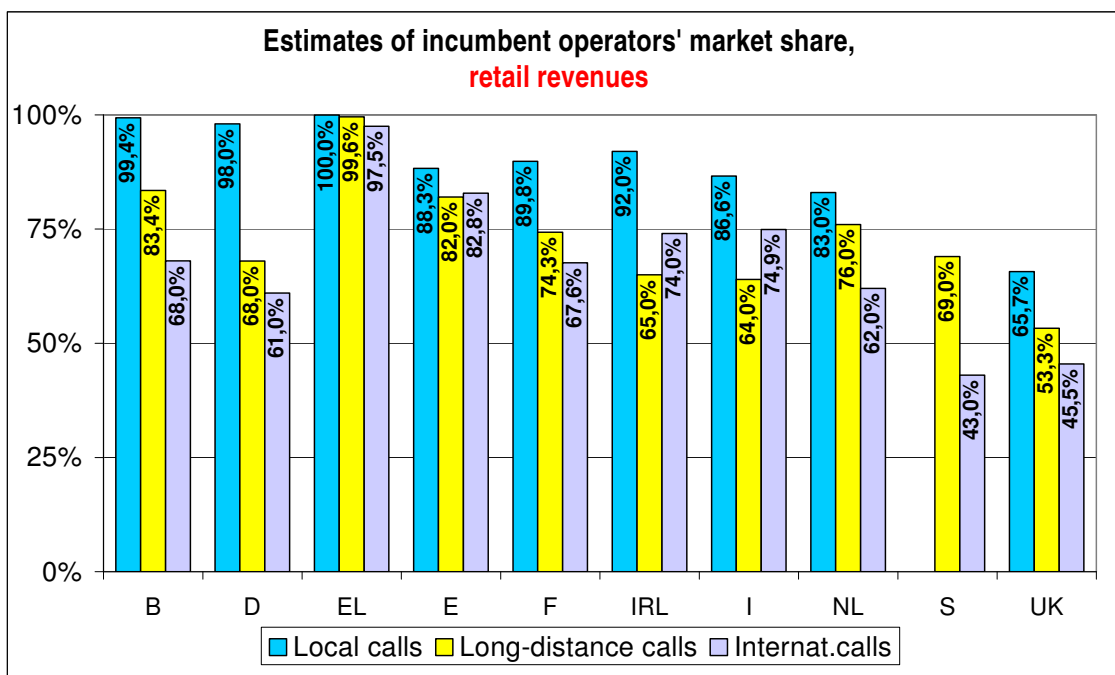


### 1.3. INCUMBENTS MARKET SHARE ON FIXED TELEPHONY MARKET

This section shows the incumbent's market share for telephony call market on the basis of retail revenues and outgoing traffic per minute. Unfortunately not all Member States collect both types of data, and differentiation between the various markets (local, long-distance, international) is not always available.

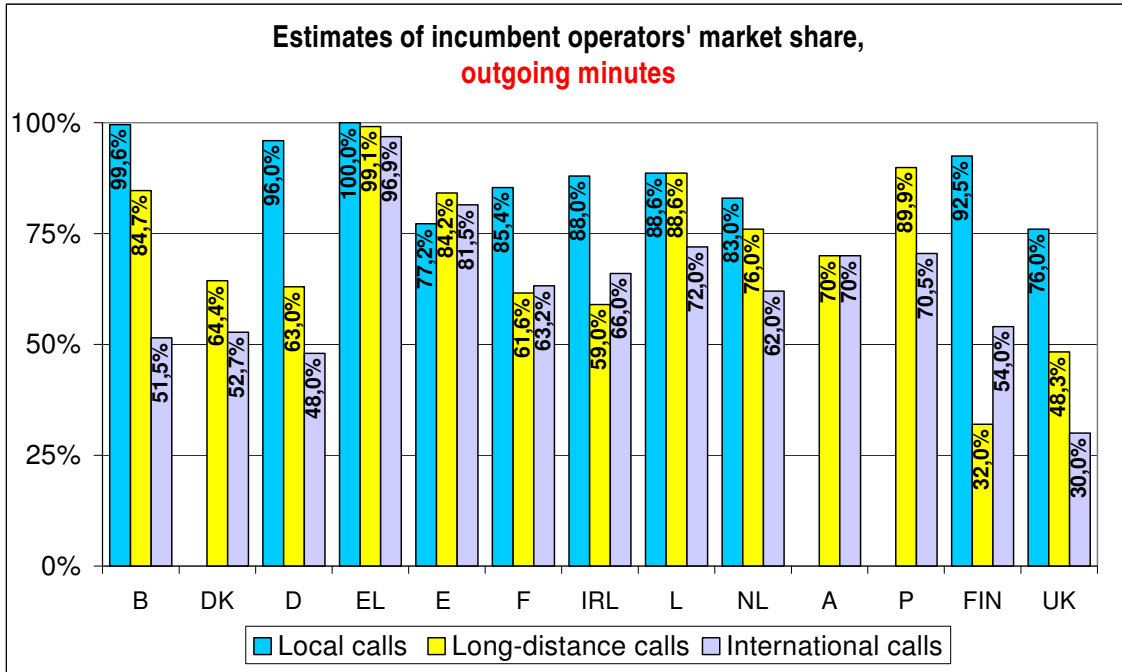
Figures have been provided by the national regulatory authorities and gives the situation as for December 2001.

Chart 11



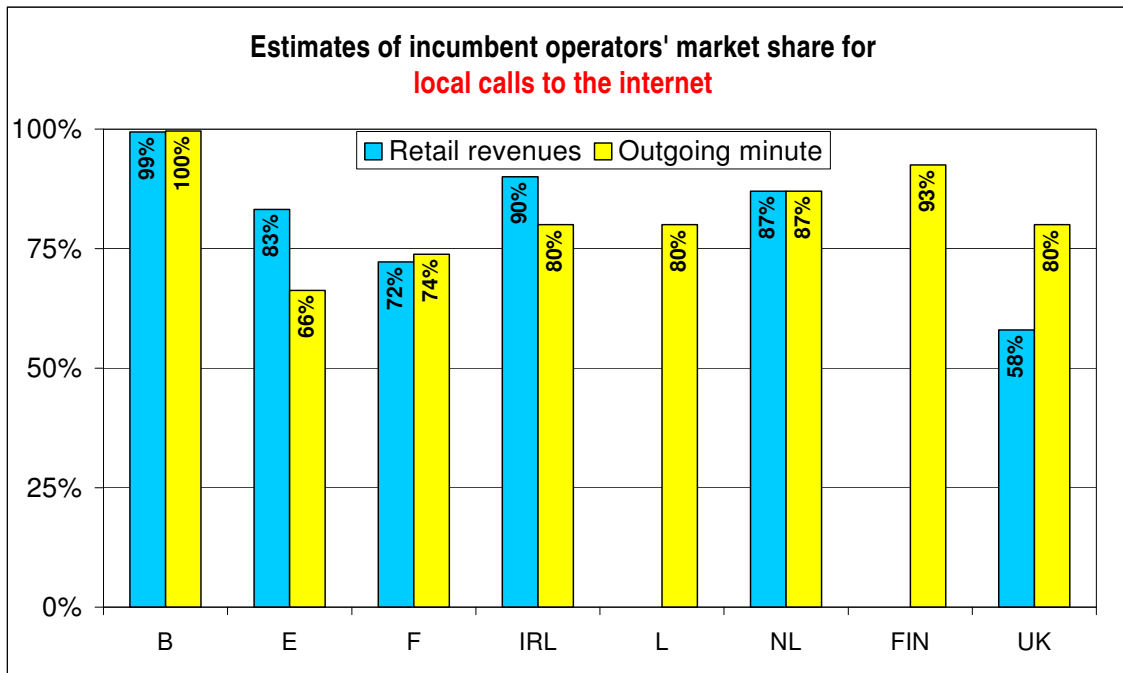
- Local call market include both phone calls and calls to internet.
- In Belgium, market share for local calls includes local calls to internet only; market share for long-distance calls refers to "national phone calls", including both local phone calls and long-distance calls.
- Data for Sweden for local calls market share is not available separately. Market share for long-distance calls refers to the total national calls", including local phone calls, calls to internet and long-distance calls.
- Data for DK, I,L,P,FIN are not available.

Chart 12

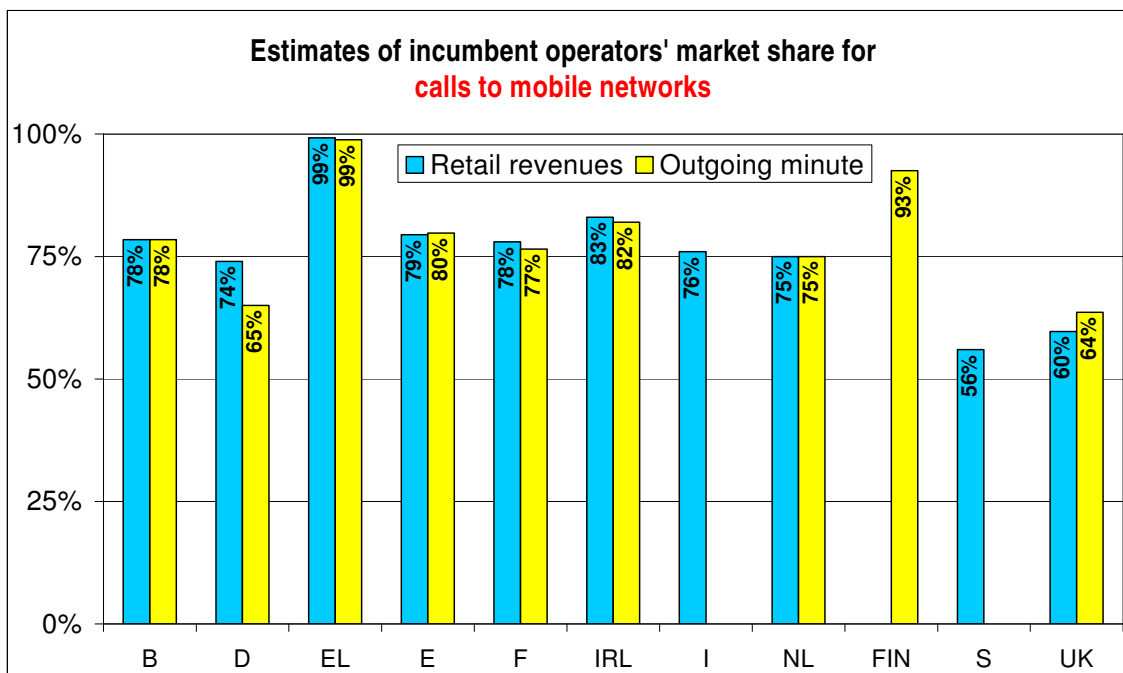


- In Belgium, market share for local calls includes local calls to internet only; market share for long-distance calls refers to "national phone calls", including both local phone calls and long-distance calls.
- Market share for long-distance calls for Denmark and Portugal refer to the overall national calls", including local and long-distance phone calls, calls to internet and call to mobile.
- Because of its small size, no distinction is made in Luxembourg between the local and the long-distance call markets.
- Data for Austria come from the NRA's Decision in the SMP operators designation of 20.09.2002. Figure refer to the overall fixed voice telephony market, including local, long-distance and international phone calls, calls to internet and calls to mobile.
- Local calls market share for Finland refers to the combined share of the incumbents (Sonera, Elisa and Finnet). Market share for long-distance and international refers to Sonera only and do not include market share of Kakoverkko Ysi Oy and Finnet International Ab, that have been designated as SMP
- Local calls market share for DK, A and P are not available separately.

**Chart 13**



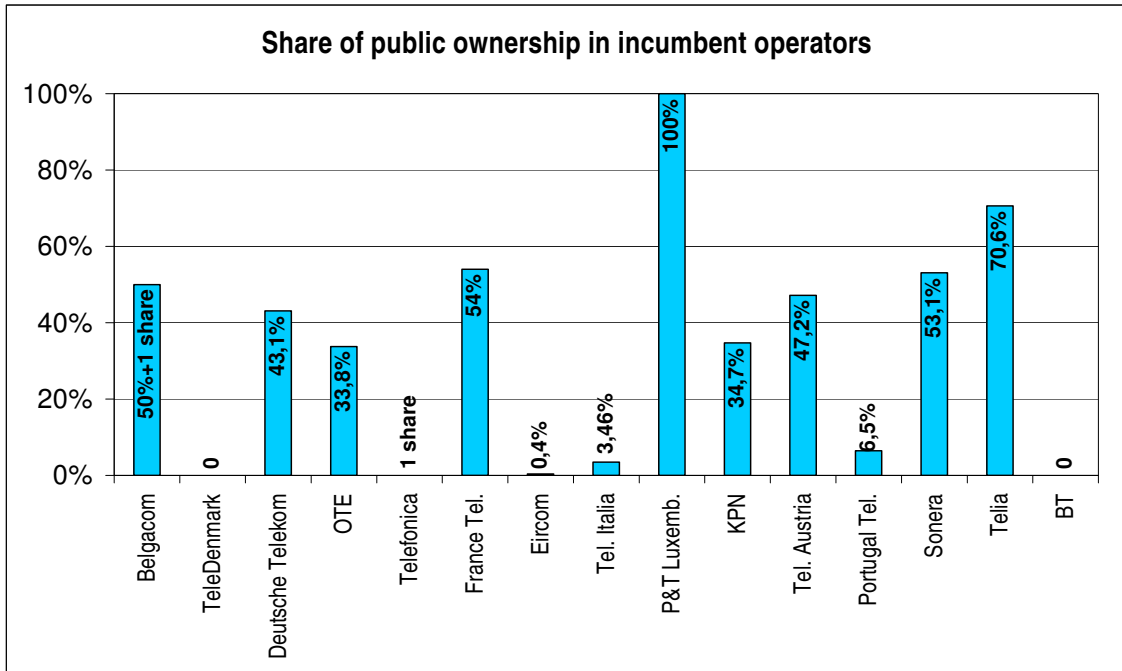
**Chart 14**



#### 1.4. SHARE OF PUBLIC OWNERSHIP IN INCUMBENT OPERATORS

In order to provide a complete overview of the players in the EU telecommunications market, the following chart shows the degree of public ownership of the incumbent operators on the fixed market. Spain, Italy, Portugal and the Netherlands have a golden share in the incumbent operators, that gives the State special rights on strategic decisions.

Chart 15



## **1.5. ADMINISTRATIVE AND NUMBERING FEES FOR THE PROVISION OF PUBLIC VOICE TELEPHONY AND PUBLIC NETWORK SERVICES**

This section provides data on Member States' administrative and numbering fees for public voice telephony and public network services licences. The data have been provided by the national regulatory authorities and give the position as at August 2002.

**Administrative fees** (table 2) are fees charged to cover the costs of examining an application for a licence, granting the relevant authorisation and verifying compliance with the terms and conditions set once the service or network is operational.

The categorisation of administrative fees is closely linked to the general licensing framework applicable in the individual countries. The categories of administrative fees will depend on whether market entry is subject to an individual licence or a notification under a general authorisation scheme (see table 1 for more details).

**Numbering fees** (table 3) are fees applied by many Member States which reflect the relative scarcity of numbering resources.

Table 3 sets out for each Member State the different kinds of fees charged for the following categories of numbers needed by each operator to provide public voice telephony services:

- standard telephone numbers (ITU-T Recommendation E.164) (for subscribers directly connected to the operator),
- carrier selection codes (to select the operator)
- signalling point codes<sup>10</sup> (for interconnection with other networks at national (NSPC) and international (ISPC) level).

Ireland, Austria, Sweden, Portugal and the United Kingdom do not charge for such numbers, although often the right to use numbers is implicitly included in the licensing fees.

---

<sup>10</sup> Signalling Point Codes (SPCs) are used in public telephone networks using CCITT Signalling System No 7 (SS7). SPCs are the addresses of the signalling points. Two types of SPC are usually individually assigned to network operators: International SPCs and National SPCs. ISPCs are used in international transit networks, e.g. to address networks which connect the various networks in a specific country or to identify the national gateways of the various networks.

### 1.5.1. ADMINISTRATIVE AND NUMBERING FEES FOR FIXED VOICE TELEPHONY

**Table 2 Administrative fees (August 2002, €)**

|                                 | Public voice telephony over a leased network<br>(service providers)                       |   | Operation of public fixed network and provision of network services over a own network<br>(not including voice services) |  | Public voice telephony over a own self-operated network<br>(not including network services )                    |   | Public voice telephony and network services over a own self-operated network |   |
|---------------------------------|---|---|--|--|---|---|--|---|
|                                 | Single payment  | Annual fee  | Single payment   | Annual fee   | Single payment  | Annual fee  | Single payment   | Annual fee  |
| <b>B</b>                        | Ind. Licence for VT   |   | Ind. Licence for NET   |  | Individual licence for VT + individual licence for NET  |   |  |   |
|                                 | 9 340   | 8 000<br>if SMP: 13 330   | 13 327   | 9 329<br>if SMP: 18 658  | 22 667  | 17 329<br>if SMP: 31 988  | 22 667   | 17 329<br>if SMP: 31 988  |
| <b>DK</b>                       | 0   | 0   | 0  | 0  | 0   | 0   | 0  | 0   |
| <b>D</b>                        | Ind. Licence for VT (class 3)   |   | Ind. Licence for NET (class 4)   |  | Individual licence for VT + individual licence for NET  |   |  |   |
|                                 | The regulation on licence fees is currently being reviewed by the government <sup>i</sup> |   |  |  |   |   |  |   |
| <b>EL</b>                       | Ind. Licence for VT   |   | Ind. Licence for NET   |  | Individual licence for VT + individual licence for NET or individual licence for VT and NS on NET <sup>ii</sup> |   |  |   |
|                                 | 0   | % of turnover<br>(from 0.5% to 0.025%;<br>min 600) <sup>iii</sup> | 0  | % of turnover<br>(from 0.5% to 0.025%. min 600) <sup>iii</sup> | 0   | % of relevant turnover<br>(from 0.5% to 0.025%. min 600) <sup>iii</sup> | 0  | % of relevant turnover<br>(from 0.5% to 0.025%. min 600) <sup>iii</sup> |
| <b>E<sup>iv</sup></b>           | Ind. licence for VT (type A)  |   | Ind. licence for NET (type C1)   |  | Ind. licence for VT and NS on NET (type B1)   |   |  |   |
|                                 | 0   | 0.15% of relevant turnover  | 0  | 0.15% of relevant turnover                                     | 0   | 0.15% of relevant turnover  | 0  | 0.15% of relevant turnover  |
| <b>F</b>                        | Ind. licence for VT (L34-1)   |   | Ind. licence for NET (L33-1)   |  | Ind. licence for VT and NS on NET (L34-1 and L33-1)   |   |  |   |
|                                 | > 5 regions   | 38 112  | 15 224   | 266 785  | 133 392   | 304 897   | 152 449  | 304 897   |
| ≤ 5 regions                     | 38 112  | 15 224  | 76 224   | 38 112   | 114 386   | 57 168  | 114 386  | 57 168  |
| ≤ 1 region                      | 38 112  | 15 224  | 38 112   | 15 244   | 76 224  | 38 112  | 76 224   | 38 112  |
| ≤ 1 department                  | 38 112  | 15 224  | 15 244   | 7 622  | 53356   | 26 678  | 53356  | 26 678  |
| ≤ 1 city of 100 000 inhabitants | 38 112  | 15 224  | 7 622  | 3 811  | 45 734  | 22 867  | 45 734   | 22 867  |
| If SMP                          | Not relevant  | Not relevant  | Double fees  | Double fees  | Double fees   | Double fees   | Double fees  | Double fees   |

**Table 2 Administrative fees (cont'd)**

|                        | Public voice telephony over a leased network<br>(service providers)    |   | Operation of public fixed network and provision of network services over a own network<br>(not including voice services) |   | Public voice telephony over a own self-operated network<br>(not including network services ) |   | Public voice telephony and network services over a own self-operated network |  |         |
|------------------------|--|---|--|---|--|---|--|--|---------|
|                        | Single payment   | Annual fee  | Single payment   | Annual fee  | Single payment   | Annual fee  | Single payment   | Annual fee   |         |
| <b>IRL</b>             | Individual licence for VT and NS on NET (General licence) <sup>v</sup> |   |  |   |  |   |  |  |         |
|                        | 12 500   | 1 015 or 0.2% of turnover > 635 000               | 12 500 (3 175 if basic licence) <sup>vi</sup>  | 1 015 or 0.2% of turnover > 635 000               | 12 500   | 1 015 or 0.2% of turnover > 635 000               | 12 500   | 1 015 or 0.2% of turnover > 635 000                |         |
| <b>I<sup>vii</sup></b> | Ind. licence for VT  |   | Ind. licence for NET   |   | Ind. licence for VTonNET   |   | Ind. lic. for VT + ind. lic. for NET<br>Or Ind. lic. VTonNET + ind. lic. NET |  |         |
|                        | Whole country  | 54 598  | 65 519   | 65 519  | 109 198  | 60 058  | 65 519   | 120 117 <sup>viii</sup><br>(125 577) <sup>ix</sup> | 174 716 |
|                        | ≤ 10 million inh.  | 21 840  | 27 300   | 21 840  | 54 598   | 27 300  | 27 300   | 43 679 <sup>viii</sup><br>(49 139) <sup>ix</sup>   | 81 893  |
|                        | ≤ 200 000 inh.   | 10 919  | 10 919   | 10 919  | 27 300   | 16 379  | 10 919   | 21 840 <sup>viii</sup><br>(27 300) <sup>ix</sup>   | 38 219  |
| <b>L</b>               | Ind licence for VT (type C)  |   | Ind. licence for NET (type B)  |   | Ind. licence for VT and NS on NET (type A)   |   |  |  |         |
|                        | 620  | 37 184 plus % of turnover (min. 0.15% max. 0.30%) | 6 197  | 12 394 plus % of turnover (min. 0.10% max. 0.25%) | 7 436  | 49 578 plus % of turnover (min. 0.20% max. 0.35%) | 7 436  | 49 578 plus % of turnover (min. 0.20% max. 0.35%)  |         |
| <b>NL</b>              | Registration for VT  |   | Registration for NET   |   | Registration for VT + Reg. for NET   |   |  |  |         |
|                        | 363  | 1 985 if SMP: 1 933 205                           | 363  | 4 590   | 363  | 4 590 if SMP: 2 173 775                           | 363  | 4 590 if SMP: 2 173 775                            |         |
| <b>A<sup>x</sup></b>   | Ind. Licence for VTonNET <sup>xi</sup>                                 |   | Ind. Licence for NET   |   | Ind. Licence for VTonNET   |   | Ind. lic. VTonNET + ind. lic. NET  |  |         |
|                        | 0  | 0   | 5 087  | 0.14% of turnover                                 | 5 087  | 0.14% of turnover                                 | 10 174   | 0.14% of turnover                                  |         |
| <b>P</b>               | Individual licence for VT  |   | Ind. Licence for NET   |   | Individual licence for VT + individual licence for NET                                       |   |  |  |         |
|                        | 9 976  | 9 976   | 9 976  | 9 976   | 19 952   | 19 952  | 19 952   | 19 952   |         |

**Table 2 Administrative fees (cont'd)**

|   | Public voice telephony over a leased network<br>(service providers) |  | Operation of public fixed network and provision of network services over a own network (not including voice services) |  | Public voice telephony over a own self-operated network (not including network services ) |   | Public voice telephony and network services over a own self-operated network |  |
|---|---|--|---|--|---|---|--|--|
|   | Single payment  | Annual fee   | Single payment  | Annual fee   | Single payment  | Annual fee  | Single payment   | Annual fee   |
| <b>FIN</b>                              | Registration for VT   |  | Registration for NET  |  | Registration for VT + Reg. for NET  |   |  |  |
|   | 0   | 0  | 0   | 0  | 0   | 0   | 0  | 0  |
| <b>S</b><br>Notification <sup>xii</sup> | Individual lic./reg. for VT   |  | Individual lic./reg. for NET  |  | Individual lic./reg. for VT + Individual lic./reg. for NET                                |   |  |  |
|   | 0   | - 115 for turnover <573 160<br>- 4 012 for turnover >573 160   | 0   | - 115 for turnover <573 160<br>- 4 012 for turnover > 573 160  | 0   | - 115 for turnover < 573 160<br>- 4 012 for turnover >573 160   | 0  | - 106 for turnover <317 511 for each relevant activity<br>- 2 646 for turnover >317 511 for each relevant activity   |
| <b>Licence</b>                          | 11 463  | - 1,57‰ of turnover (min. 5 732/area of licence)<br>- SMP operator: extra 0.5‰ of voice telephony turnover (max 11 463 190)            | 11 463  | - 1.57 of turnover (min. 5 732)  | 11 463  | - 1,57‰ of turnover (min. 5 732/area of licence)<br>- SMP operator: extra 0.5‰ of voice telephony turnover (max 11 463 190)                     | 22 928   | - 1,57‰ of turnover (min. 100 000 SEK) for each relevant activity (min. 10 584)<br>- SMP operator: extra 0.5‰ of voice telephony turnover (max 11 463 190) |
| <b>UK</b>                               | Individual licence for VT and NS on NET (PTO licence)               |  |   |  |   |   |  |  |
|   | 59 975  | new entrants: 4 498 for the first two years, then 4 498 if turn. < 7 496 768<br>- % of turnover to a max 0.08% if turnover > 7 496 768 | 59 975  | new entrants: 4 498 for the first two years, then 4 498 if turn. < 7 496 768<br>- % of turnover to a max 0.08% if turnover > 7 496 768 | 59 975  | new entrants: 4 498 for the first two years, then 4 498 if turn. <7 496 768<br>- calculated % of turnover to a max 0.08% if turnover >7 496 768 | 59 975   | new entrants: 4 498 for the first two years, then 4 498 if turn. <7 496 768<br>- calculated % of turnover to a max 0.08% if turnover >7 496 768            |

**Legend:**

VT (Voice Telephony): individual licence/registration for providing public fixed voice telephony (not including the installation of the network)

NET (Network): individual licence/registration/notification for operation of a public network and for the provision of network services (not including voice telephony)

VTonNET (Voice Telephony on Network): individual licence/registration/notification for providing public voice telephony on a owned self-operated network (not including network services)

VTandNSonNET (Voice Telephony and Network Services on Network): individual licence/registration/ notification for provision of public voice telephony and network services on a owned self-operated network

VT + NET; VTonNET + NET; VTandNSonNET + NET: both licences needed for provision of the services



- 
- <sup>i</sup> In its judgement of 19 September 2001, the Highest Administrative Court (the Bundesverwaltungsgericht, BVerwG) annulled the regulation on licence fees on the basis that it does not reflect the principle that licence fees should only cover administrative costs. The regulation on licence fees is currently being reviewed by the government. Pending the previous proceedings in national courts, operators have been charged licence fees and have been granted suspension of the payment at their request. Since the judgement of the BVerwG, licence fees are not charged and licences are issued under the provision that licence fees will be fixed on the basis of the forthcoming regulation.
- <sup>ii</sup> The Greek licensing regime provides for a list of 6 types of individual licence, among which those for public fixed networks and for public voice telephony. Moreover, at the request of the applicant, the NRA can issue a single licence which combines several categories of individual licence.
- <sup>iii</sup> The fees are determined based on an interval function with respect of the turnover of the relevant activities, with a minimum of 600 Euro: 0.5% of turnover for the first 300 million euro, 0.2% for turnover between 300 and 600 million euro, 0.15% for turnover between 600 and 900 million euro, 0.1% for turnover between 900 and 1 200 Meuro, 0.05% for turnover between 1 200 and 1 500 million euro, 0.025% for turnover over 1 500 million euro.
- <sup>iv</sup> According to the General Telecommunications Act, the exact amount of the annual fees (percentage value) will be fixed every year by Parliament, taking into account the need to cover the administrative costs of the licensing management and controls system. The annual fees cannot be higher than 2‰. For 2001 the value set is 0.15%.
- <sup>v</sup> In Ireland a separate licence for Public Network (basic licence) is also provided.
- <sup>vi</sup> Holder of a general licence are permitted to operate a public network and provide voice telephony and network services. A basic licence is sufficient to operate a public network and provide network services.
- <sup>vii</sup> Current fees are obtained adjusting original values provided by Ministerial Decree 05.02.1998 on the basis of inflation foreseen in the *Documento per la programmazione economica e finanziaria* on a year by year basis.
- <sup>viii</sup> Corresponding to the combination of licences for provision of voice telephony and for provision of public network services.
- <sup>ix</sup> Corresponding to the combination of licences for provision of voice telephony on a self-operated network and for provision of public network services.
- <sup>x</sup> For all types of operator, an annual fee (depending on turnover and market share) is payable to contribute to the overall costs of the regulator. The annual percentage varies between 0.1% and 0.2% of turnover (in 1999 it was 0.12%, in 2000 it was 0.1%). The value for the year 2001 will be communicated in the second half of 2002.
- <sup>xi</sup> An individual licence is required for the provision of public voice telephony over a self-operated fixed telecommunication network. The network could either belong to the operators, or could be totally leased from third-party network operator.
- <sup>xii</sup> A licence is required if an operator's activity is considered "significant" regarding the area of distribution, the number of users and similar factors. These operators typically have a market share of 10-15% (never less than 5%).

**Table 3 Numbering fees (€)**

(S = one-off fee; A = annual fee; where relevant: S(r)/A(r) = one-off/annual fee in case of allocation of a number that had been reserved before)

|   | B   | DK <sup>11</sup>                                 | D   | EL   | E  | FIN   | F   | I   | L   | NL   |
|---|---|--|---|--|--|---|---|---|---|--|
| <b>Standard telephone numbers (E.164)</b>                                       | per block of 10 000 numbers<br>S: 400<br>A: 134 | per number (8-digit numbers)<br>A: 0.2571        | per block of 1 000 10-digit numbers<br>S: 500.00<br><br>per block of 1 000 11-digit numbers<br>S: 50.00 | per number:<br>S: 0.03<br>A: 0.025<br><br><b>reservation:</b><br>A: 0.0125 | per number<br>A: 0.03  | per number<br>A: 0.34   | per number<br>A: 0.02<br><b>reservation</b><br>A: <b>0.01</b>   | per number<br>A: 0.0109296<br><b>reservation</b><br>A: 0.0054648  | per number part of a block of 10 000 numbers<br>S: 0.12<br>A: 0.12<br>per number in amount < a block:<br>S 61 97 + n*0.24<br>A: 61 97 + *0.24 | per block of 1000 numbers.<br><b>reservation</b><br>S: 13.60 61<br>A: 1.60<br><b>allocation</b><br>S: 13.60<br>A: 9.75 |
| <b>Carrier selection code</b>   | 4 digits<br>S: 1 333<br>A: 13 327               | 4 digits<br>A: 2 570.97<br>5 digits<br>A: 257.10 | 4 digits<br>S: 500.00   | 4digit:<br>S: 15 000<br>A: 15 000<br><br>5digit:<br>S: 1 500<br>A: 1 500   | per number<br>A: 0.03 x a factor indicating the number of 9-digit numbers occupied in the numbering plan | <b>International</b><br>A: 3 digits<br>90 000<br>A: 4 digits<br>18 000<br>A: 5 digits 3 600<br><b>Long distance</b><br>A: 3 digits<br>45 000<br>A: 4 digits<br>9 000<br>A: 5 digits 1 800 | <b>reservation</b><br>A: 4 digits<br>20 000 A: 1 digit<br>200 000<br><b>attribution</b><br>A: 4 digits<br>40 000 A:1 digit<br>400 000 | <b>reservation</b><br>A: 4 digits<br>54 598<br>A:5 digits<br>27 300<br>26 976<br><b>allocation</b><br>A: 4 digits<br>109 198<br>A: 5 digits<br>54 598 | S: 1 239<br>A: 1 239  | <b>reservation</b><br>S 450<br>A: 112.5<br><b>allocation</b><br>S: 450<br>A: 225                                       |
| <b>International Signalling Point Codes (for international interconnection)</b> | S: 400<br>A: 13 327                             | A: 25 709.71                                     | S: 375  |  |  | A: 1680   |   |   | S: 991<br>A: 495  | <b>reservation</b><br>S: 450<br>A: 112.5<br><b>allocation</b><br>S: 450<br>A: 225                                      |
| <b>National Signalling Point Codes (for national interconnection)</b>           | S: 400<br>A: 0                                  |  | S: 187.50   |  |  | A: 0.7  |   |   | S: 991<br>A: 495  | per block of 8 numbers<br><b>reservation</b><br>S: 450<br>A: 112.5<br><b>allocation</b><br>S: 450<br>A: 225            |

<sup>11</sup> Changes in numbering fees in DK are due to a change in the exchange rate to Euro.

## 2 CONSUMER'S CHOICE OF FIXED OPERATORS

This section analyses the fixed voice telephony market from the point of view of the consumers.

The following indicators have been considered: the percentage of subscribers with choice of operators and the percentage of subscribers actually using a provider other than the incumbent. The facilities used by the operators to provide public voice telephony services have also been included.

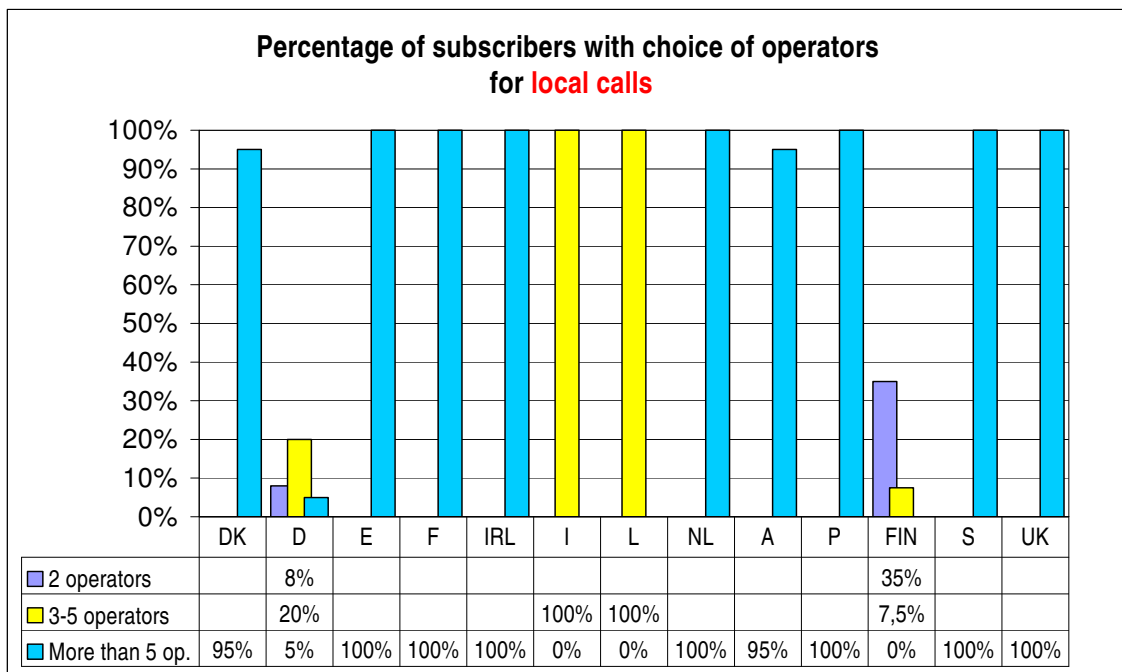
The data presented below has been provided by the national regulatory authorities and, unless otherwise indicated, reports the position at August 2002. Figures for countries not included in the charts are not available.

Figures are not comparable with those published in the 7<sup>th</sup> Implementation Report, since they are now based on the percentage of subscribers rather than population.

### 2.1. PERCENTAGE OF SUBSCRIBERS WITH CHOICE OF OPERATORS FOR FIXED CALLS

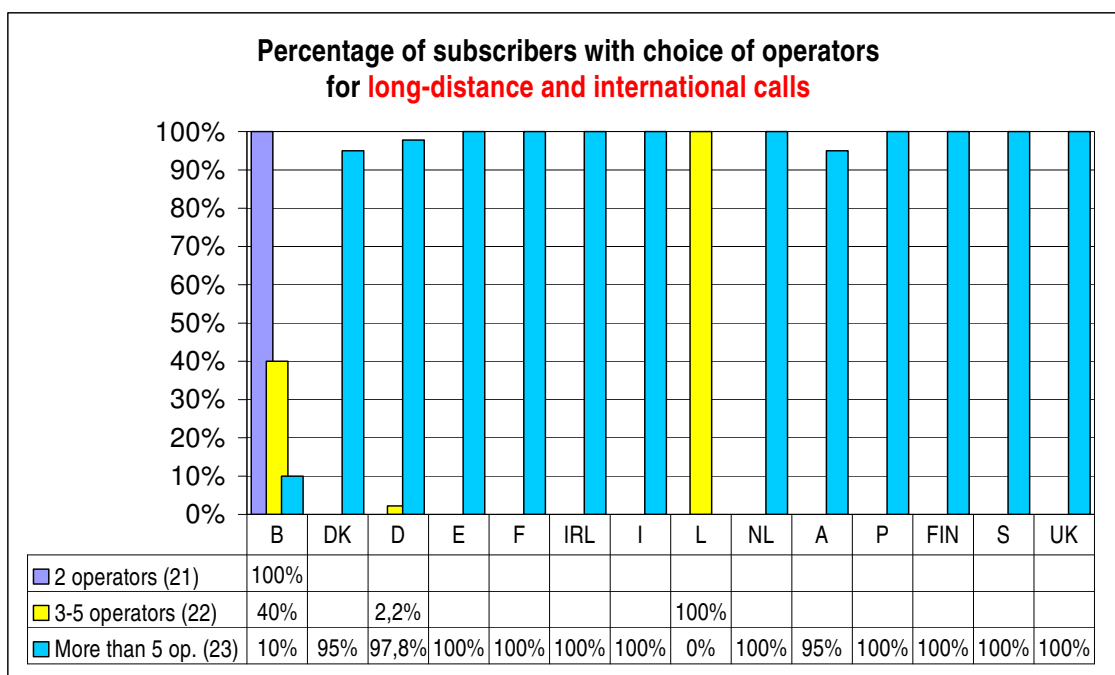
The following charts show the percentage of subscribers with choice of operators for local, long-distance and international calls and for direct access. The choice could be between only 2 operators, between 3 to 5 operators or more than five operators.

**Chart 16**



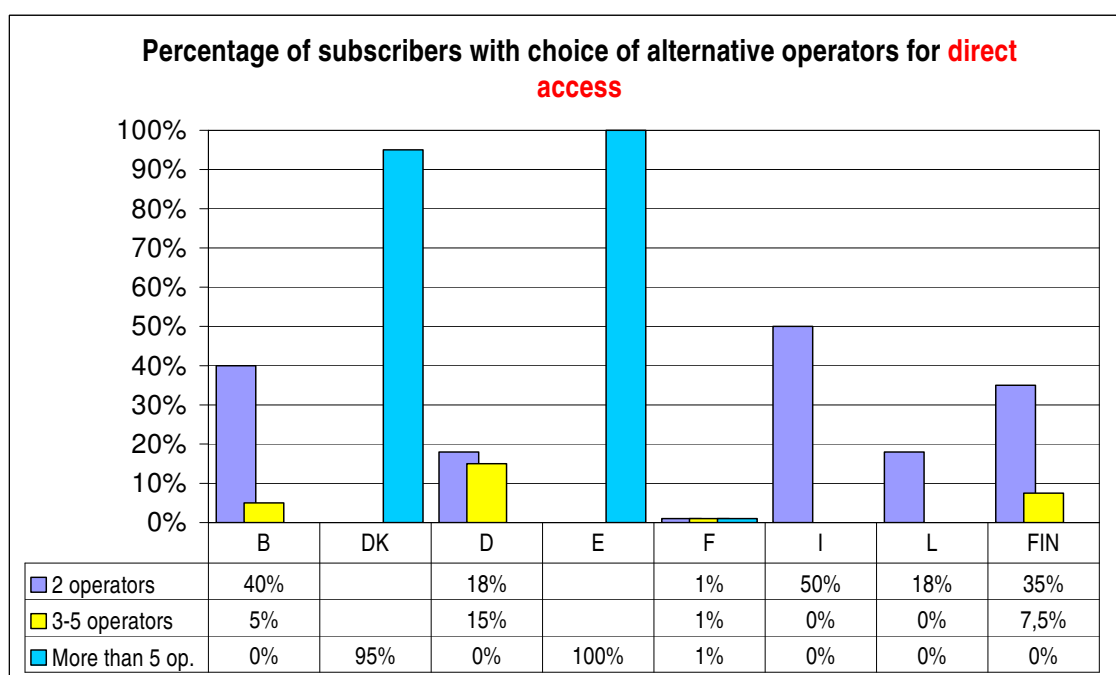
- Data for Belgium and Greece are not available.
- Figure for Denmark should be considered as minimum.
- Figure for France refer to end of March 2002.
- Data for Italy for "more than 5 operators" are not available.

**Chart 17**



- Figure for Denmark should be considered as minimum.
- Figure for Greece is not available.
- Figure for France refer to end of March 2002

**Chart 18**

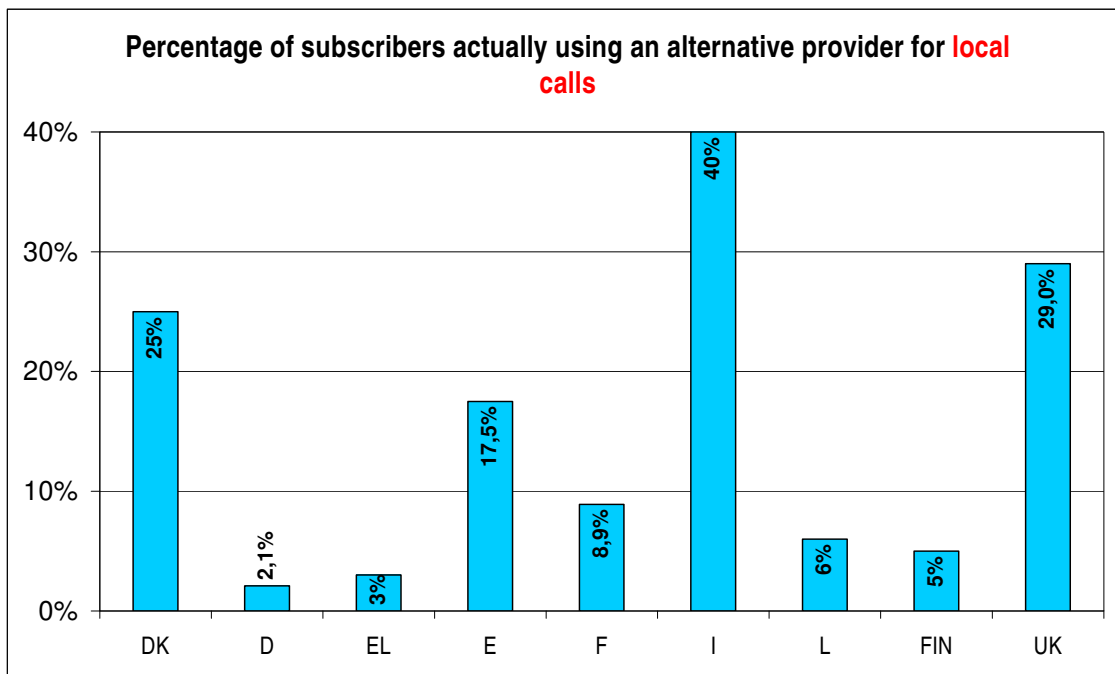


- Figure for Denmark, should be read as minimum.
- Figure for France should be read as maximum and refer to end March 2002.

## 2.2. PERCENTAGE OF SUBSCRIBERS ACTUALLY USING AN ALTERNATIVE PROVIDER OTHER THAN THE INCUMBENT

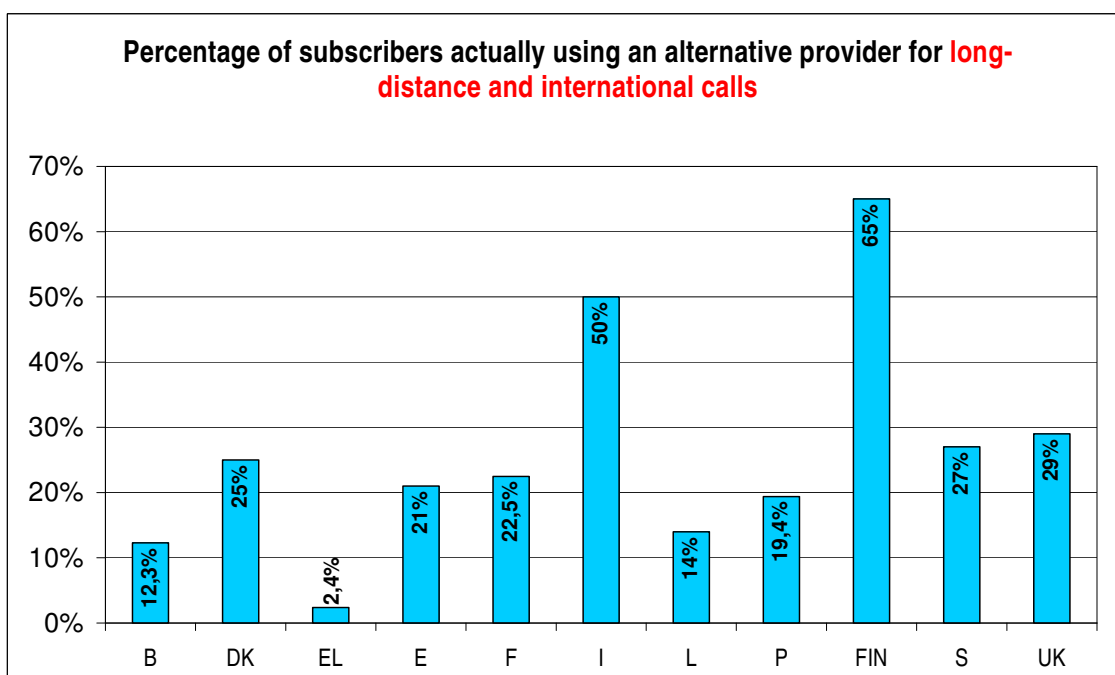
Unlike the previous indicators, that show the theoretic possibility of choice for the consumers, the following charts show the percentage of subscribers actually using an alternative provider for voice services.

**Chart 19**



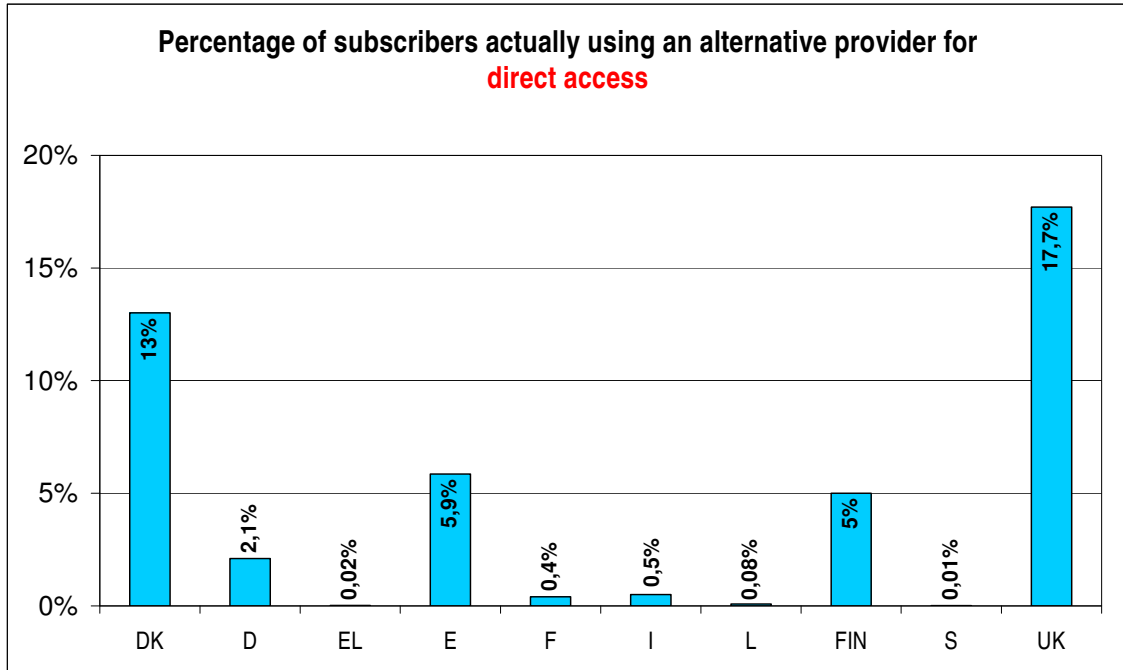
- Figure for Spain and France refer to subscribers using pre-selection and/or direct access only, and they should be considered as minimum
- Figure for Denmark should be considered as minimum.

**Chart 20**



- Figure for Denmark should be considered as minimum.
- Figure for Spain and France refer to subscribers using pre-selection and/or direct access only, and then should be considered as minimum

**Chart 21**



- Figure for Sweden should be considered as maximum.

### **2.3.FACILITIES USED BY NEW ENTRANTS TO PROVIDE VOICE TELEPHONY**

This section provides information on the facilities used by new operators to offer voice telephony, particularly to residential users.

The following charts show the estimated number of alternative operators using carrier selection, carrier pre-selection or direct access to provide voice telephony services to residential users.

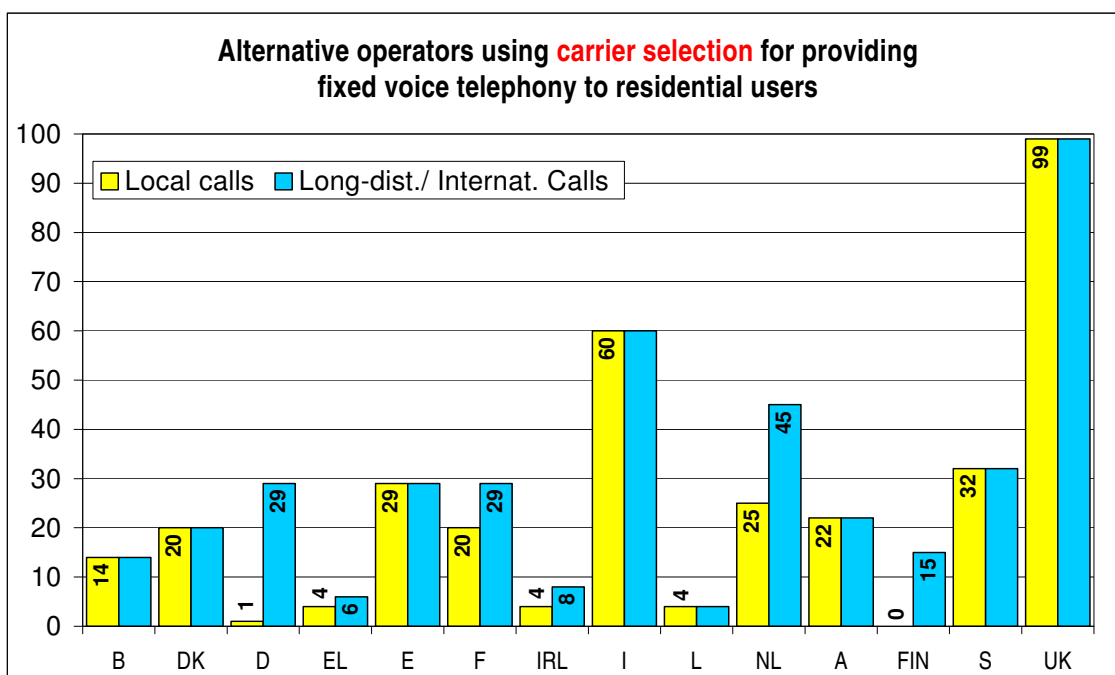
These figures are estimates provided by the national regulatory authorities and refer to July 2002. The charts should be read separately and not summed up as country totals, since most operators use more than one means of providing call services.

As indicated in the section on numbering, at the reference date used for these charts, carrier selection and pre-selection was not yet available for local calls in Germany, but legislation has been introduced recently. Furthermore, carrier pre-selection is not yet available in Greece, due to the deferment granted until 1 January 2003. In the United Kingdom, carrier pre-selection for local calls is only available via “autodiallers”.

Because of its small size, no distinction is made in Luxembourg between local and long-distance calls.

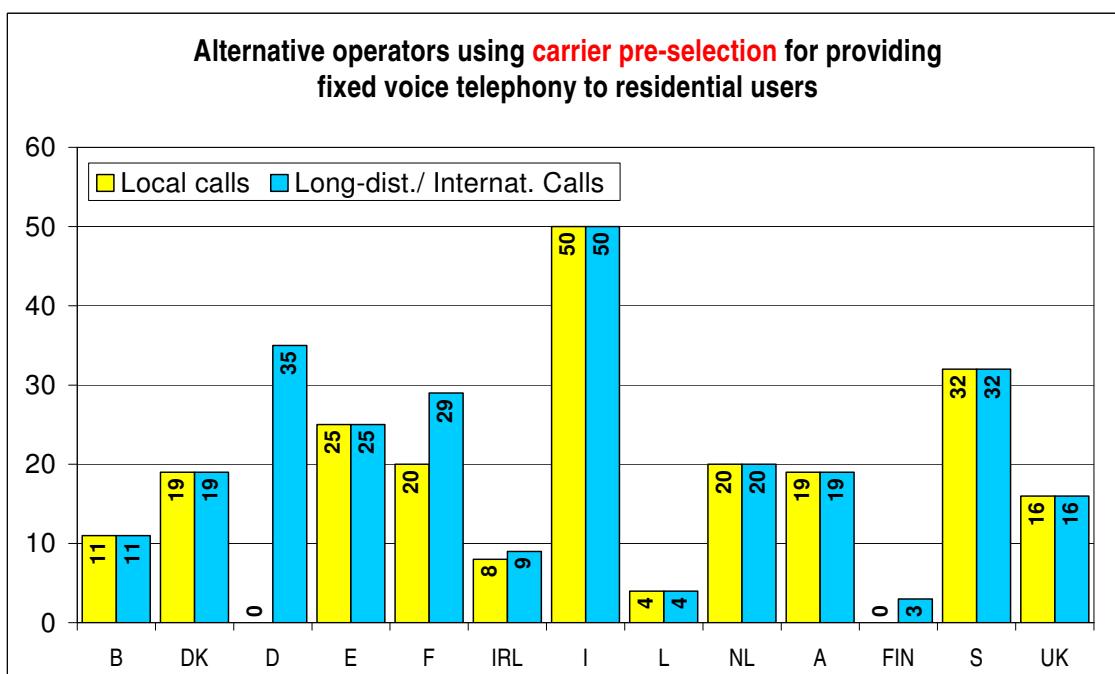
The information is not available for Portugal.

**Chart 22**



- Figure for Denmark should be considered as minimum.
- Data for France refer to May 2002.
- Figure for Ireland refers to August 2001.
- The United Kingdom estimate refer to residential and business users.

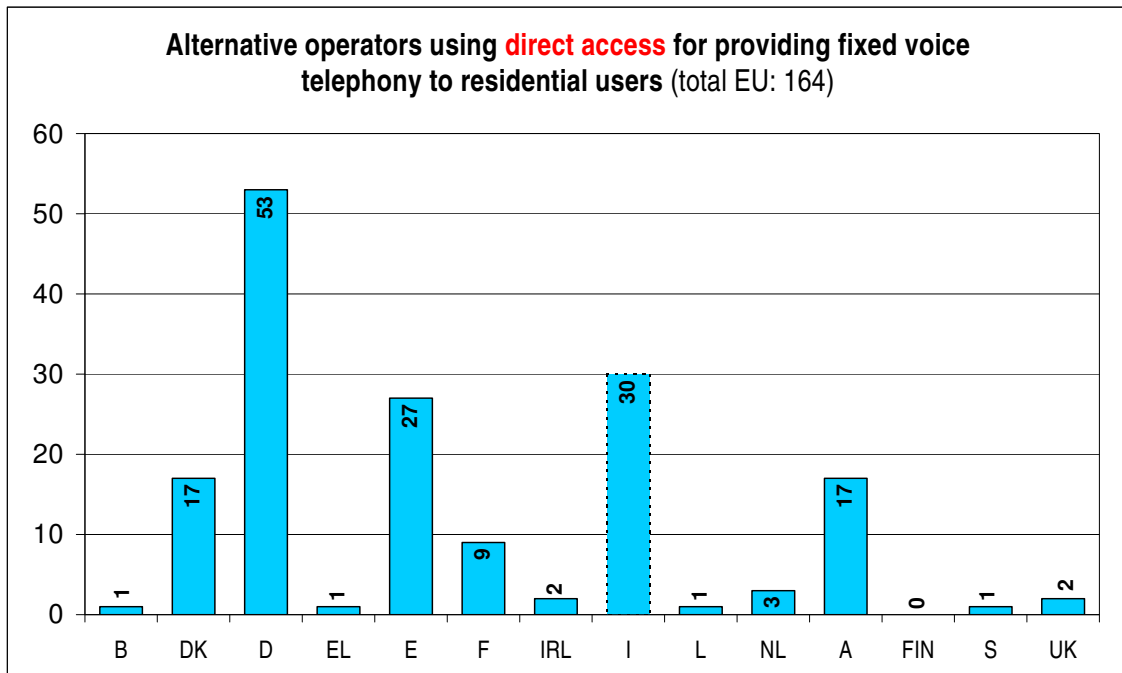
**Chart 23**



- Figure for Denmark should be considered as minimum.
- In Germany, carrier pre-selection for local calls is not available yet.
- In Greece, the carrier pre-selection for all types of calls is not available yet.
- Data for France refer to May 2002.

In the following chart, figures refer to all types of calls (local, long-distance and international).

**Chart 24**



- Figure for Denmark should be considered as minimum.
- Data for France refer to May 2002.
- Figure for Italy refers to the number of operators that signed a ULL contract with the incumbent, but not all of them are so far operational.
- Figure for the Netherlands refer to local call; data for long-distance/international call is 2.



### 3 PUBLIC NETWORK INTERCONNECTION AND INTERCONNECTION CHARGES

#### 3.1. FIXED-TO-FIXED INTERCONNECTION CHARGES

The following charts show the per-minute interconnection charges for call termination on the incumbent's fixed network, based on the first three-minute call at peak rate.

The charts show the absolute value of the interconnection charges (in €-cents) as of 1 August 2002, in comparison to the value as at August 2001.

The figures may have been approved by the NRA or simply agreed between operators, where the legal framework does not require NRA approval.

Interconnection charges for Spain refers to a standard single transit, but a different charge is applied in Barcelona and Madrid (1,05 eurocents/minute)

In the case of France, in order to maintain consistency across Member States, the per minute charge indicated does not include the per minute charge related to the cost of the 2 Mbit/s port, which, however, according to ART, provides a better picture of the cost borne by the interconnecting party. By taking this additional charge into account, per minute charges would be €-cent 0.62, €-cent 1.26 and €-cent 1.76 respectively at local, single transit and double transit interconnection levels.

Charges for Netherlands apply from 1 Sept. 2002.

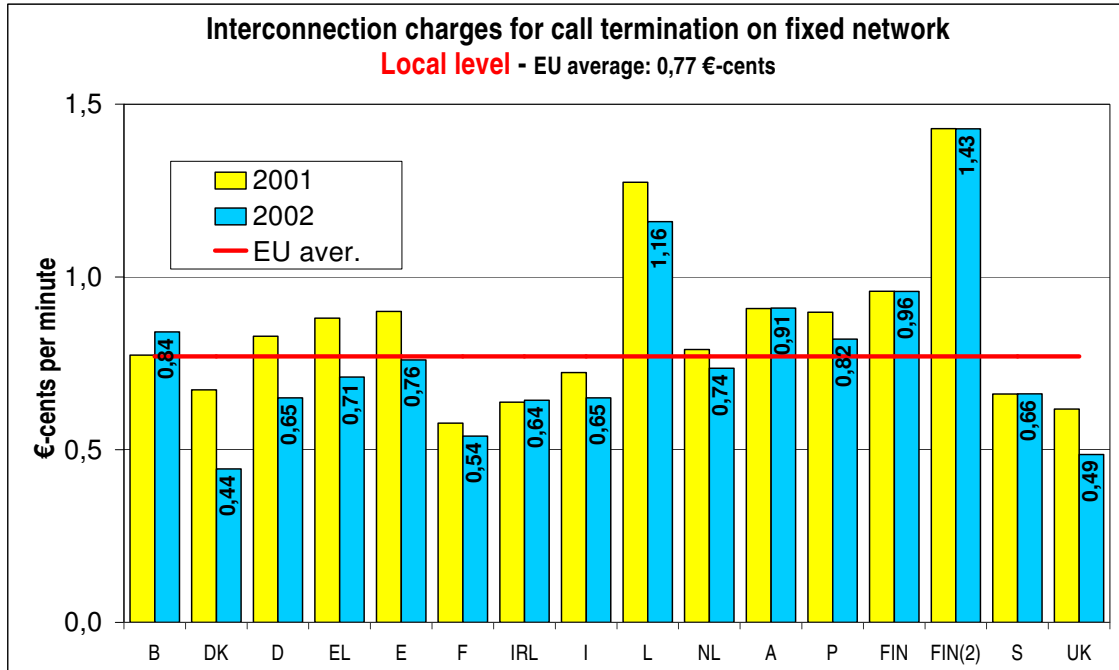
Figures for Austria are valid until 30.06.2002.

In Finland there are about 50 SMP operators who apply different interconnection charges. The charts refer to charges applied by the two major operators Sonera (FIN) and Elisa (FIN2).

Charge for Germany for single transit level is not comparable to last year, since the Regio50 and Regio200 zone rates have been unified in a unique single transit charge.

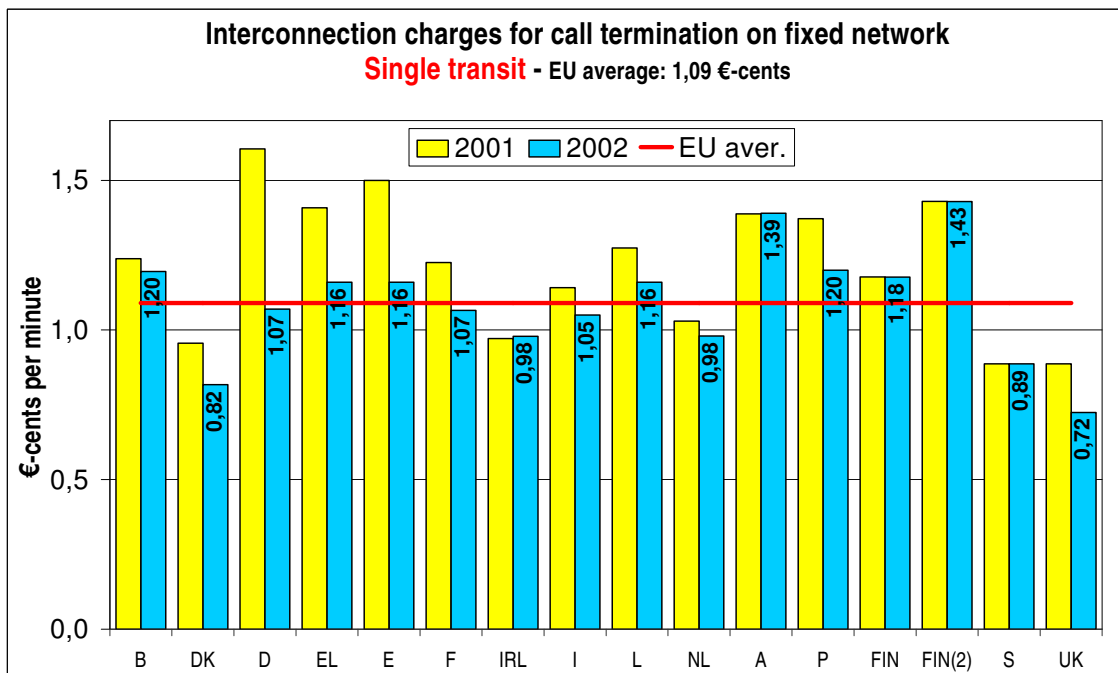
The EU average is a simple, rather than a weighted average.

Chart 25



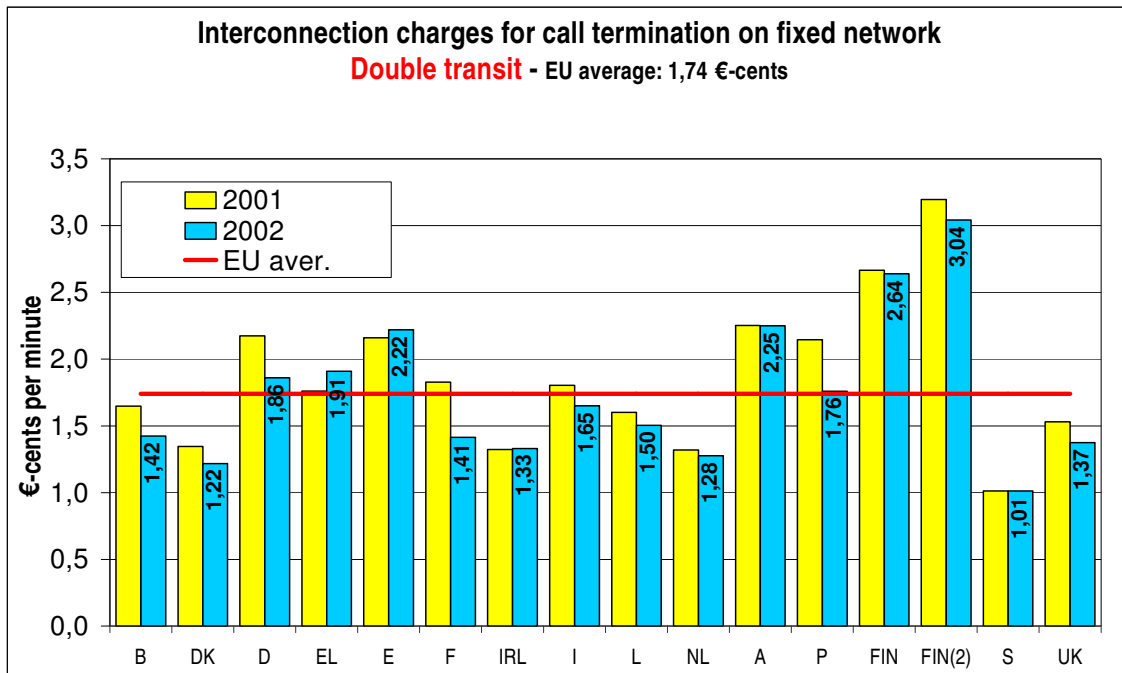
- In Luxembourg there is no distinction between local and long-distance domestic calls.

Chart 26



- Figure for Germany for the year 2001 is the simple average between the Regio50 and Regio200 zone rates.

Chart 27



- Data for the United Kingdom refers to a 100-200km connection length. For length less than 100 the interconnection charges at double level is 1,11184; and for more than 200km is 1,7832

### 3.2.LEASED LINE INTERCONNECTION CHARGES

This section shows the monthly rental and the one-off charges for short-distance leased lines (local ends, excluding VAT) up to 2 and 5 km provided by the incumbent operator to other interconnected operators. An estimate of the total average monthly rental cost (based on the total cost for the first year) is also presented.

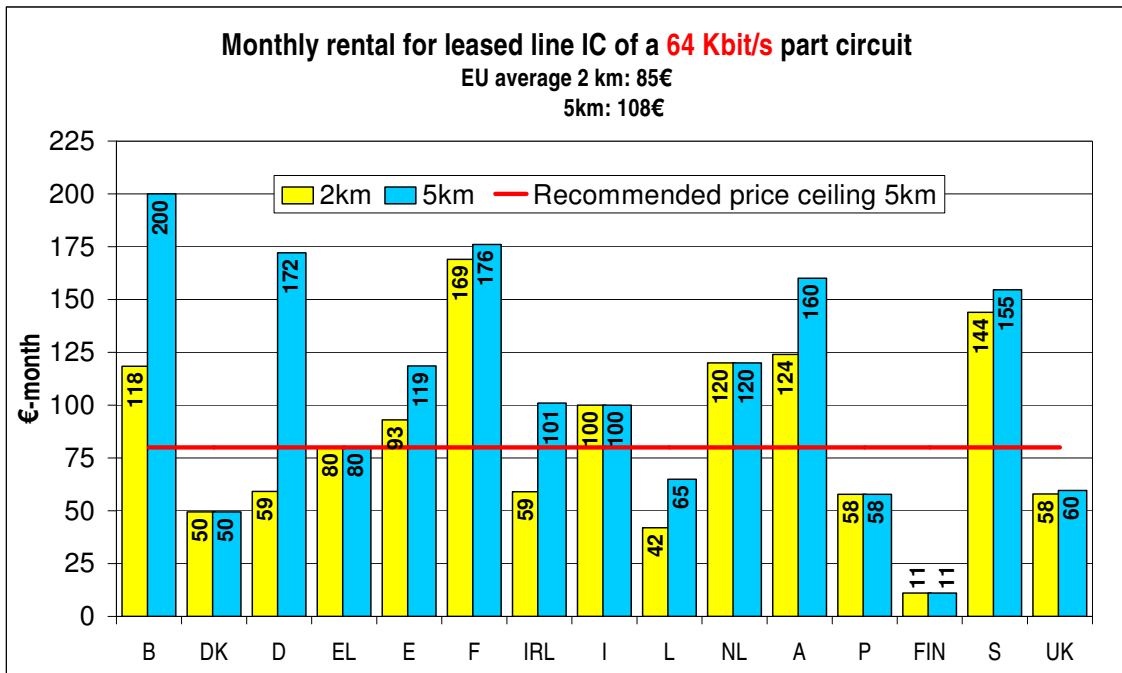
Deviations for the monthly rental from the “recommended price ceiling” set in Commission Recommendation 1999/3863 of 24 November 1999 are also shown. The recommended price ceilings are:

- € 80/month for a 64 Kbit/s leased line part circuit up to 5 km
- € 350/month for a 2 Mbit/s leased line part circuit up to 5 km;
- € 1 800/month for a 34 Mbit/s leased line part circuit up to 2 km;
- € 2 600/month for a 34 Mbit/s leased line part circuit up to 5 km.

These figures have been provided by the national regulatory authorities through the questionnaire for the 8<sup>th</sup> Implementation Report and the replies to the ONP COM02-18 Document. Figures indicate the position in August 2002.

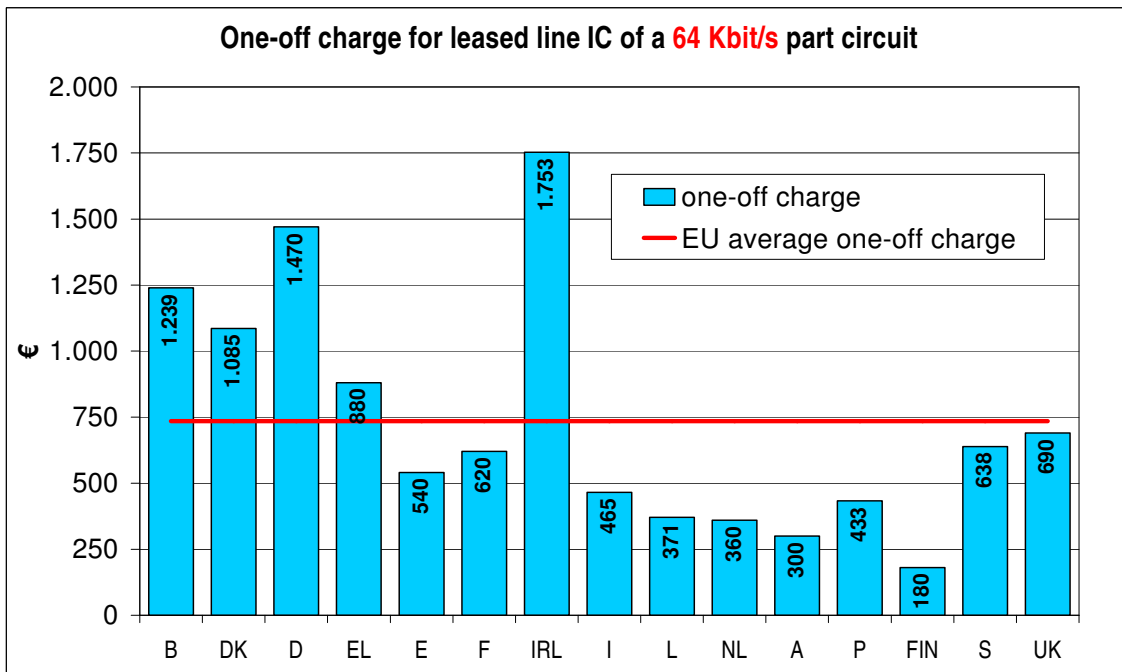
64 Kbit/s part circuit

**Chart 28**



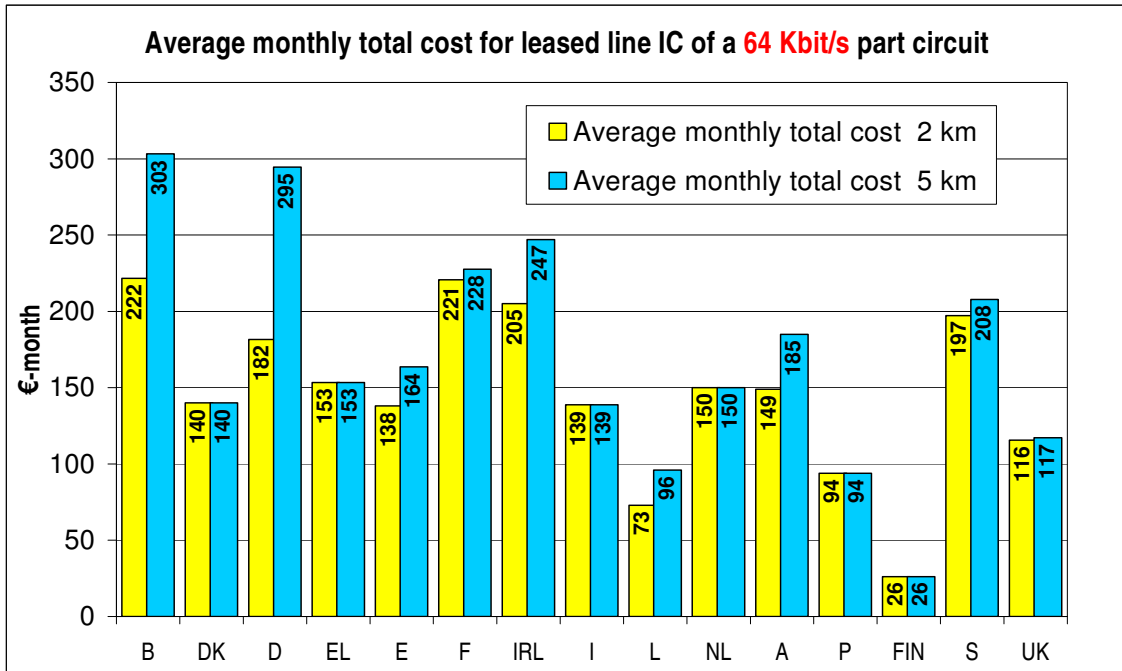
- Figure for Greece refer to August 2001.
- Figure for Denmark in force since October 2002.

**Chart 29**



- Figure for Denmark in force since October 2002.

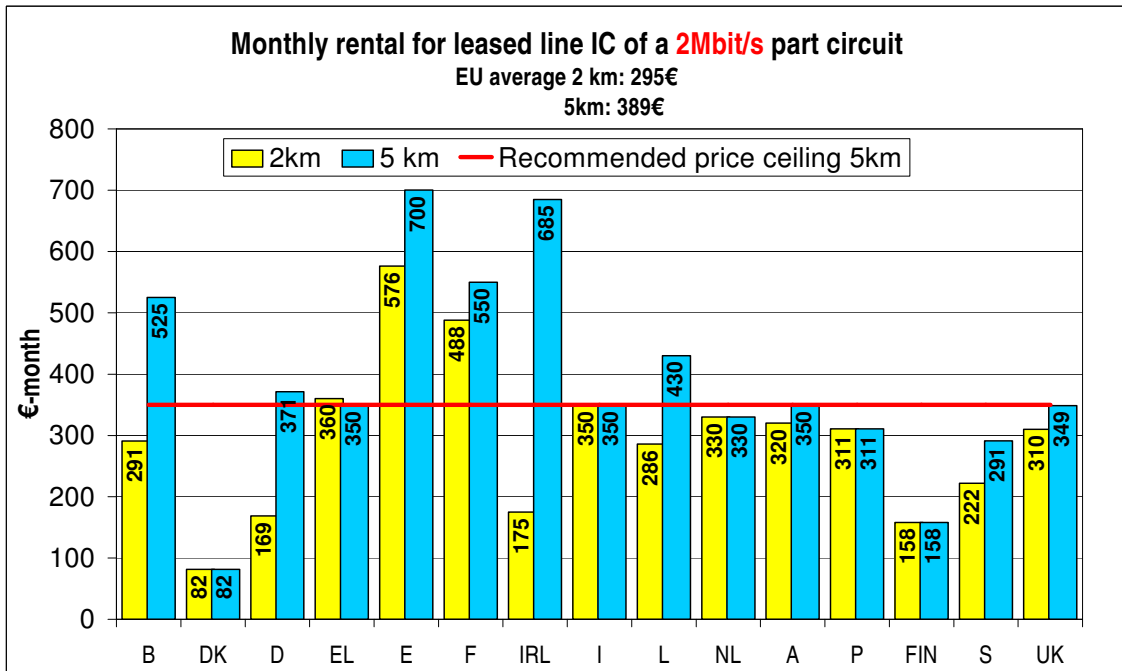
Chart 30



- Monthly rental for Greece refers to August 2001.
- Figure for Denmark in force since October 2002.

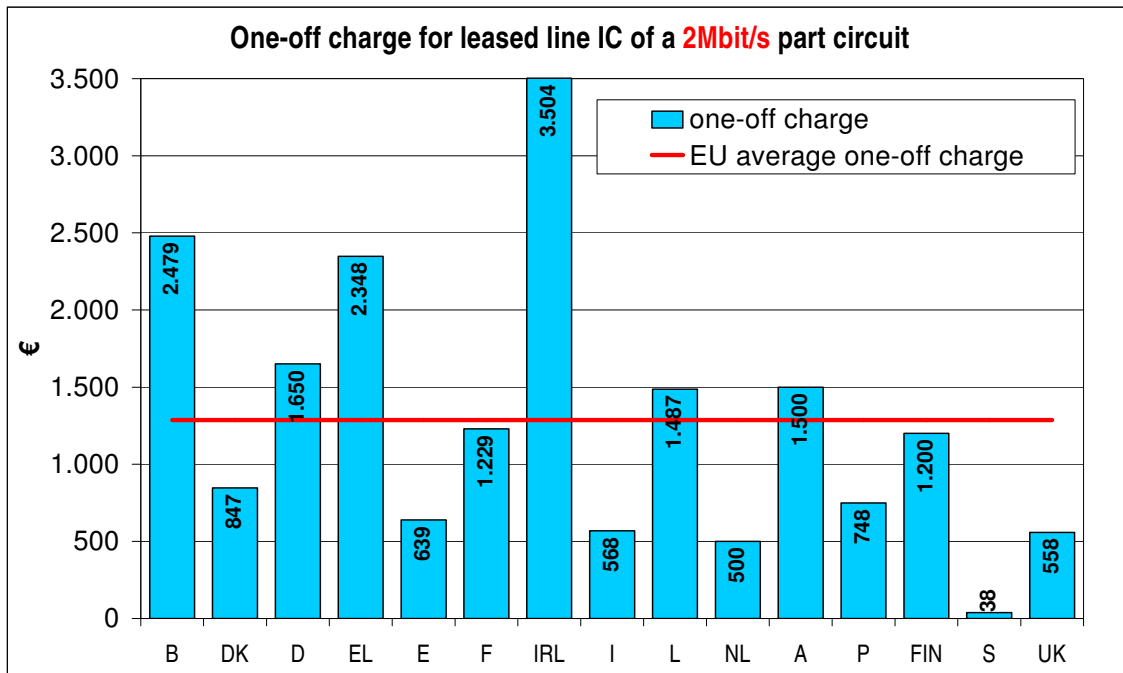
**2 Mbit/s part circuit**

Chart 31

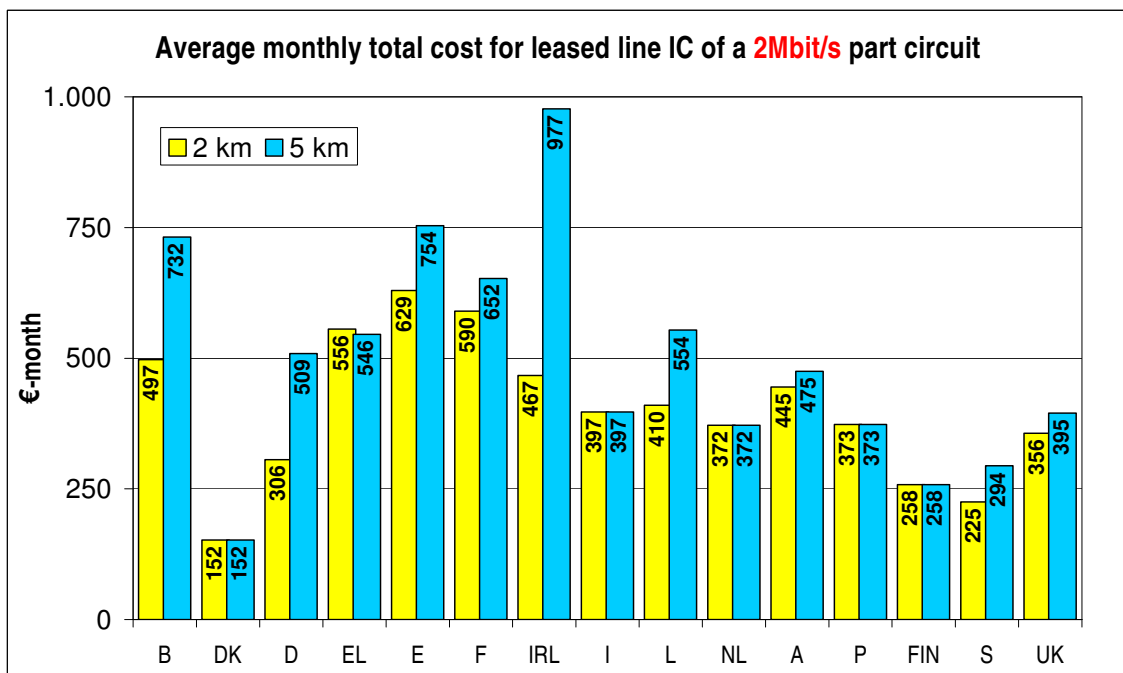


- Figure for 2km for Greece refers to August 2001.
- Figure for Denmark in force since October 2002.

**Chart 32**



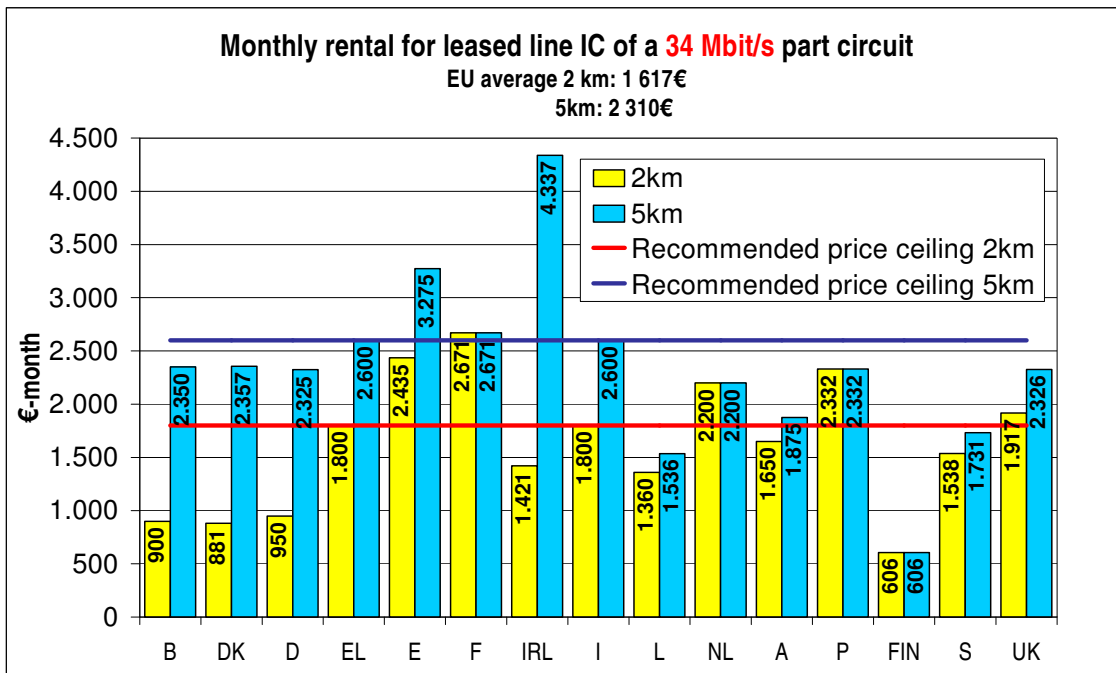
**Chart 33**



- Monthly rental for 2km for Greece refers to August 2001.

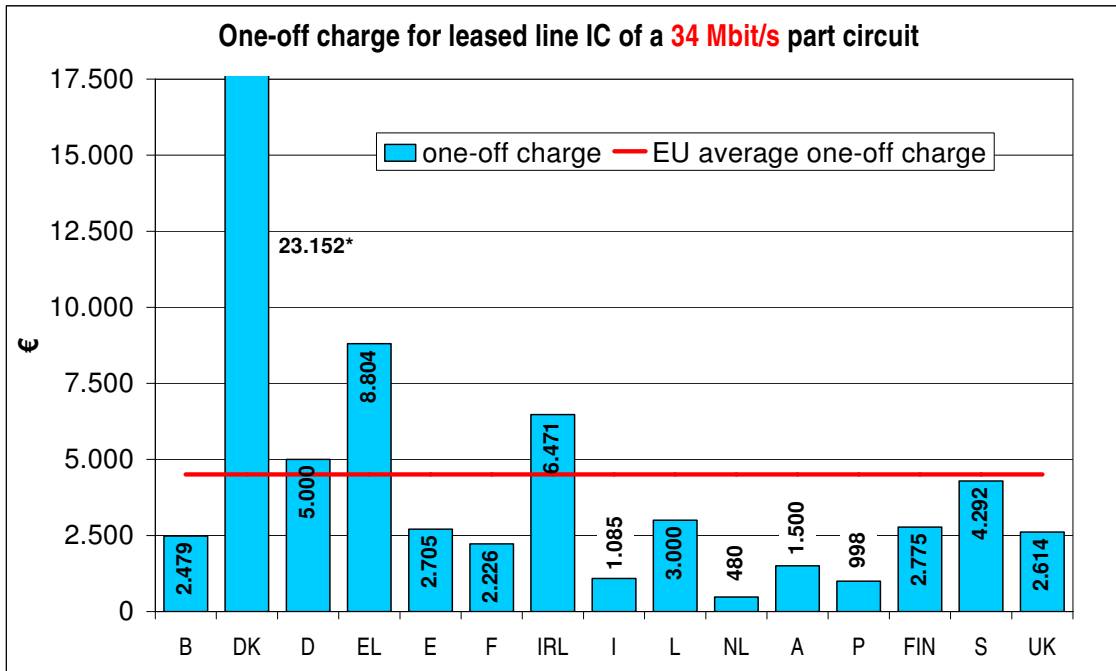
**34 Mbit/s part circuit**

**Chart 34**



- Figure for Denmark in force since October 2002.

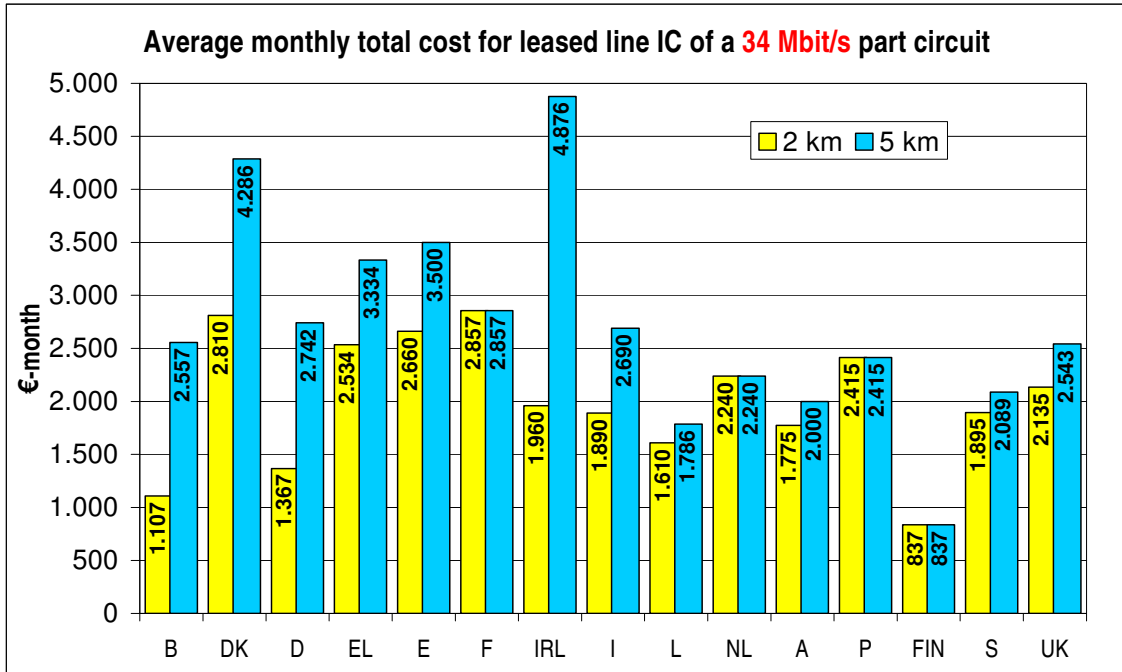
**Chart 35**



\* Value not to scale

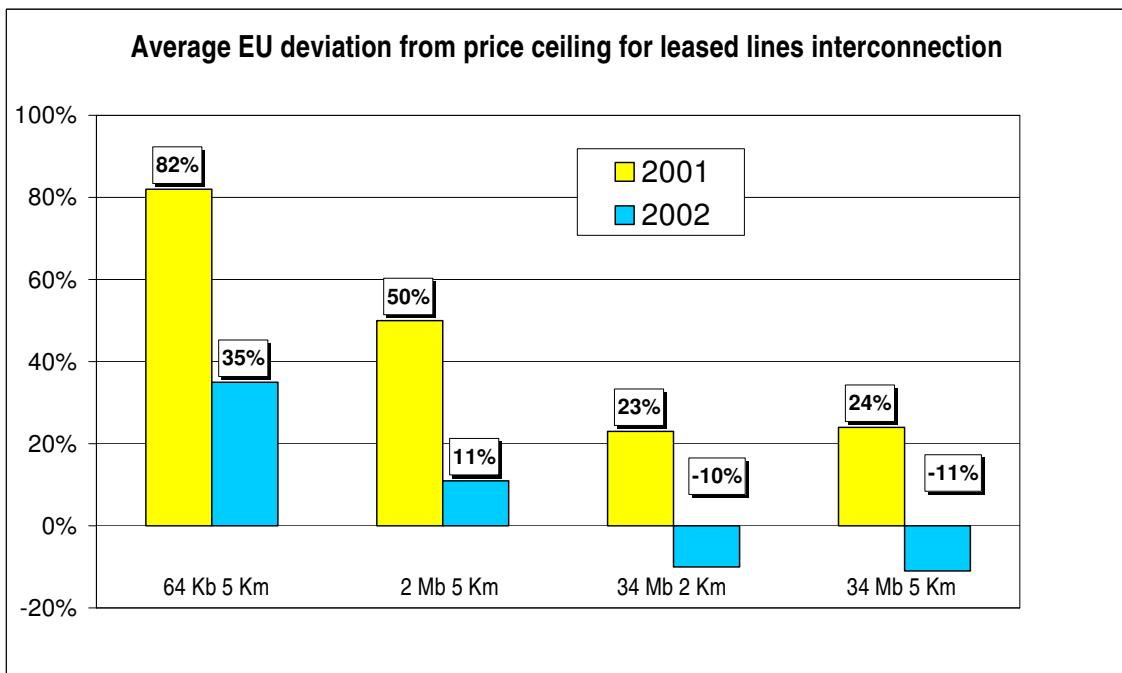
- Figure for Denmark in force since October 2002. One-off charge in the chart refers to 2km. One-off charge for 5 km is 55 458€.

**Chart 36**



- Figure for Denmark in force since October 2002.

**Chart 37**



### 3.3.FIXED-TO-MOBILE INTERCONNECTION CHARGES

This section shows the per-minute interconnection charges for fixed call termination on the networks of mobile operators. Charges are for calls originating in the same countries, except for Finland, where charges for mobile termination of international fixed calls are considered.

The charges are based on the first three-minute call at peak rate, except for Finland, where the average peak/off-peak rate set by the NRA has been shown. Different charges may apply for call termination on other mobile networks.



Except for Germany, the figures have been collected by the NRA, and give the position in August 2002. Data for Germany are not publicly disclosed by the NRA and the figure shown in the chart was provided by Cullen International.

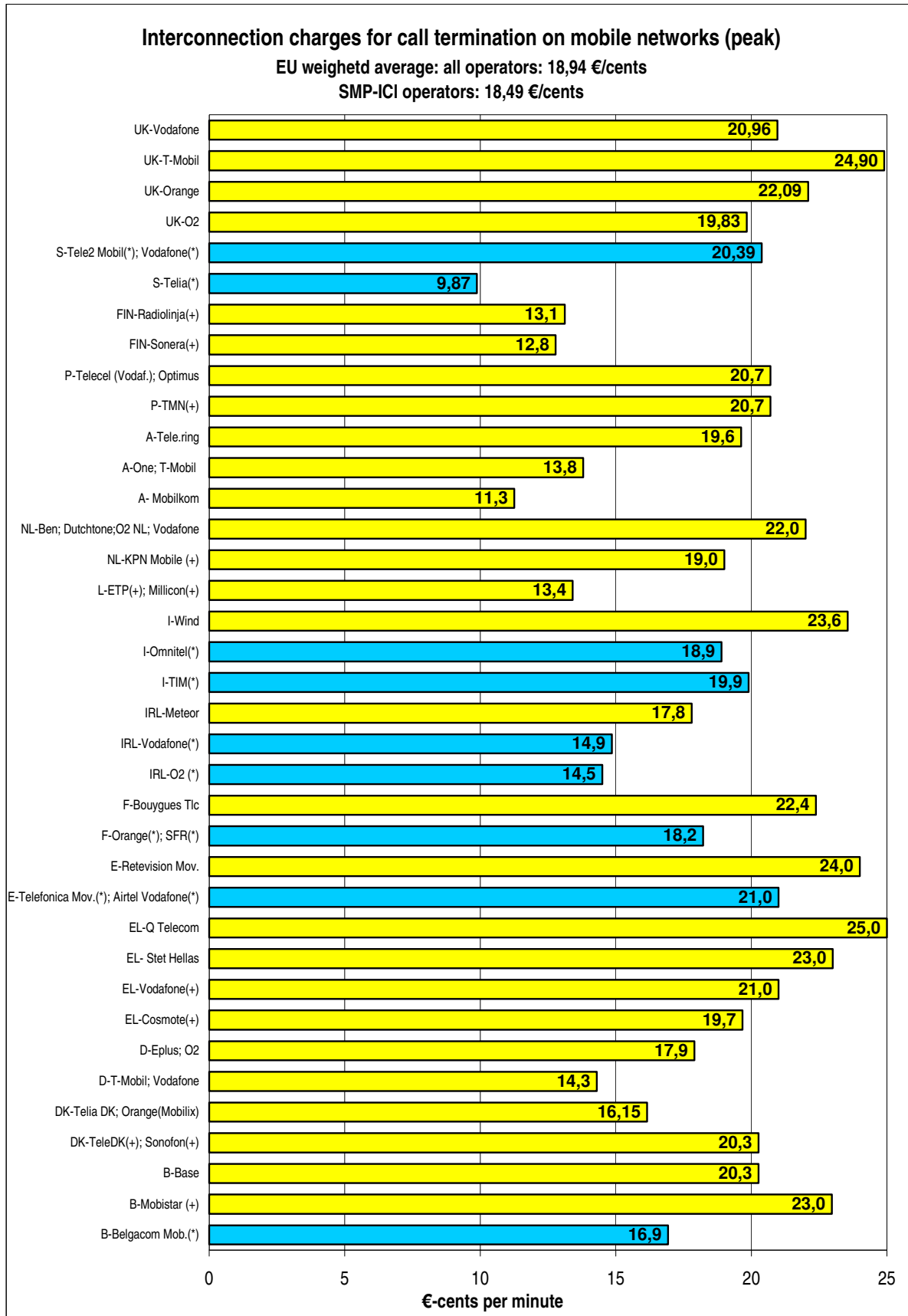
In the following chart figures are shown for a total of 12 operators with SMP in the national market for interconnection (Belgium, France, Ireland, Italy, Spain and Sweden). Figures for all the major mobile operators in each country are also shown (24 operators with SMP in the national mobile market). Denmark and Portugal applied to the non-SPM operators the same interconnection price as for the SMP operators in the mobile market.

In France, mobile-to-mobile interconnection charges are based on the "bill and keep" principle, so operators do not define termination charges.

Tariffs for Portugal are valid until 30.09.2002. Then, according to a NRA's decision they will be progressively reduced to 18.7 cents/min.

Data for Finland indicate the interconnection charges for an international fixed call to a mobile network (interconnection charges also apply to mobile-to-mobile calls). No mobile wholesale termination charges exist for call originating on national fixed network; instead, so-called "end-user" charges are levied.. The originating fixed operator charge a customer for a fixed network retail charge and for a mobile network retail charge (to be forward to the mobile operator). Both fixed and mobile operators determine the charges of their own segments. Example of fixed-to-mobile retail call charge (including VAT at peak rate) is 0,27€ for Sonera and 0,26€ for Radiolinja.

**Chart 38**



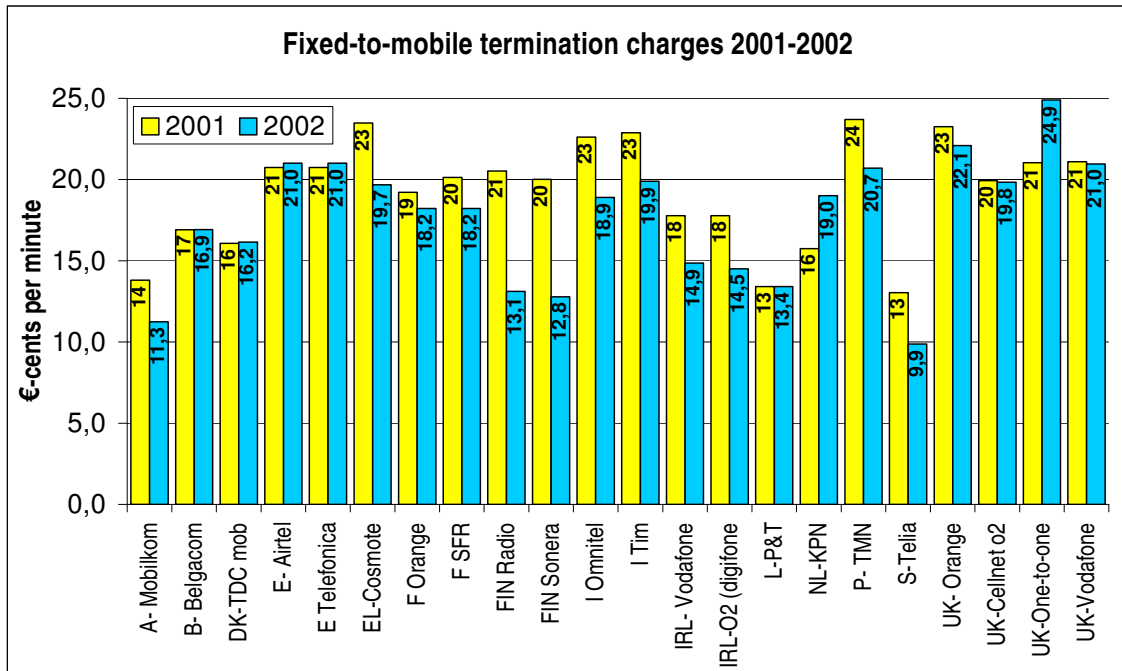
Legend:

(\*) SMP operators in the national interconnection market  
 (+) SMP operators in the national mobile market

Charge for the SMP operator Telia in Sweden refers to a weighted peak/off-peak average rate, set out by the NRA. Charges for the other operators refer to a per minute peak rate. The SMP designation for Tele2 Mobil and Vodafone has not taken effect due to pending court proceedings.

The following chart shows the mobile termination charges for the year 2001 and 2002 for the main EU operators. EU weighted average trend is also shown.

**Chart 39**





## 4 MOBILE MARKET

### 4.1. MOBILE PENETRATION

The following charts estimate for each Member State the number of mobile subscribers and the penetration rate in 2002 for second generation mobile services (DCS-GSM). Growth in the penetration rate since August 2001 is also shown.

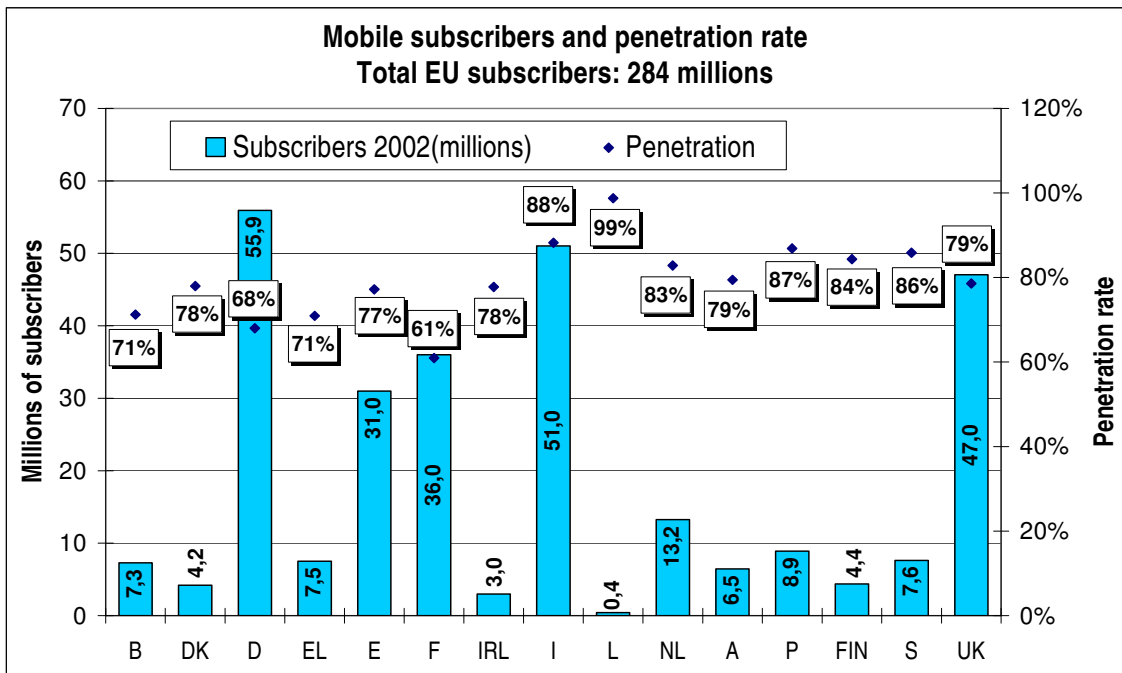
Subscriber figures are taken from FT Mobile Communications (August 2002) except for Germany, Austria and the Netherlands, where updated figures were provided by the respective NRAs. Data show the situation as at August 2002 and include both post-paid card and pre-paid subscribers.

EU average is a simple, rather than a weighted average.

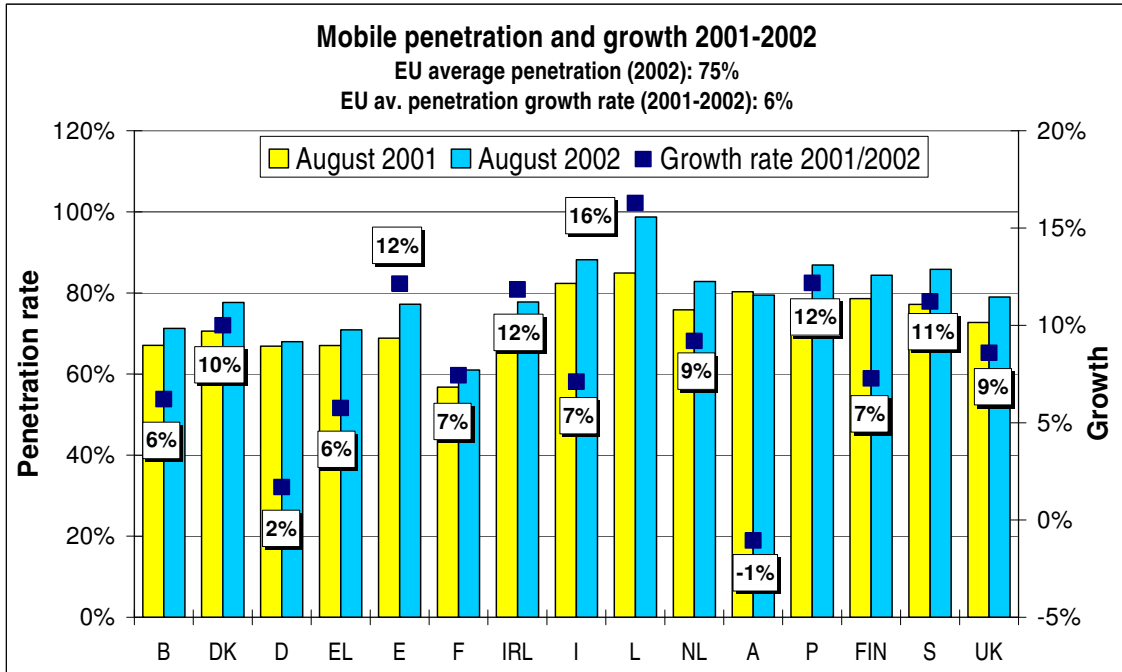
The following chart shows the absolute number of mobile subscribers in each Member State (columns) and their penetration rate (dots), expressed in terms of % of total subscribers over population.

Figures for Italy, Spain, Sweden and Finland include analogue subscribers.

**Chart 40**



**Chart 41**



According to the Austrian NRA, the decline in the number of Austrian subscribers is due to a revision in the definition of active subscriber. Non-regular users are excluded from these figures.

**Chart 42**

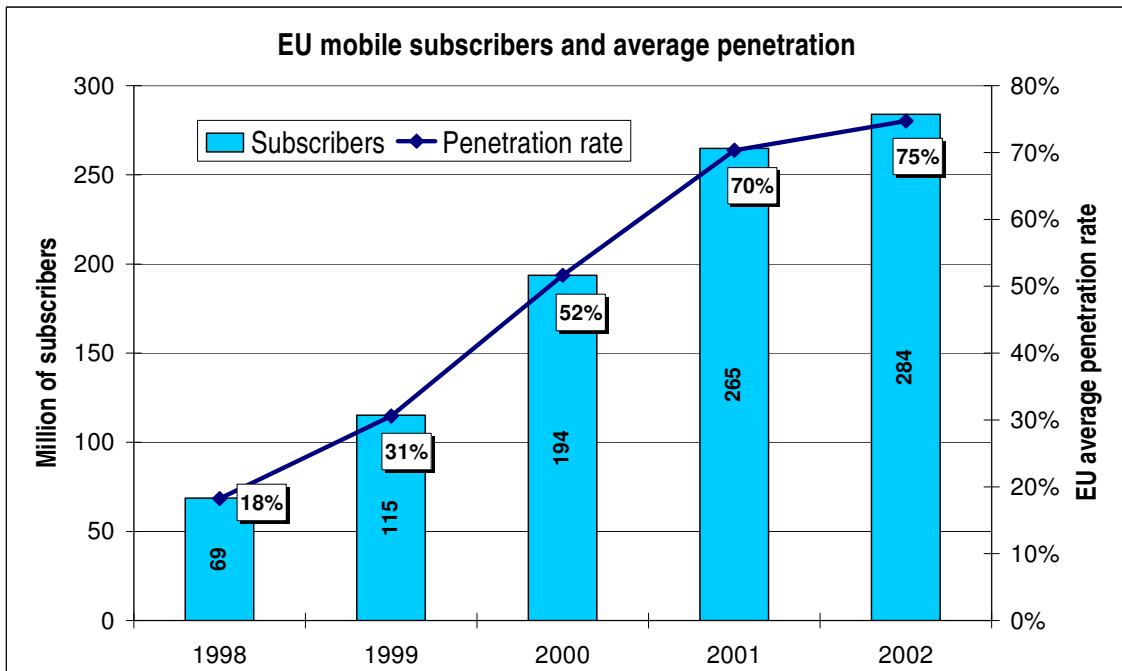
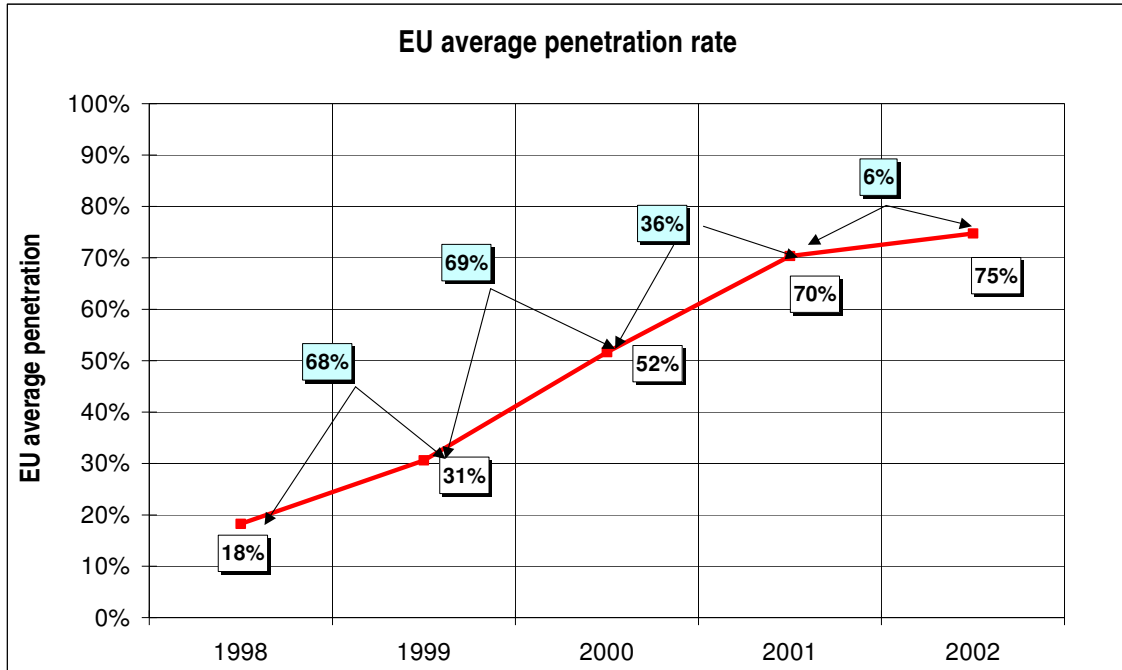


Chart 43



- EU average is a simple, rather than a weighted average.

#### 4.2. PLAYERS IN THE MOBILE MARKET

This section shows the number of mobile licences granted in each Member State for the provision of analogue, GSM 900, DCS 1800 and UMTS services.

The data on the number of licensed operators have been provided by the national regulatory authorities and indicate the position in October 2002.

Chart 44 shows the number of operators licensed to provide digital mobile services (second-generation) rather than the number of licences issued in each country. The number of operators indicates the real magnitude of the choice of operators for customers of digital mobile services, since very often operators have licences for both GSM 900 and DCS 1800. Mobile network operators have been identified as having only GSM 900 or only DCS 1800 frequencies, or both (in which case they have usually been granted a GSM 900 licence which has subsequently been extended to the DCS 1800 band).

Information on mobile service providers<sup>12</sup> has been included where available (without distinction between local and national coverage).

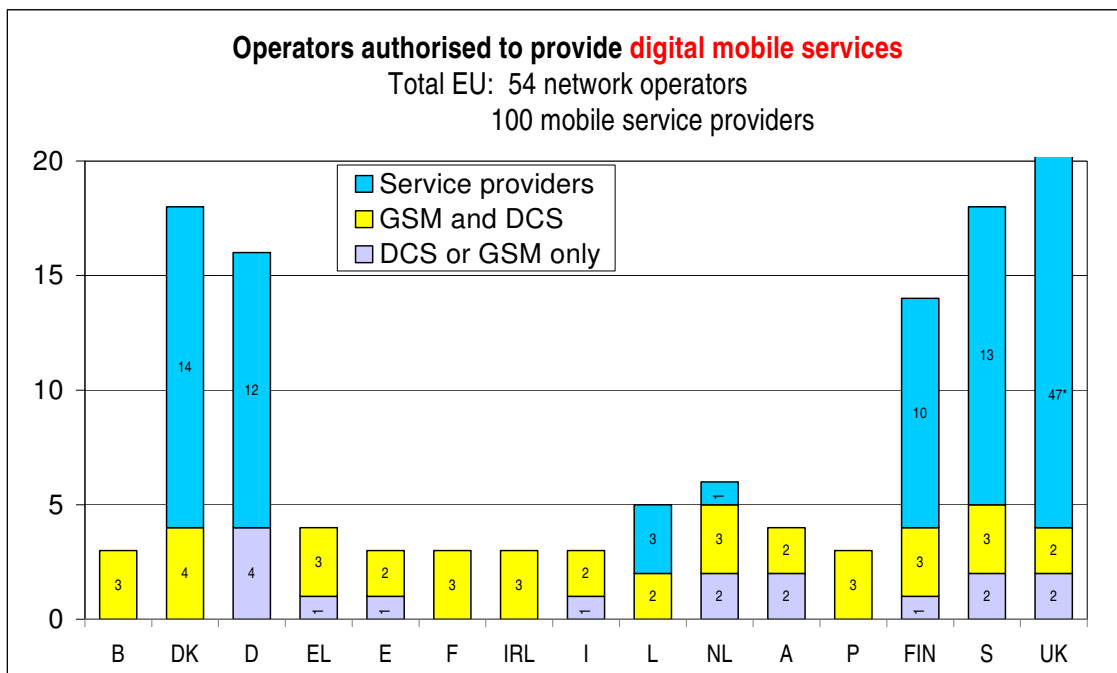
In Finland, 21 local telephone companies have been awarded licences to operate local DCS 1800 services, but spectrum has been allocated to two mobile operators, Radiolinja and Suomen 2G, in which those companies participate. Only 8 of these local companies are actually providing services. The figure does not include 1 local GSM operator belonging to the Finnet Group (Ålands) and 1 local GSM and 2 local DCS operators not belonging to the Finnet group. Only 3 mobile service providers have started commercial operations.

Figure for France does not include 2 analogue, 6 GSM local and 6 DCS local licences granted to the subsidiaries of the licensed mobile operators for the overseas departments<sup>13</sup>.

<sup>12</sup> Mobile service providers are defined as entities authorised to offer mobile service under their own brand name (dealing with marketing, billing, etc.), using a third party's mobile network.

Figures for Italy does not include the license of BLU since this has been withdrawn.

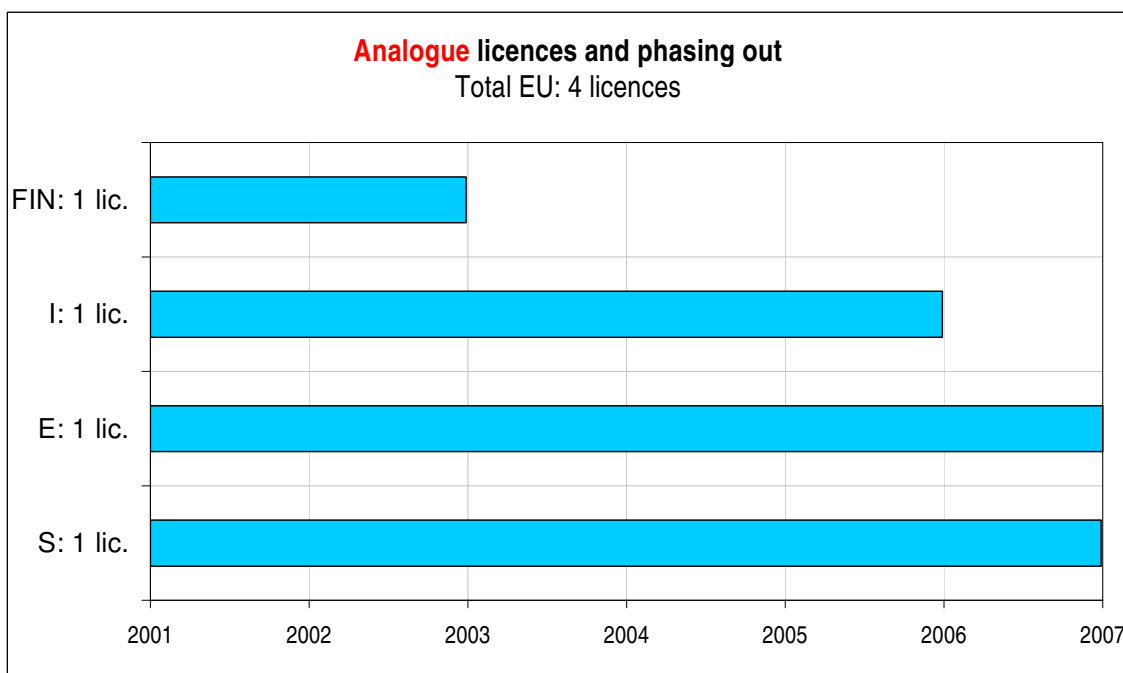
**Chart 44**



\* Values not to scale

The following chart shows the number of analogue licences still active in Europe and the date on which the phasing-out of these networks is expected to be completed. All the analogue licences have been granted to the subsidiary of the incumbent fixed network operator.

**Chart 45**



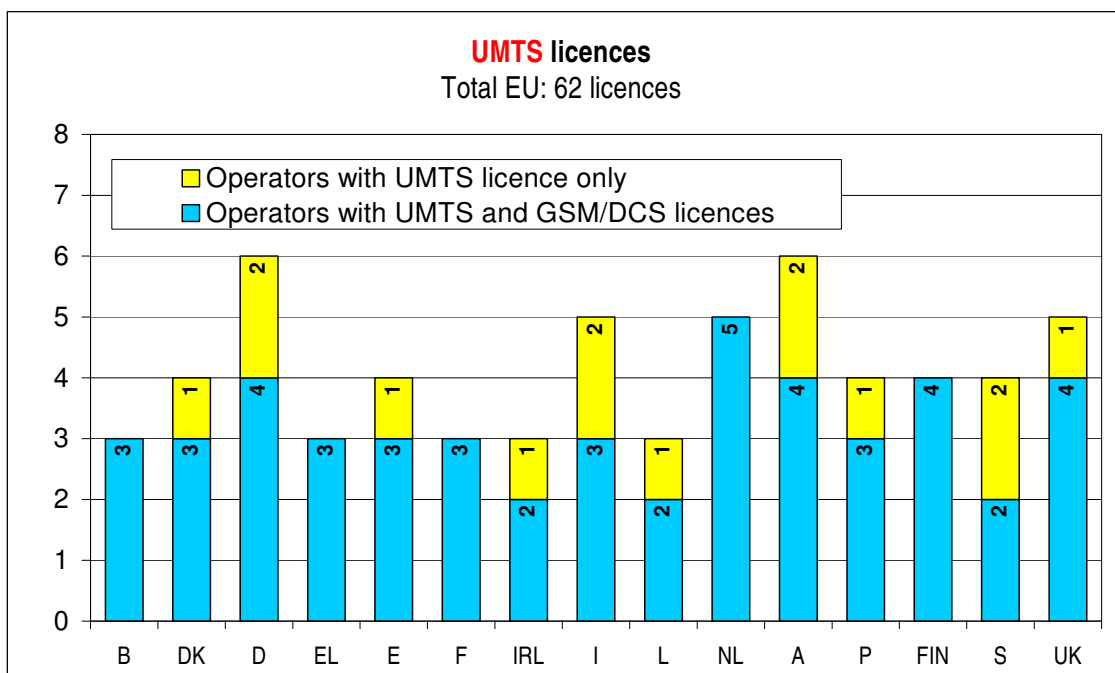
<sup>13</sup> Département de la Réunion, Antilles Françaises, Guyane; Île de Saint Martin et Saint Barthélemy)



Chart 46 shows the number of UMTS licences granted in Europe. The great majority of licences have been granted to players still active in the second generation market, and 14 licences have been granted to new entrants.

Figure for Finland does not include a local service provider.

**Chart 46**



### 4.3. OPERATORS' MARKET SHARES

The following charts show the market shares, in terms of subscribers, of the main competitors in the second generation mobile market.

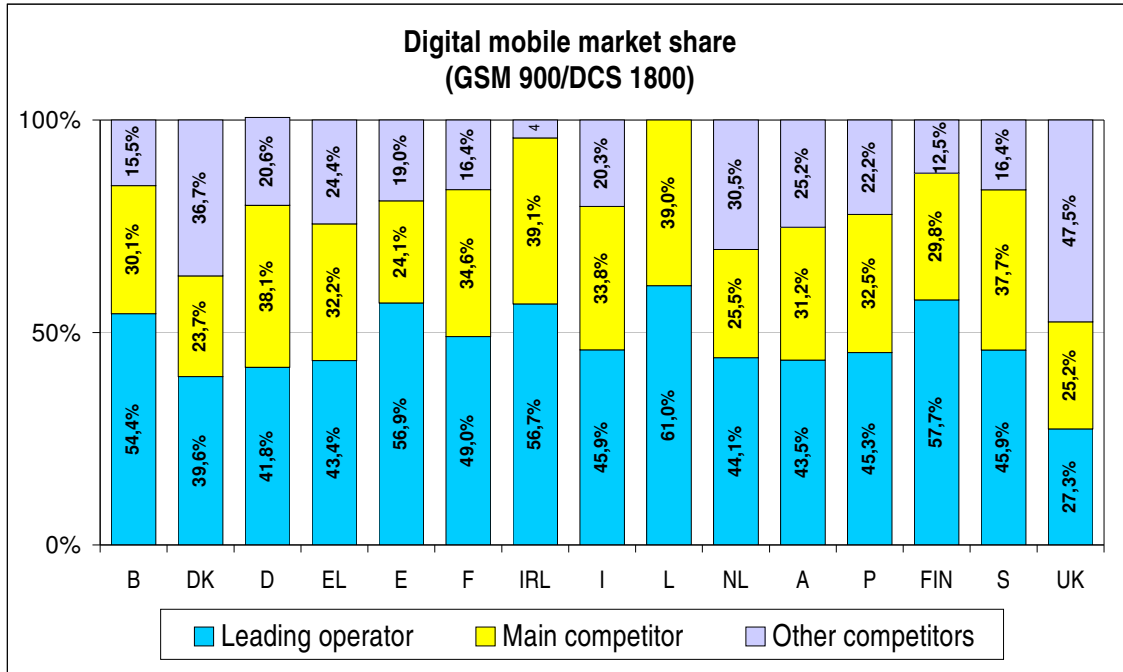
Since in four countries the incumbent's subsidiary is still providing the analogue service on the basis of a de jure or de facto monopoly, the operators' market shares have been calculated on two different relevant markets: the overall mobile market (including analogue, DCS 1800 and GSM 900 subscribers) and the digital market only (DCS 1800 and GSM 900).

Data concerning shares of the mobile market are based on estimates of the number of mobile subscribers, taken from FT Mobile Communications, and refer to August 2002. They have been compiled on the same basis in each country, and are therefore comparable. However, different figures might be obtained if the underlying raw data were collected/estimated on a different basis (number of subscribers, pre-paid card, minutes of conversation, etc.) or if a different method of calculation was used.

Apart from the United Kingdom, the leading operator is a subsidiary of the incumbent fixed network operator.

Chart 47 shows the shares of the leading operator, of the main competitor and of the other competitors on the digital mobile market only (100%).

**Chart 47**



The following chart shows the share of the overall mobile market held by the mobile subsidiary of the incumbent fixed operator. Where the incumbent still operates the analogue service, the shares of the overall mobile market of their analogue and digital services are indicated separately.

**Chart 48**

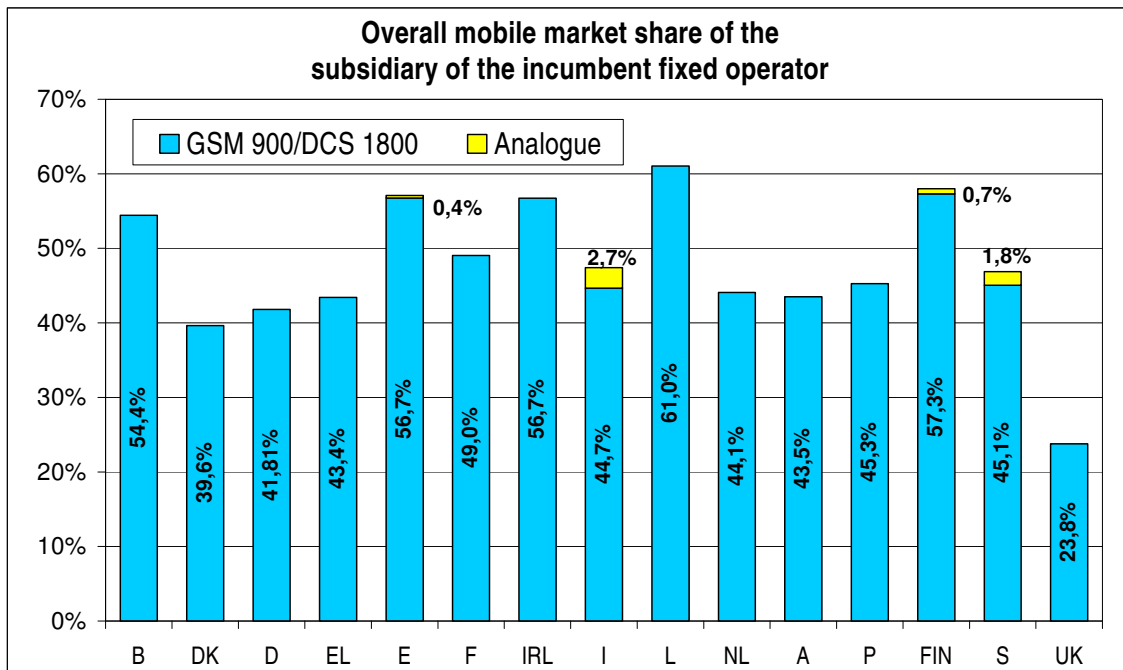
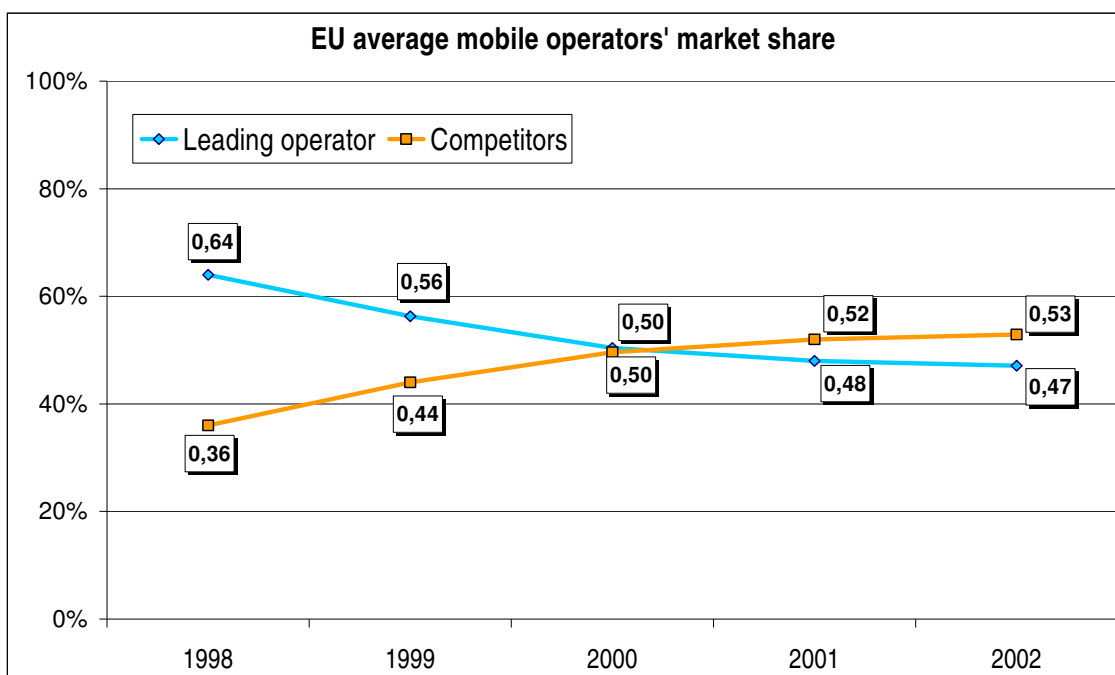


Chart 49



#### 4.4.MOBILE BASKET

The analysis of national (as opposed to roaming) mobile services is based on the OECD baskets for GSM/DCS services, as provided by Total Research Teligen in the August 2002 T-Basket. Due to significant changes in usage patterns the OECD baskets have been redefined with effect from August 2002<sup>14</sup>.

Since the results from the 'new' baskets are not finalised yet, the 'old' OECD baskets will be used in this section.<sup>15</sup>

The 'old' OECD baskets cover calls to local (70% of national calls) and distant (20% of national calls) fixed line phones, mobile phones in the same network (10% of national calls), and international calls.

All packages analysed are post-paid packages. The analysis is based on packages from the leading<sup>16</sup> operator in each country. Other providers may offer lower prices.

The low intensity basket will be typical for personal usage, with a weight towards afternoon and evening, and a lower number of calls (total 202 calls per year, of these 2 are international).

The high intensity basket is more typical for professional usage, with a heavy weight towards business hours, and far more calls than the low intensity basket (total 1272 calls per year, of these 72 are international).

The baskets cover all relevant charges, i.e. 1/5 of the activation charge, annual rental charges, and call charges as defined above.

<sup>14</sup> The 'new' baskets are not compatible with the "old" ones, in that they contain an SMS element, they include calls to several mobile networks, and they do not cover international calls. The new baskets will cover more than one operator per country, and a range of packages per operator. This means that the results from the new baskets will come out very different from the results obtained in previous years.

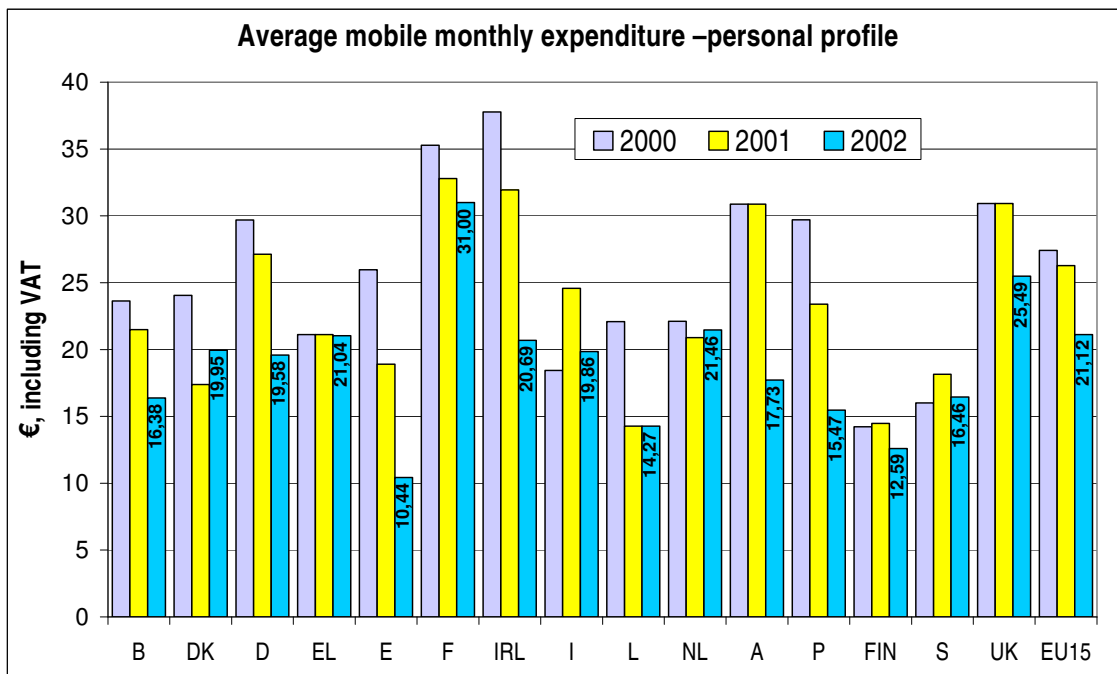
<sup>15</sup> A full description of the methodology can be found in the document 'OECD Telecommunications Basket definitions', June 2000, available at <http://www.oecd.org/pdf/M00005000/M00005340.pdf>

<sup>16</sup> In terms of number of subscribers.

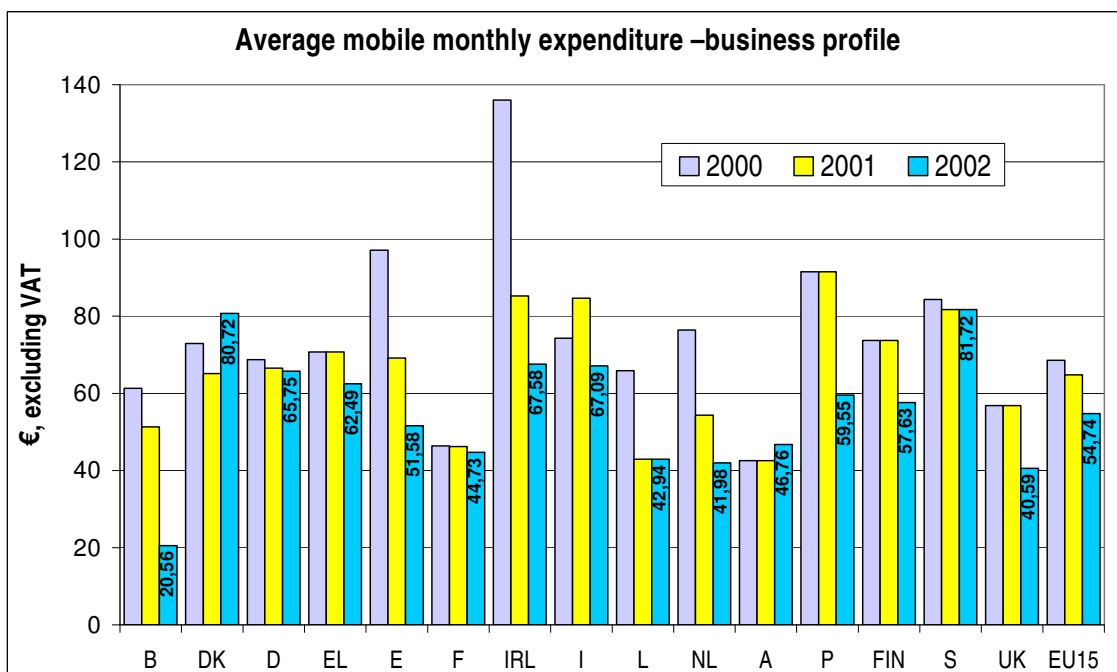
The packages from each operator have been selected as appropriate for each of the two baskets, based on an analysis of the range of packages offered.

Several packages offer an amount of free calls, included in the package price. These free calls are subtracted from the usage charges.

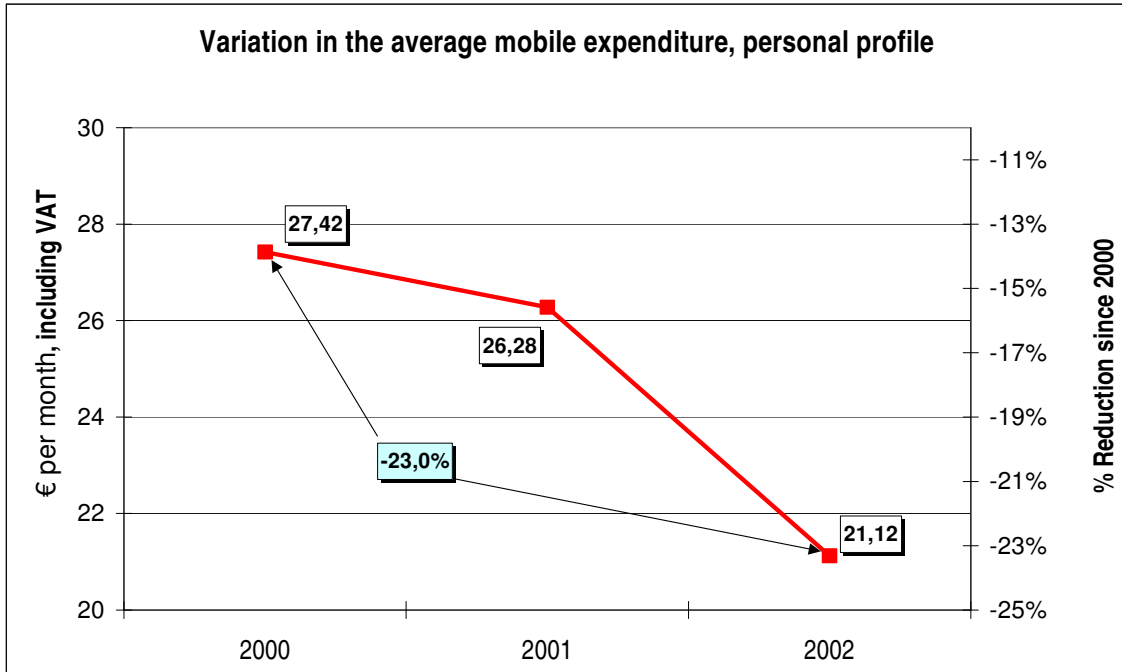
**Chart 50**



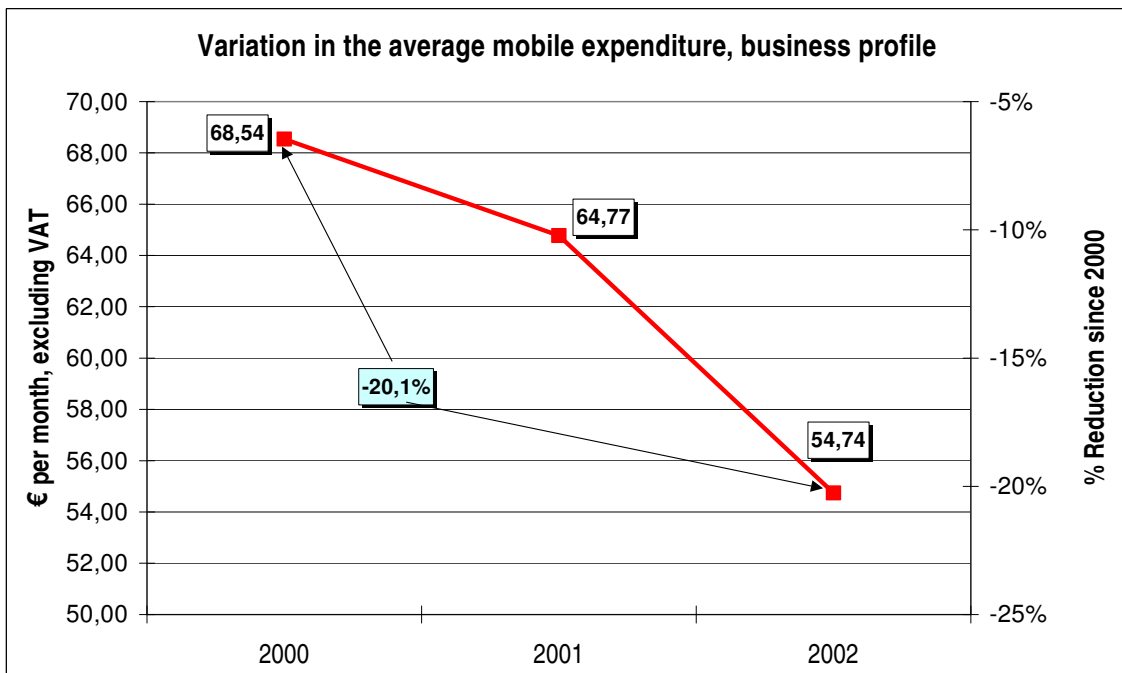
**Chart 51**



**Chart 52**



**Chart 53**





## 5 LOCAL ACCESS AND PRICING

### 5.1. BROADBAND ACCESS

This section provides data on the number and type of broadband lines supplied by both incumbent operators and new entrants in the EU. It also contains information on access lines provided by means of alternative technologies such as wireless access (WLL), satellite and cable modems.

Information have been collected from the national regulatory authorities through the ONP COM02-18 questionnaire on data for local broadband access. Given the rapid developments in this sector, it has been agreed with NRAs to update the ONP questionnaire data on a regular basis in January, July and October. Unless otherwise stated data below refer to the situation as at 1<sup>st</sup> October 2002.

For the collection of data the following concepts have been used:

- “New entrants” refers not only to alternative telecommunications operators, but also include the internet service providers (ISPs);
- In the case of full unbundling, the copper pair is rented to a third party for its exclusive use;
- As fully unbundled lines (ULL) supplied by incumbent to new entrants could in principle be used for services other than broadband the total number of ULL for access to internet will be lower than the total number of ULL;
- In the case of shared access, the incumbent continues to provide telephony service, while the new entrant deliver high speed data services over the same local loop;
- Bitstream access refers to the situation where the incumbent installs a high speed access link to the customer premises (e.g. by installing its preferred ADSL equipment and configuration in its local access network) and then makes this link available to third parties, to enable them to provide high speed services to customers. The incumbent may also provide transmission services to its competitors, to carry traffic to a “higher” level in the network hierarchy where new entrants may already have a broadband point of presence;
- In contrast to bitstream access, simple resale occurs where the new entrant receives and sells on to end-users - with no possibility of value-added features to the DSL part of the service - a product that is commercially similar to the DSL product provided by the incumbent to its own retail customers, irrespective of the ISP service that may be packaged with it;
- Retail broadband access refers to the access provided to the end users;
- Incumbents’ DSL lines refers to the lines provided to end users by the incumbent, its subsidiaries or partners;
- Other means of accessing the internet indicates connections by means of satellite, fibre optic, powerline communications, etc;

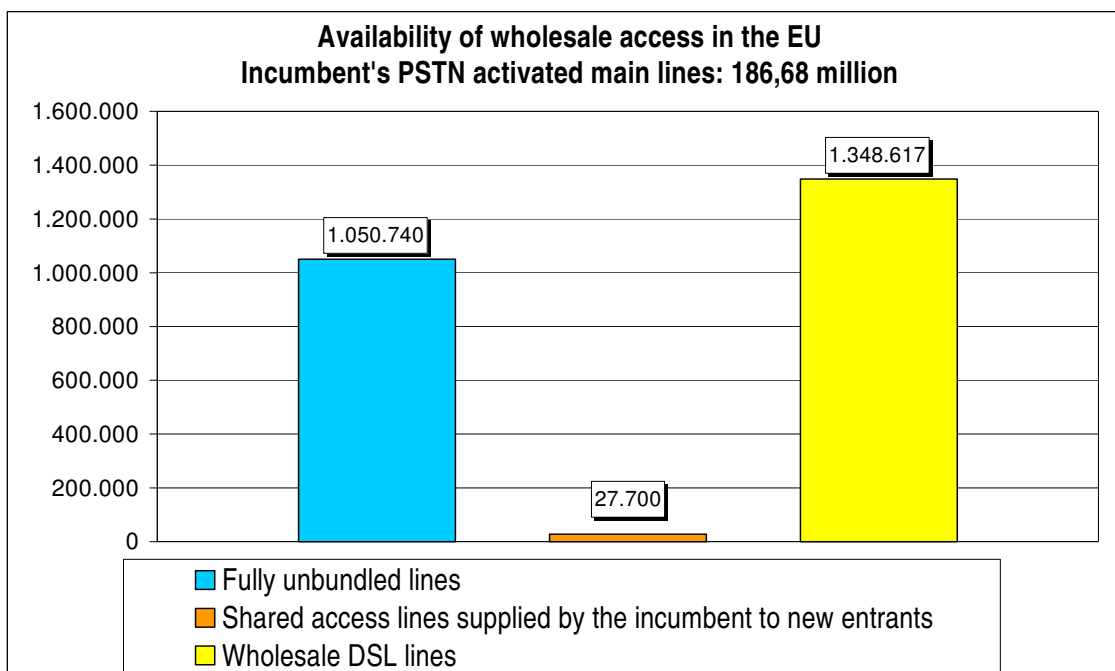
### 5.1.1. Wholesale access

This section shows the availability of wholesale access supplied by incumbents to new entrants. Separate figures are provided for full unbundled lines, shared access and bitstream access (wholesale DSL lines).

**Table 4 Number of agreements for full ULL, shared access, bitstream access and resale.**

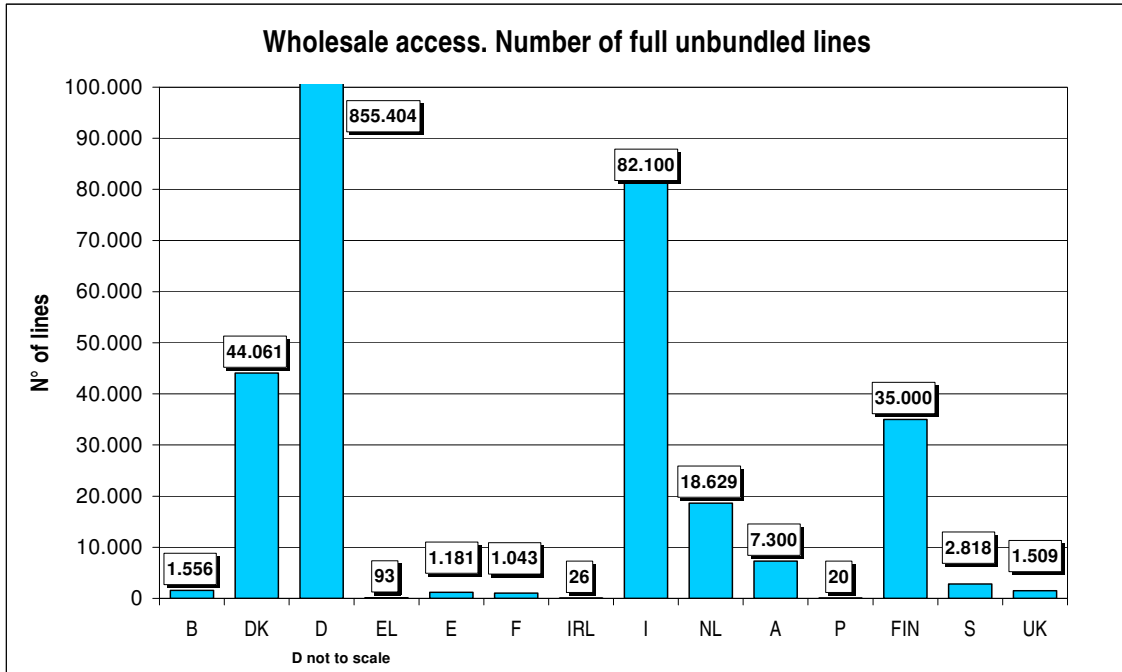
|                | N. of agreements on fully unbundled lines | N. of agreements on shared lines | N. of agreements Wholesale DSL lines supplied. Bitstream access | N. agreements Wholesale DSL lines supplied. Simple resale |
|----------------|---|----------------------------------|---|---|
| <b>B</b>       | 7   | 4                                | 4   | 12  |
| <b>DK</b>      | 16  | 5                                | 5   | 1   |
| <b>D</b>       | 91  | 3                                | 2   | 52  |
| <b>EL</b>      | 2   | 0                                | 0   | 0   |
| <b>E</b>       | 6   | 6                                | 38  | n.a.  |
| <b>F</b>       | 9   | 9                                | 4   | 5   |
| <b>IRL</b>     | 1   | 1                                | 0   | 0   |
| <b>I</b>       | 31  | 2                                | 50  | n.a.  |
| <b>L</b>       | n.a.                                      | n.a.                             | n.a.  | n.a.  |
| <b>NL</b>      | 10  | 10                               | n.a.  | n.a.  |
| <b>A</b>       | 12  | 0                                | 24  | 0   |
| <b>P</b>       | 4   | n.a.                             | 4   | n.a.  |
| <b>FIN</b>     | 180                                       | 80                               | 60  | 35  |
| <b>S</b>       | 33  | 33                               | 4   | 5   |
| <b>UK</b>      | 53  | 5                                | 309   | 0   |
| <b>Tot. EU</b> | <b>455</b>                                | <b>158</b>                       | <b>504</b>  | <b>110</b>  |

**Chart 54**





**Chart 55**



**Chart 56**

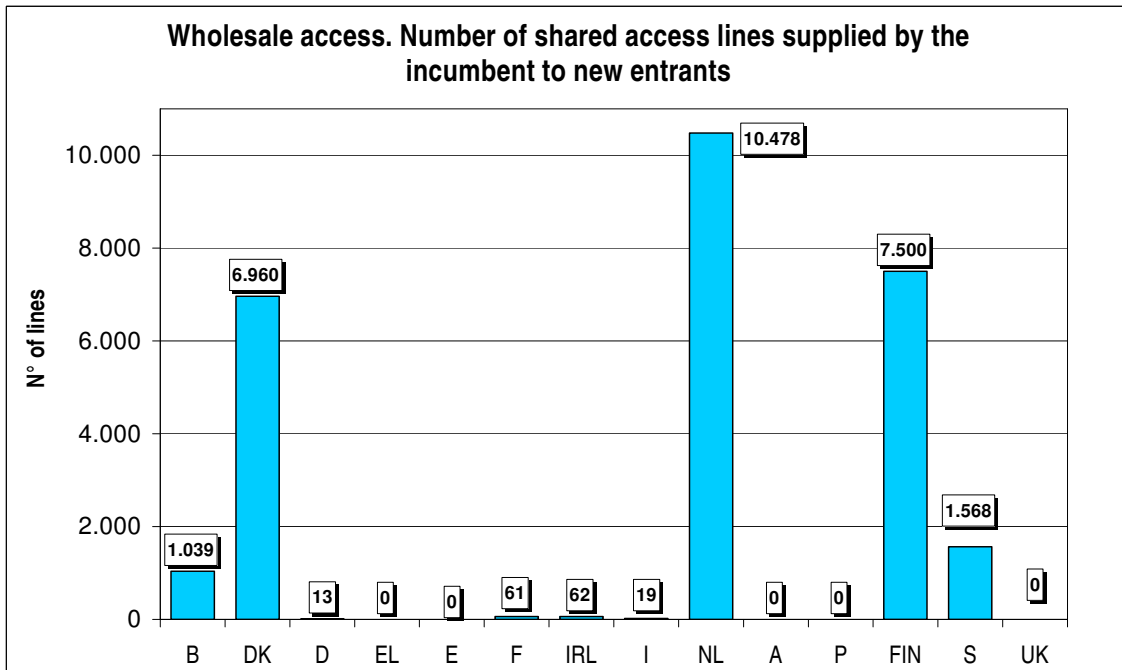
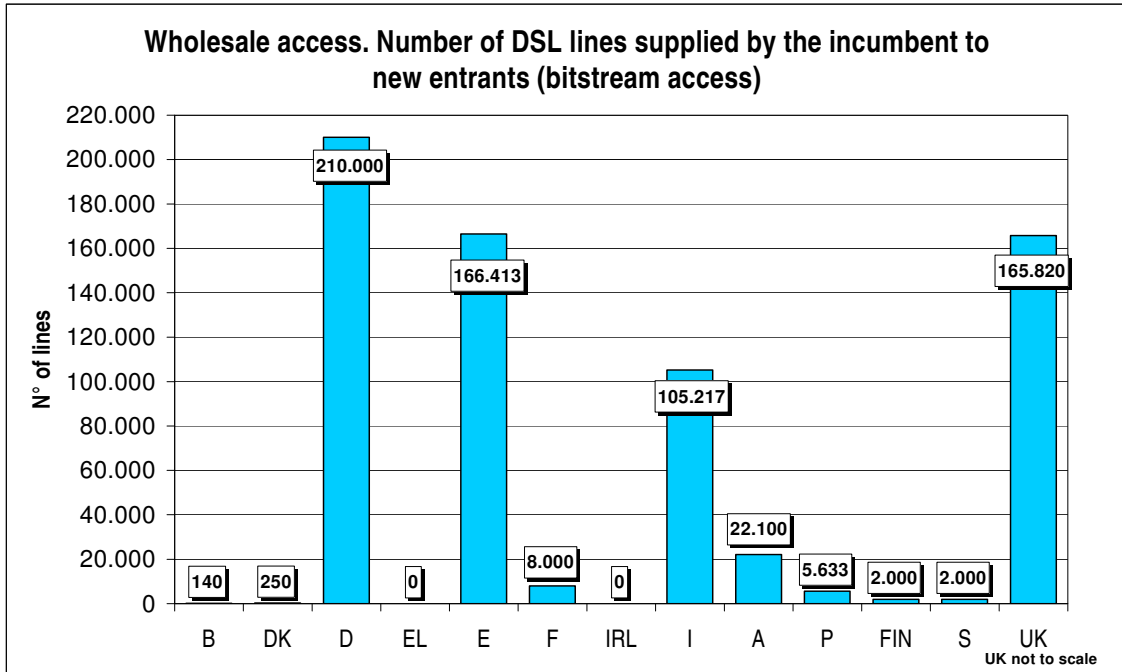


Chart 57



### 5.1.2. Retail broadband access to internet

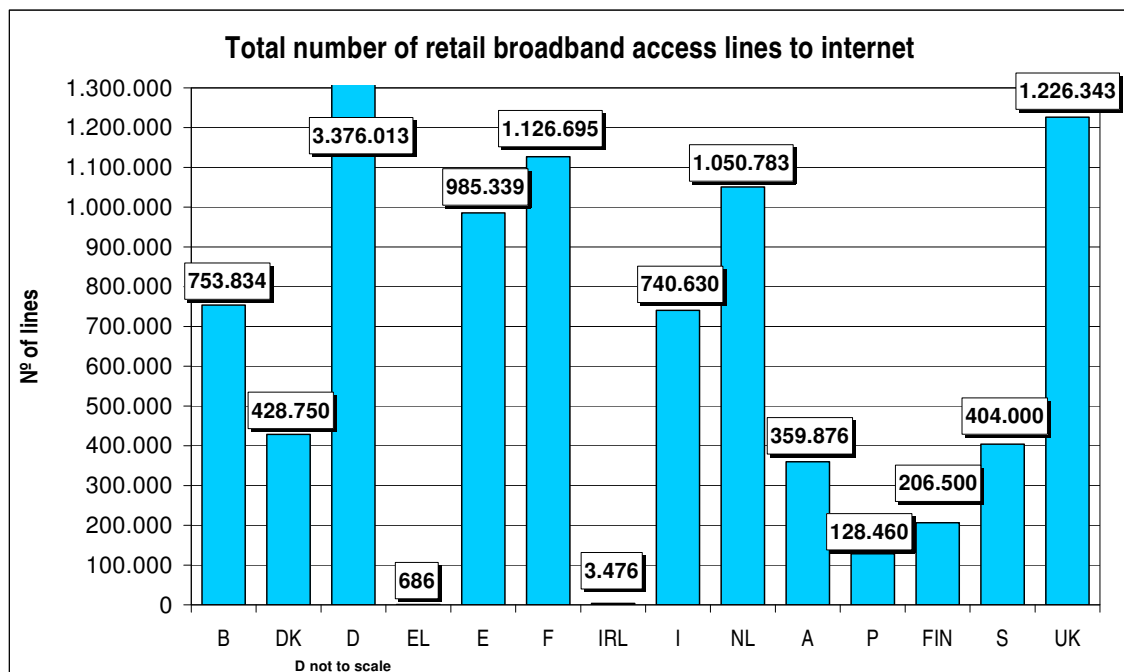
This section show the availability of broadband access to internet for end-users provided by incumbents (its subsidiary or partners) and by new entrants (alternative telecom operators or Internet Service Providers).

Internet broadband access can be provided through different means: DSL lines, wireless local loop (WLL), cable TV access (cable modem), dedicated leased lines and other access (like satellite, fibre optic powerline communications, etc..)

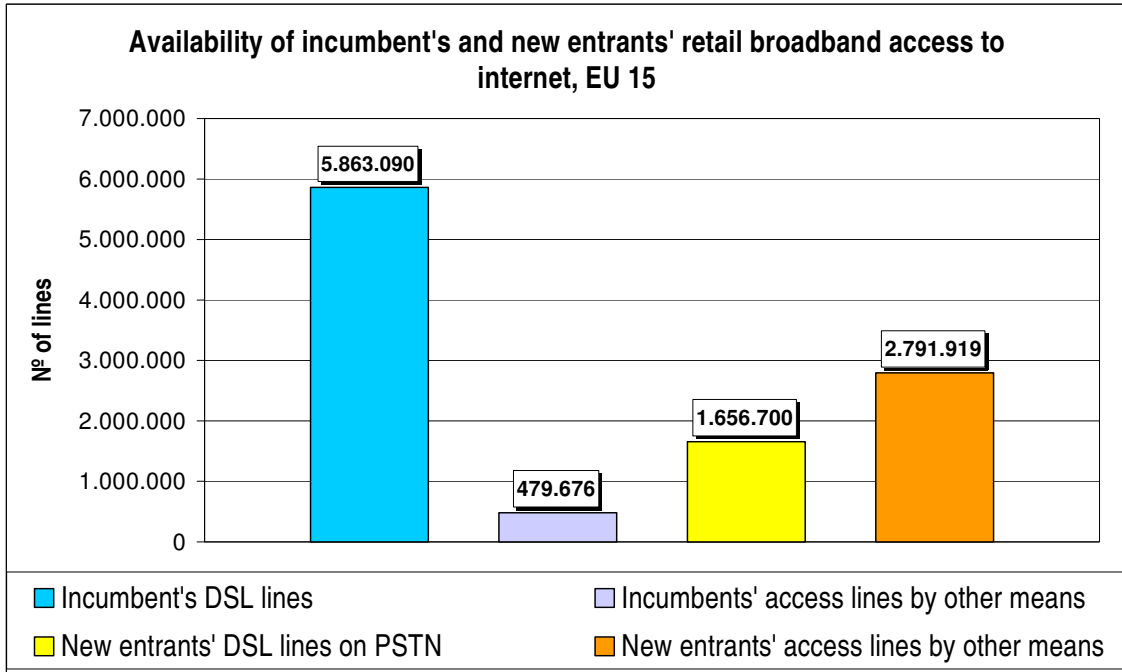
New entrants' DSL lines can be provided to end users by means of full unbundled, shared access, bitstream access or resale.

Chart 58 shows the total number of broadband access to internet for each Member States provided by both incumbents and new entrants and including all means of broadband connections.

**Chart 58**



**Chart 59**



**Chart 60**

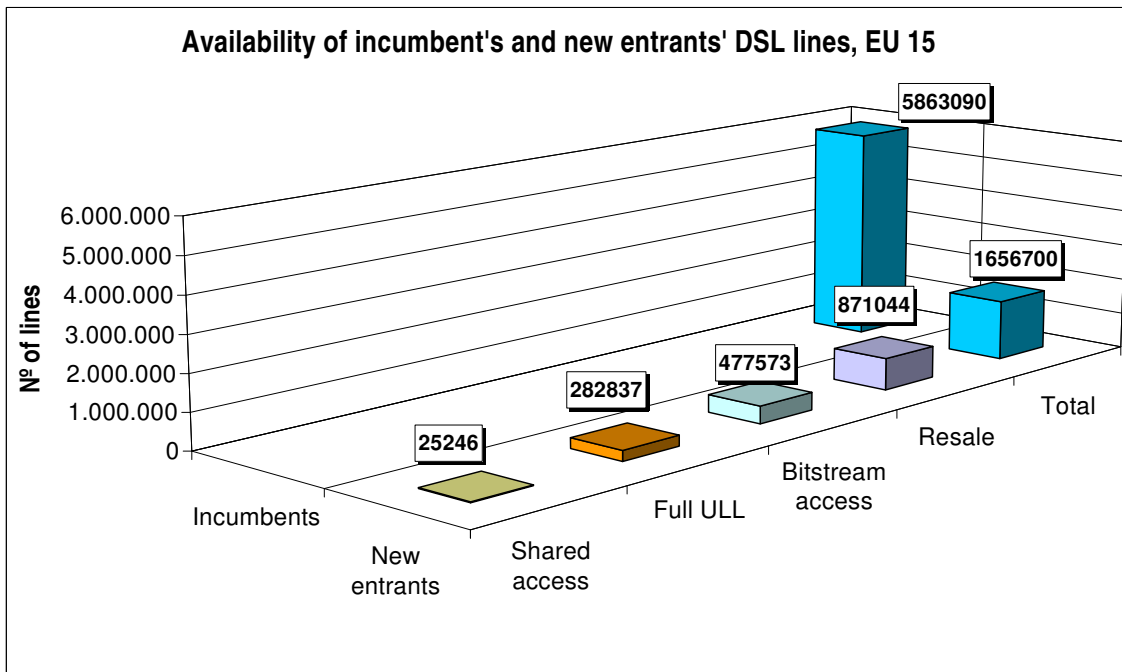
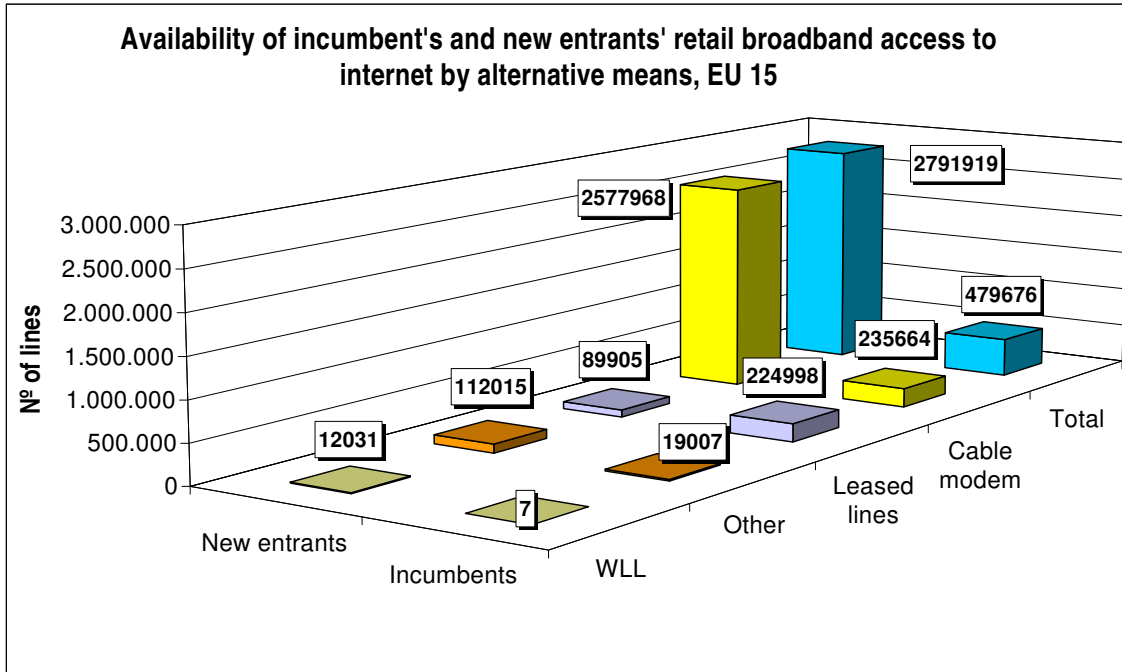
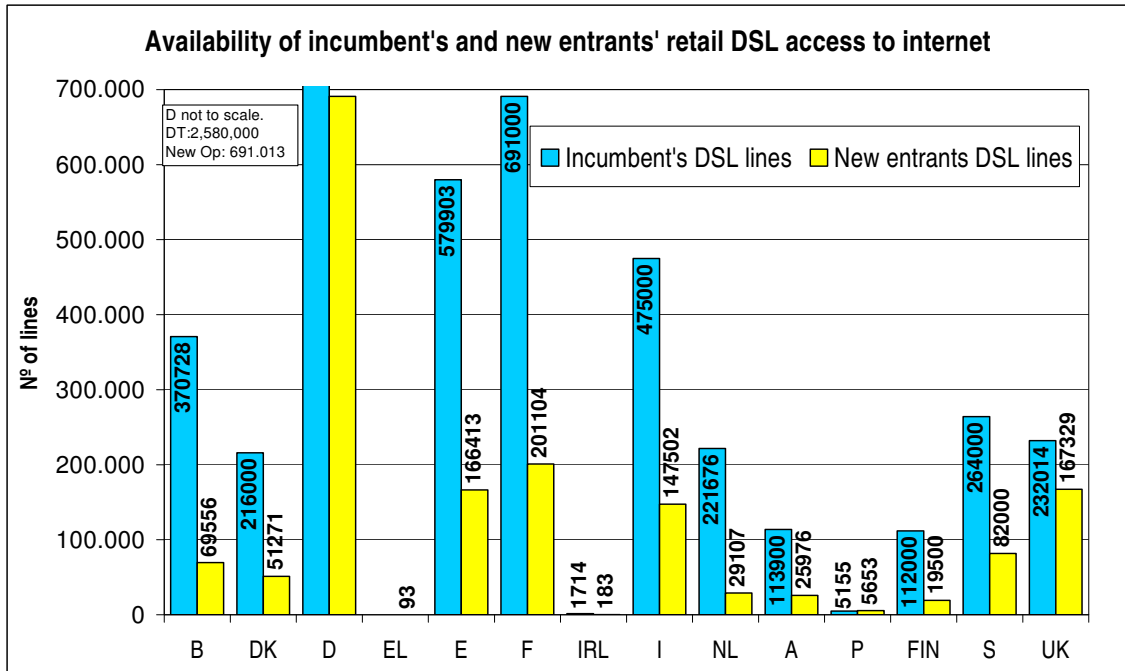


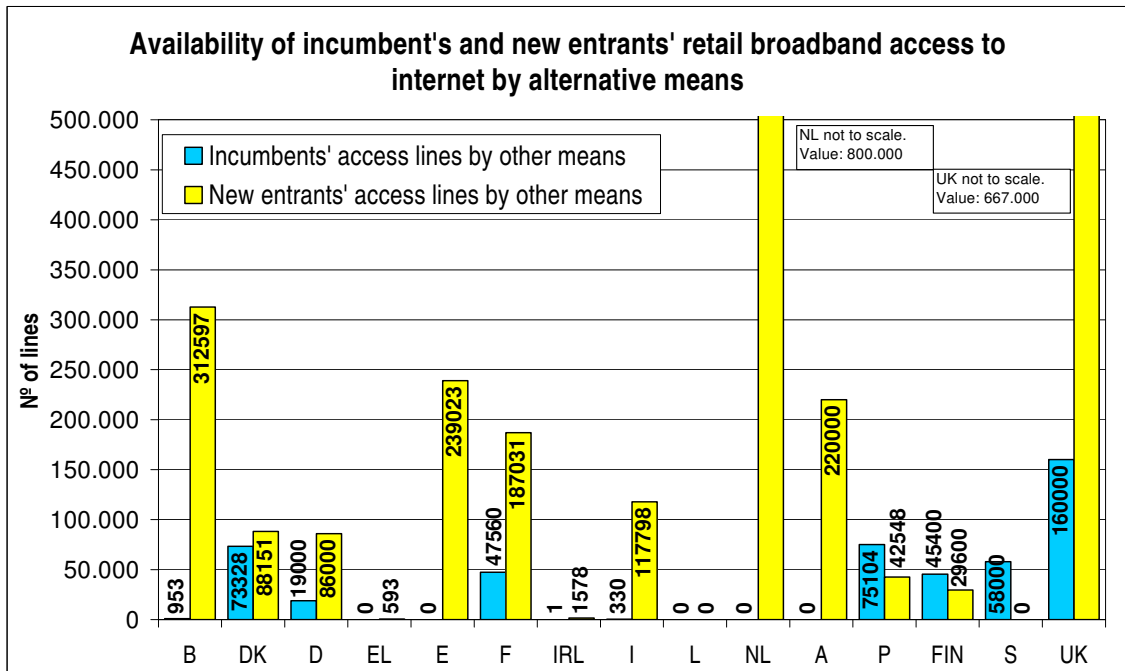
Chart 61



**Chart 62**



**Chart 63**



## 5.2.PRICES FOR UNBUNDLED LOCAL LOOP

This section show the charges per unbundled loop (monthly rental and connection) in case of full unbundled and shared access of the loop. Estimates of total average monthly rental cost (based on the total costs for the first year) is also presented.

In the following we assume that the loop is active and will be used to provide DSL services. In fact some Member States (Belgium, Luxembourg and Portugal) charge a different price for the loop, depending on if it is used for the voice telephony services or for DSL services. Furthermore, Belgium applied a different price for non-active loop and in some Member States charges are different in case of subsequent access.

### 5.2.1. PRICES FOR FULL UNBUNDLED LOCAL LOOP

In Belgium a supplementary fee of 28.29 for disconnection is also charged. It should be noted that a disconnection fee is not charged to the incumbent's own retail market.

Data for the connection fee in Germany refers to a unique payment option.

The connection charge for Italy, also includes the charges for the "verification/preparation of the copper line for the provision of ADSL service", that is always paid by the OLOs, except in the case of an existing customer changing from the incumbent to the OLO.

Data for Finland refer to a weighted average of 44 SMP operators providing ULL. Prices vary between 10 -31 € for the monthly rental and between 105 - 303 € for the connection fee.

Data for connection fee in Sweden refers to the first access. Charges for the following access is 85€.

Figure for the United Kingdom refer to an average based on determined price of 194€ per annum for the monthly rental and on a price of 140€ per annum for connection fee.

Chart 64

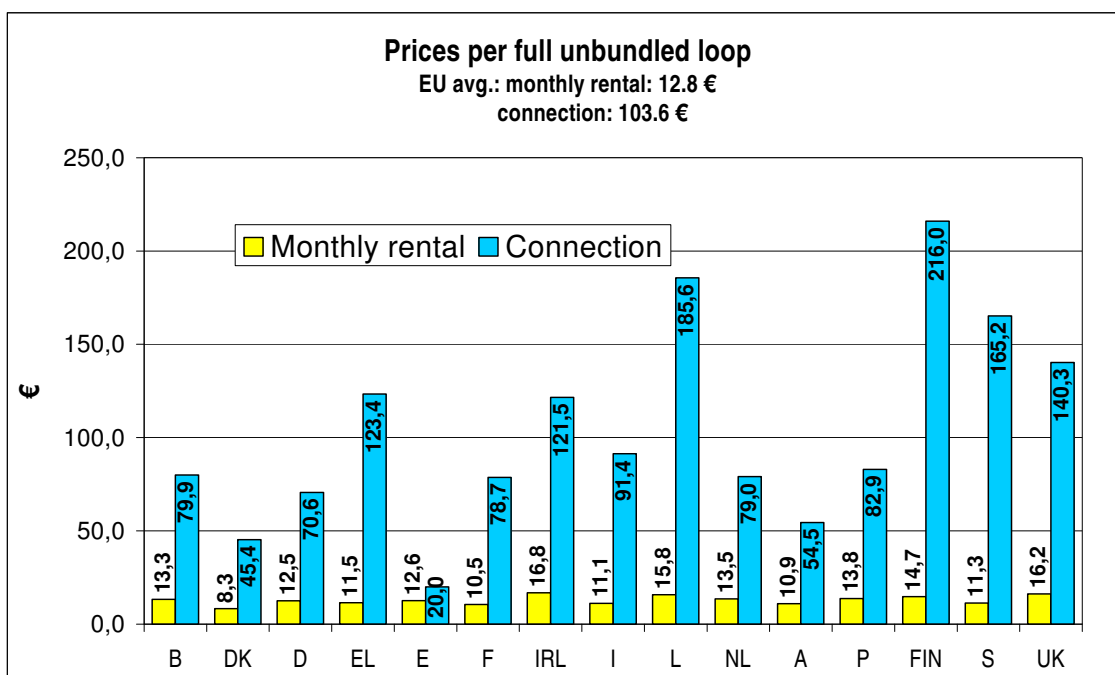
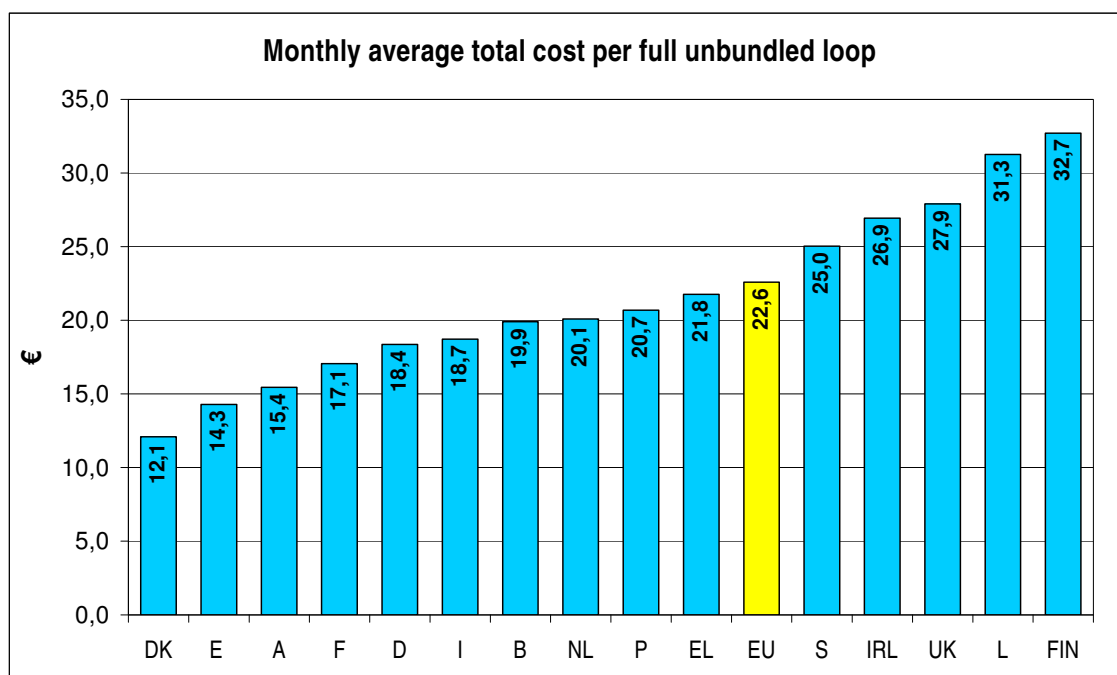


Chart 65



- Estimates are based on the total cost for the loop for the first year.

### 5.2.2. PRICES FOR SHARED ACCESS LOCAL LOOP

In Belgium a supplementary fee of 28.73€ for disconnection is also charged. It should be noted that a disconnection fee is not charged to the incumbent's own retail market.

Connection fee in Denmark decrease to 57€, when taking over an existing shared access connection.

Data for the connection fee in Germany refers to a unique payment option.

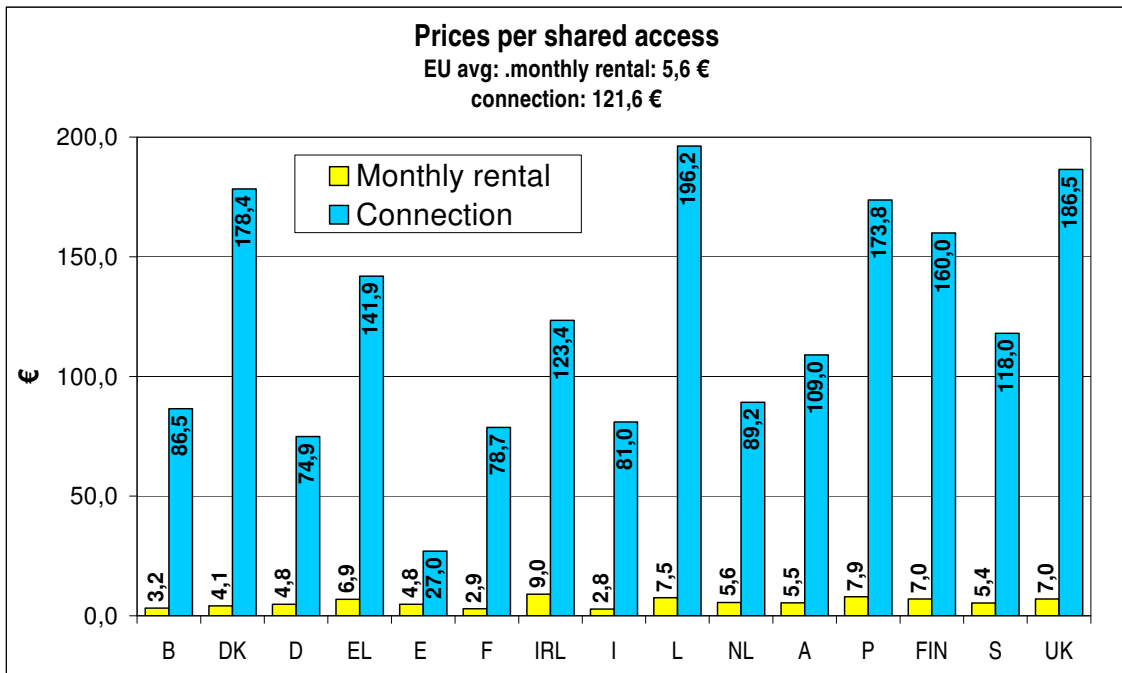
Data for Finland refer to a weighted average of 44 SMP operators providing shared access to local loop. According to the Telecom Market Act, monthly rental for shared access may add up to maximum half the price for full unbundling. Prices for connection fees vary between 57€ and 260€.

Data for Sweden for connection fee refers to the first access. Charges for the following access is 85€.

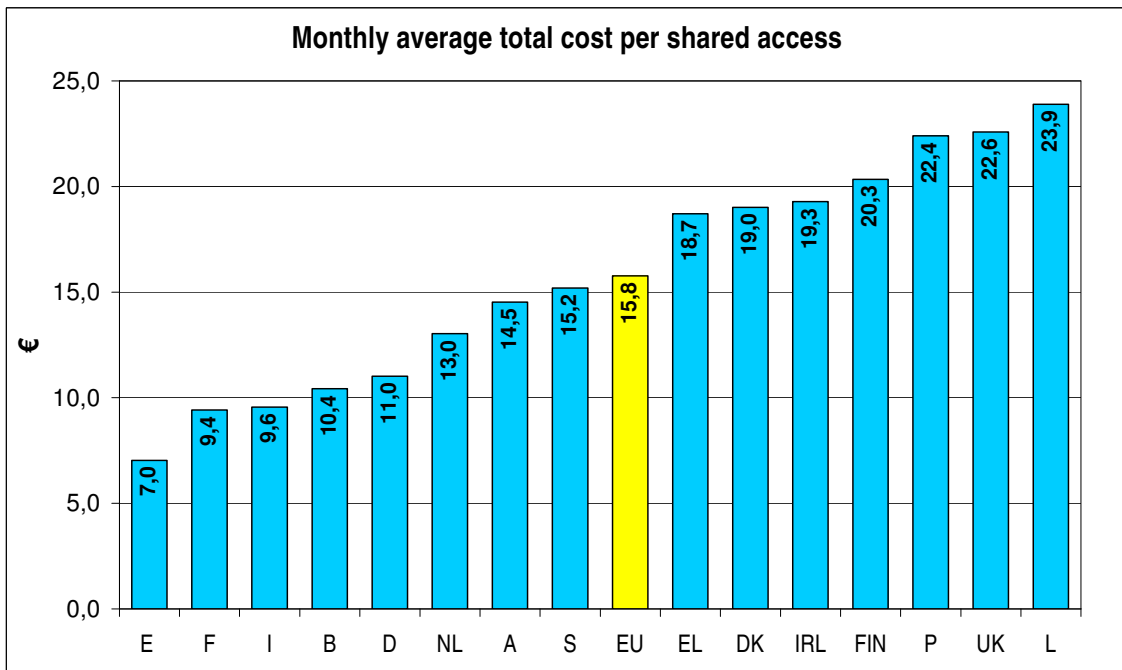
Data for the United Kingdom refer to an average based on determined price of 84€ per annum for the monthly rental and on a price of 186€ per annum for connection fee.



**Chart 66**



**Chart 67**



- Estimates are based on the total cost for the loop for the first year.



## 6 INTERNET SERVICES

### 6.1.INTERNET MARKET DATA

This section provides information about the penetration of the internet in European households as well as about the number of Internet Service Providers (ISPs).

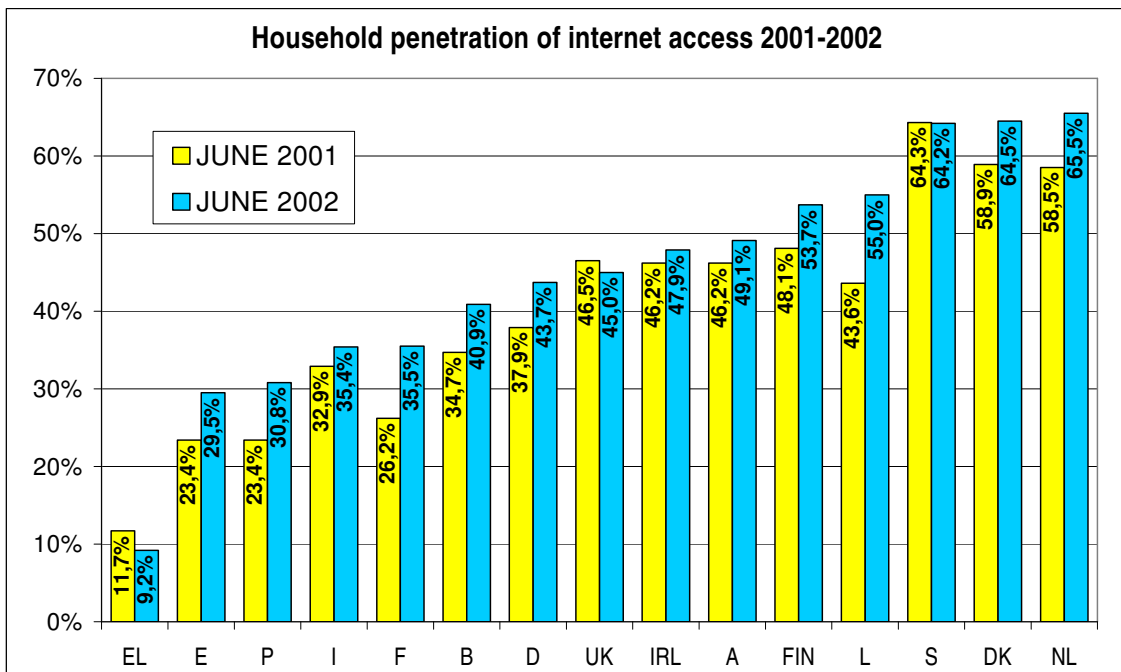
The following chart shows the percentage of households having internet access, irrespective of the technologies used: normal public switched telephone network (PSTN) or broadband access (DSL, cable modem, ISDN, WLL).

The source of the data on internet penetration is the Flash Eurobarometer 'Internet and the public at large' carried out for the Commission by EOS GALLUP Europe between May and June 2002.

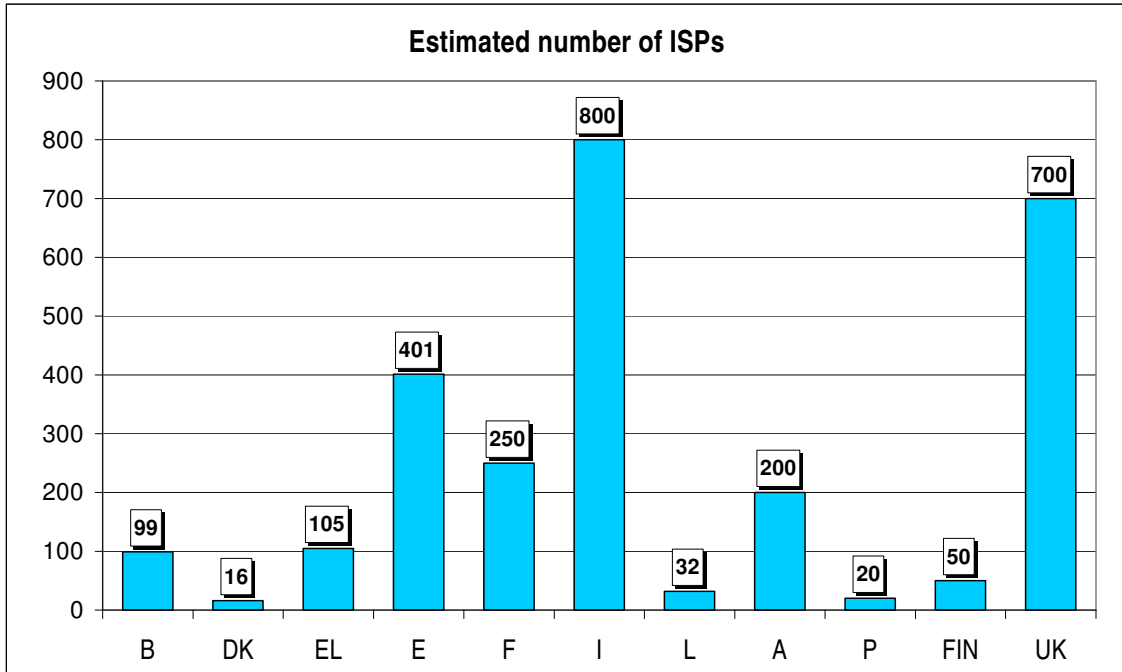
A new survey will be carried out in November 2002 for which data will be available in December 2002.

The data on the number of ISPs and the availability of broadband access have been provided by the national regulatory authorities.

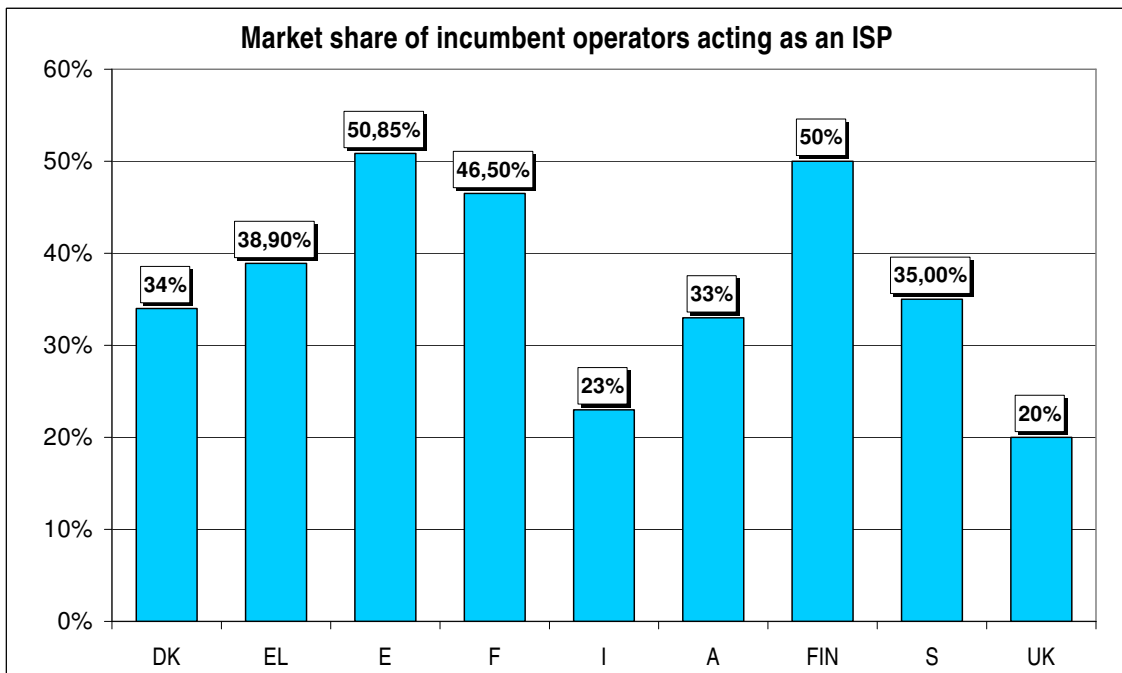
Chart 68



**Chart 69**

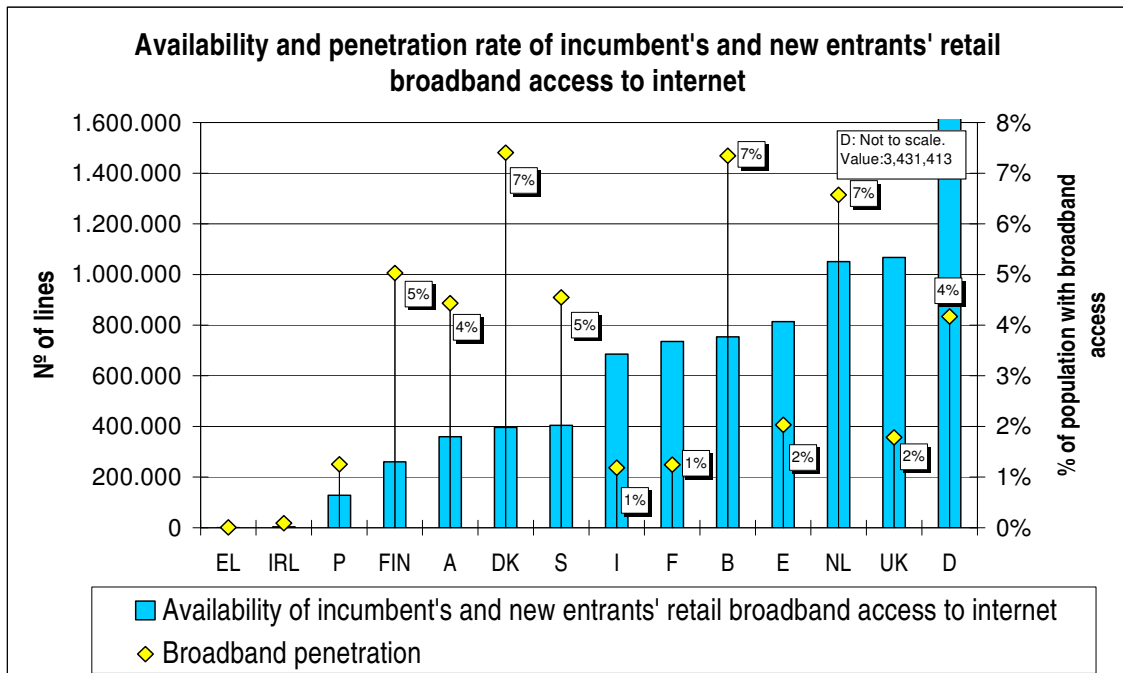


**Chart 70**



- Data for B, D, IRL, L, NL and P are not available.

**Chart 71**



## 6.2. INTERNET ACCESS PRICING

This section deals with the cost of internet usage for residential (20 hours off-peak time usage) and business (40 hours peak time usage of 40 ) through dial-up modems for access.

The figures and information are taken from a study carried out for the European Commission by Total Research Teligen and give the position as at 1 May 2002.

For each profile of usage, the following charts show the lowest prices of dial-up services to ISPs via a standard telephone line in each country. This has required the analysis of the telephony charges in the 15 countries, in addition to the actual ISP charges, in order to find the best overall option for the types of access described by the basket profiles..

The overall summary of the dial-up access information collected covers 92 different providers with 253 packages in the 15 countries.

The criteria for selecting the ISPs were that:

- The top 5 ISPs in each country should be covered;
- Fewer ISPs could be covered as long as the combined market share was at least 80%;
- If the top 5 ISPs had less than 50% of the market, additional ISPs should be covered up to around 80% combined market share.

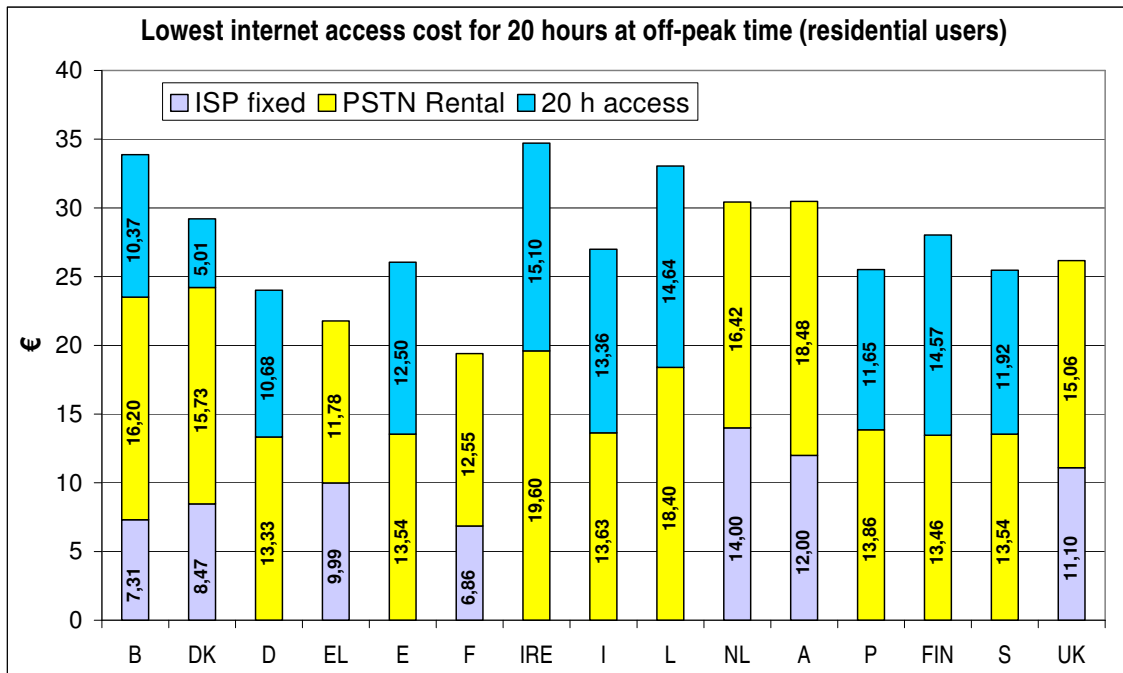
The analysis of dial-up access includes:

- PSTN line rental charges for residential users. Any additional charges related to the selection of the most appropriate tariff package for internet access is also included. This may for example be a telephony charge related to a certain access option;
- PSTN call charges as applicable for internet access, either using the standard local call charges, or charges defined in special internet access tariffs. Additional discounts are also analysed in this context, where they may provide even lower access call charges, for example after a certain period of access time. It should be noted that with many ISP services there are no call charges, or different call charges from the carrier, as determined by the ISP;

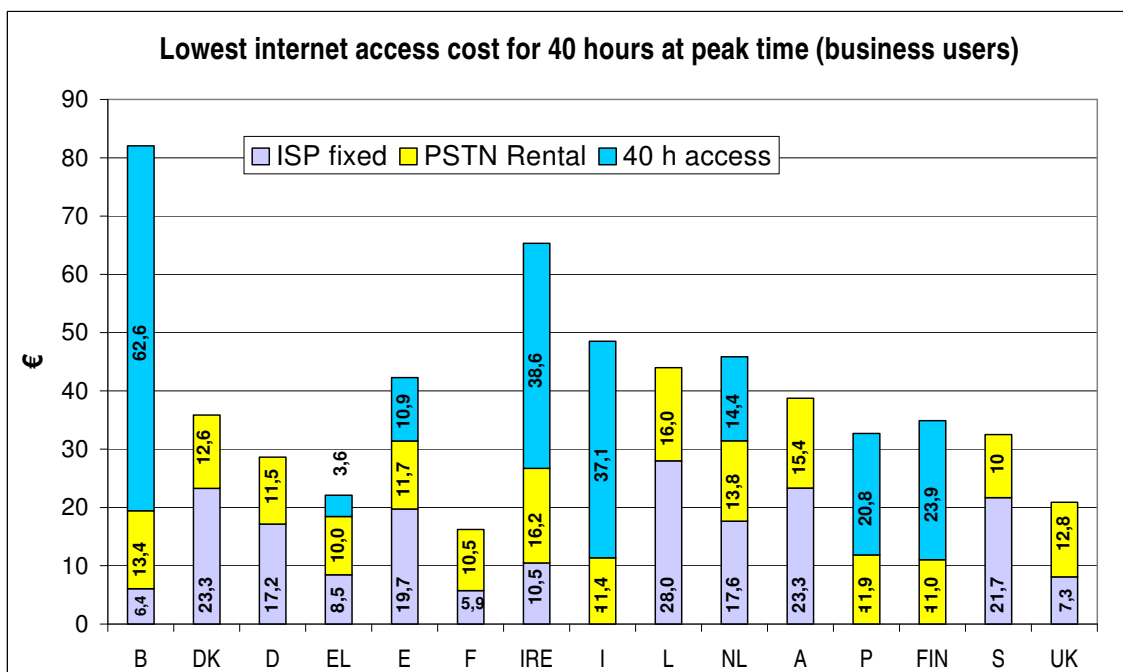
- ISP monthly rental and/or connection charges for each ISP package. Most ISPs identify their packages for use by residential and/or business users;
- ISP charges related to usage. Such charges are normally given on a per hour basis, and are accumulated to the number of hours or minutes of usage per month. Any amount of inclusive time offered with the monthly rental charge is deducted from the actual usage. Many ISP services do not have such charges;

Many operators or ISPs will have special dial up tariffs for internet access, and these have been used where appropriate.

**Chart 72**



**Chart 73**



## **INCUMBENTS' RETAIL TARIFFS FOR PUBLIC FIXED VOICE TELEPHONY**

This section examines the charging system, the line rental charges and the main tariffs for public fixed voice telephony charged by the incumbent operators in each Member State<sup>17</sup> in August 2002. The price trend over the past four years is also analysed.

The incumbent operators still retain a large market share, but new entrants are increasingly gaining market shares by offering cheaper prices for certain types of calls (usually long-distance or international) or destination. The prices charged by incumbents do not necessarily, therefore, represent the lowest prices available. A comparison between the rates charged by incumbents and alternative operators for a sample of countries is shown at the end of this section.

The figures and information are taken from a study carried out for the Commission by Total Research-Total Research Teligen. The data are collected from primary sources (i.e. directly from the incumbent operators).

Different sets of charges for fixed national voice telephony services are shown in the following sections:

- the minimum costs for different types of calls (local, long-distance, international calls and calls towards mobile networks), depending on the charging system adopted;
- the monthly rentals charged by incumbent operators;
- the charges for a composite basket of calls (local, long-distance, international fixed calls and calls to mobile), that gives an estimate of the average monthly spending by a typical "European business/residential user" for the whole range (national and international) of calls;
- the charges for a basket of national calls, that gives an estimate of the average monthly spending by a typical "European business/residential user" for fixed national calls;
- the basket of international calls for each country that indicates the average price of a single call from the originating country to all other OECD destinations. In addition, the price of individual calls to specific destinations are also shown.
- the price of some individual calls (3- and 10-minute local, long-distance and international calls) at peak time, inclusive of any initial charge. Furthermore, for incumbents which apply unit-based charging, the price of a whole unit is calculated.

For the various types of calls, a benchmark based on a comparison with US and Japan is also included. For the USA, the prices for national calls are those charged by Nynex/Bell Atlantic/Verizon (in New York city)<sup>18</sup> and the prices for international calls are those charged by

---

<sup>17</sup> The incumbent operators considered are the following: Belgacom for Belgium, Tele Denmark for Denmark, Deutsche Telekom for Germany, OTE for Greece, Telefonica for Spain, France Telecom for France, Eircom for Ireland, Telecom Italia for Italy, P&T Luxembourg for Luxembourg, KPN for the Netherlands, Telekom Austria for Austria, Portugal Telecom for Portugal, Sonera for Finland, Telia for Sweden, British Telecom for the United Kingdom.

<sup>18</sup> The operator has changed name twice during the past five years. Prices for the same operator may vary depending on the specific user location in the area covered by the local operator. We have taken the prices for New York city.

AT&T. For Japan, the national call prices are those charged by NTT and the international call prices are those charged by KDD.

The euro exchange rate expressed in terms of purchasing power parities (€-PPP) has been applied, in order to compare the retail price level between Member States in real terms, rather than nominal terms (see appendix for more details on € and €-PPP exchange rates). € and €-PPP exchange rates are used, referring to 2002, even for past years, in order to avoid showing changes in exchange rates. Price increases/decreases over time are in nominal rather than real terms (i.e. the effects of inflation are not excluded).

The EU average tariffs shown in the charts are weighted average (by population of the Member States in 1999) rather than simple averages.

## **7.1.CHARGING SYSTEM**

The billing system for public voice telephony services usually comprises two components: an initial charge applied at the beginning of a call and a charge for the remainder of the call (that may not depend on the type of initial charge used).

### **7.1.1. Initial charges**

There are different types of charges applied at the beginning of a call, either alone or in combination. The charging method used for the remainder of the call may not depend on the type of initial charge used. The types of charges are:

Call set-up charge raised at the start of the call (when the call is answered). This charge does not offer any call time.

Initial charge that is used in the same way as call set-up, but in addition includes a certain number of seconds call time before normal time-based charging starts.

Unit charge does in effect work the same way as the initial charge. A full unit is charged at the beginning of the call, providing a certain number of seconds call time until the next unit is charged. Depending on the principle used by the operator (synchronous / asynchronous) the number of seconds call time in the first unit may be less than the specified unit duration.

Minimum charge is normally used with per second billing, to ensure the operator minimum revenue per call. If the call duration is short, the actual call charge may be less than the minimum charge. In such cases the minimum charge will be applied.

### **7.1.2. Charging system during the call**

There are in principle 3 ways of charging calls. The fact that most operators tend to publish the duration charges on a per minute basis does not itself indicate which system is used. The 3 principles are:

Real time charging (also known as per second billing) allows the cost of the call to be calculated to the exact duration of the call (normally nearest second). Call set-up charge, initial charge or minimum charge may be applied to this structure, in addition to the duration charge.

Unit based charging uses a fixed price unit. The duration of this unit will vary with the destination of the call and time of day. Call duration will always be raised to a multiple of whole units, so the user will nearly always pay for more time than is used. Call set-up charge may be applied to this structure, but is relatively rare.

Fixed period charging uses a variable price, but fixed duration unit. The call is normally charged on a per minute basis, or per 6 seconds. The price for the period will vary with destination and time of



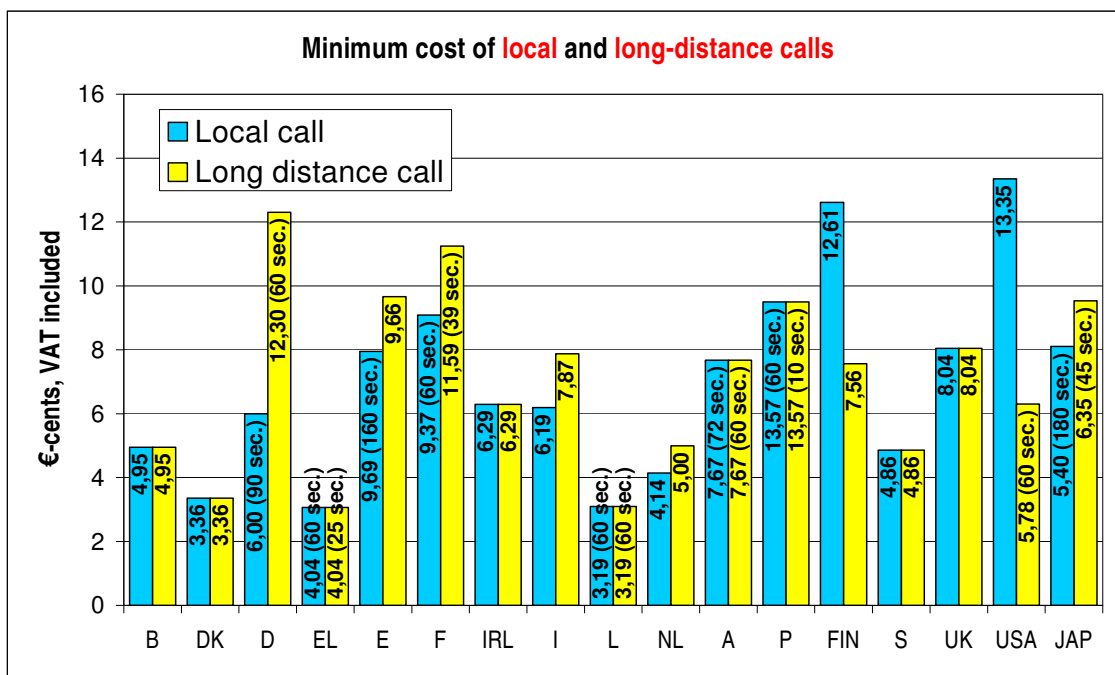
day. The charged duration of the call will be raised to a multiple of whole periods. A call set-up charge or initial charge is often implemented in the form of a higher charge for the first minute or period. This initial charge may vary with destination and time of day.

In August 2001 only the incumbents in Greece, Luxembourg, Austria and Germany (for local and international calls<sup>19</sup>) still use a unit-based charging system. No changes are reported since the situation in August 2001.

Call set-up charges may vary according to the type of call (local, long-distance, international, calls to mobile), and for international calls according to destination. In the case of international calls, the minimum cost of a call may change according to the destination.

The following charts show the minimum cost, due to initial charges, for local, long-distance and international calls and calls to mobile charged by the incumbent operators. The free call time (i.e. the number of seconds of call time before normal time-based charging starts) is shown in brackets. Values are expressed in €-PPP, including VAT. It should be noted that while some operators apply identical set-up charges to local and long-distance calls, the free call times can vary, as is the case in Austria and Portugal.

**Chart 74**



<sup>19</sup> National calls and calls to mobile are charged per minute rather than the normal unit.

Chart 75

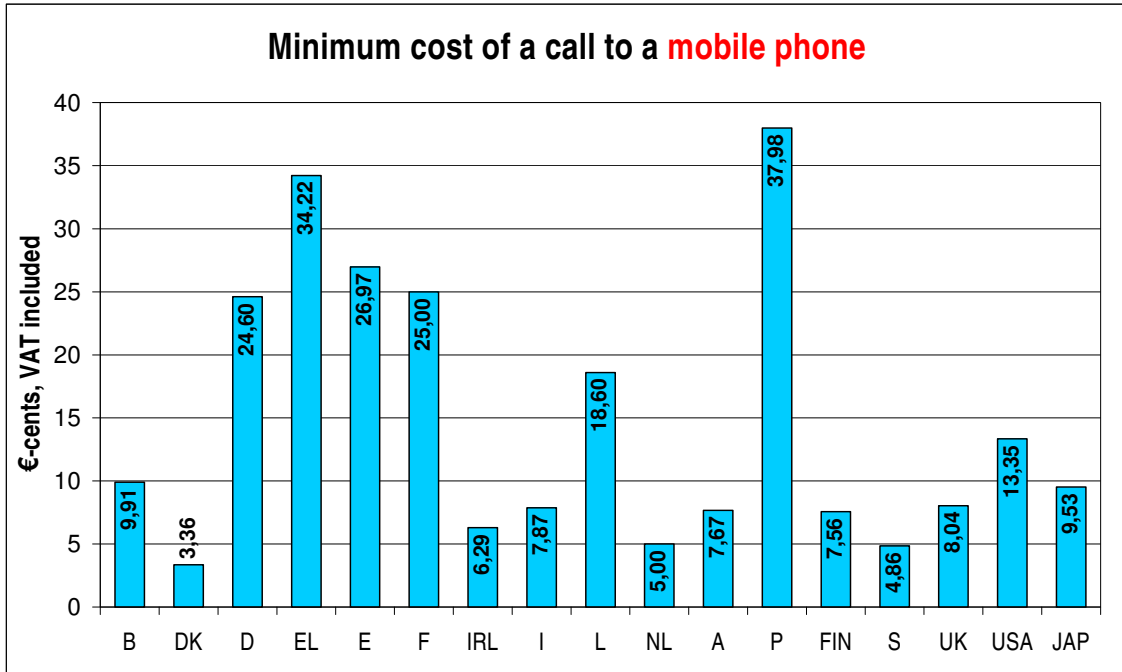
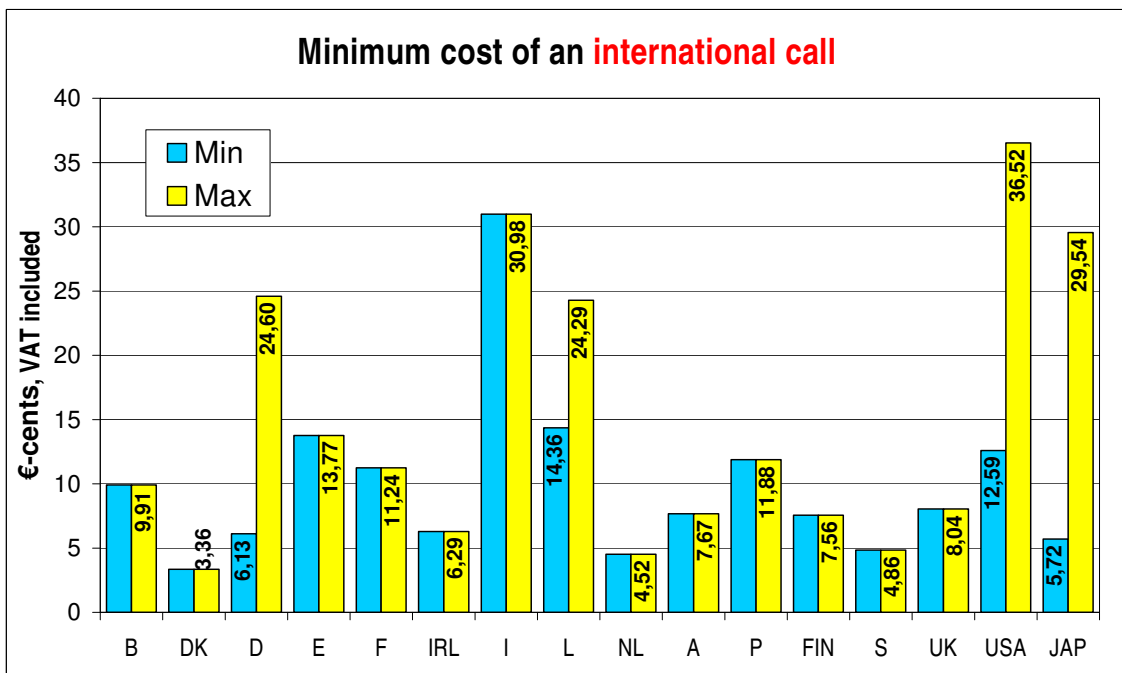


Chart 76



- Data for EL not available

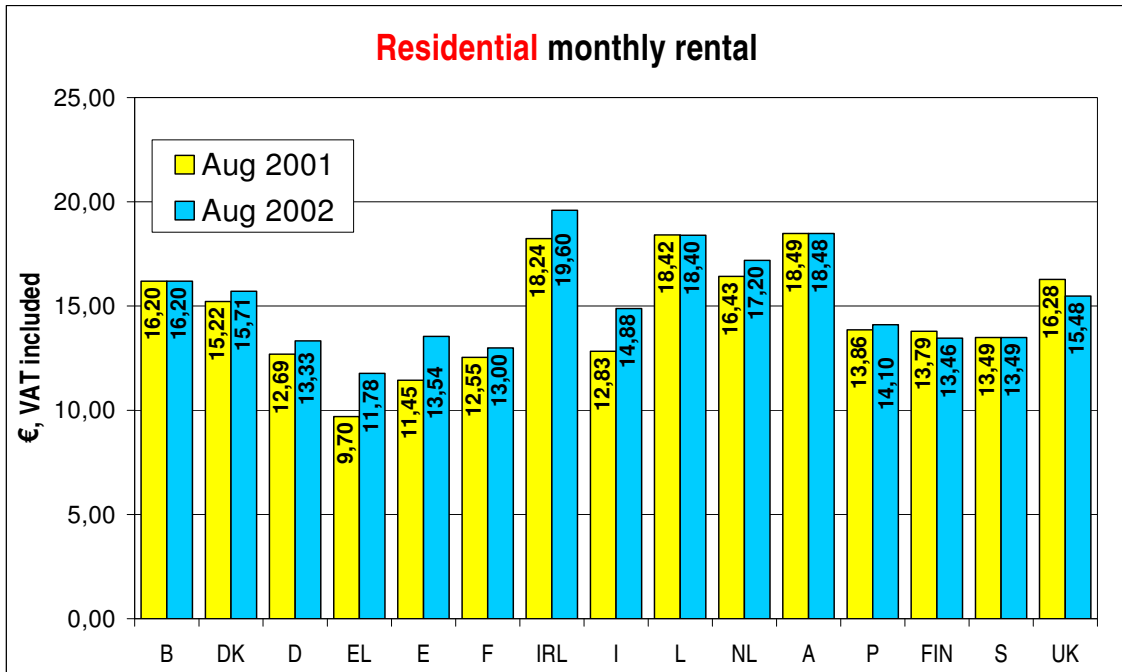
## 7.2. MONTHLY RENTAL CHARGED BY THE INCUMBENT OPERATORS

The following charts show the incumbent's monthly line rental charges for residential and business users in August 2002 and the variation in nominal terms in each country since August 1998. In order to reflect the real charges actually paid by users, values are expressed in €-PPP, including VAT for residential users and excluding VAT for business users.

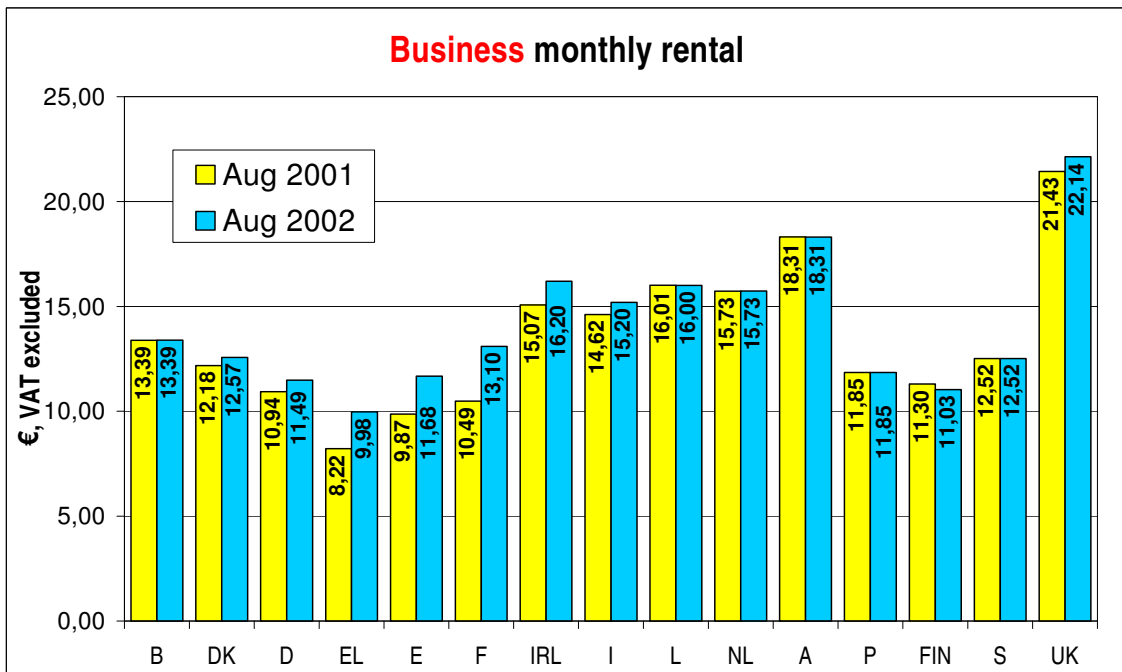
The incumbent operators in Italy, Sweden and the United Kingdom apply different monthly line rental charges for residential and business users. In the Netherlands and Austria two different

packages have been chosen for residential and business users, hence different charges. In the other countries the differences between the types of users are due only to the exclusion of VAT for business users.

**Chart 77**

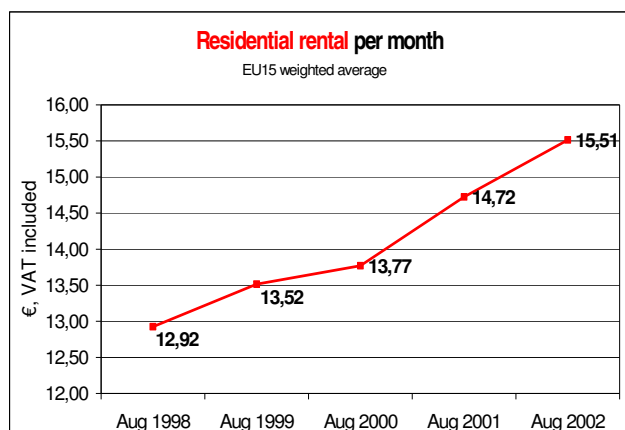


**Chart 78**

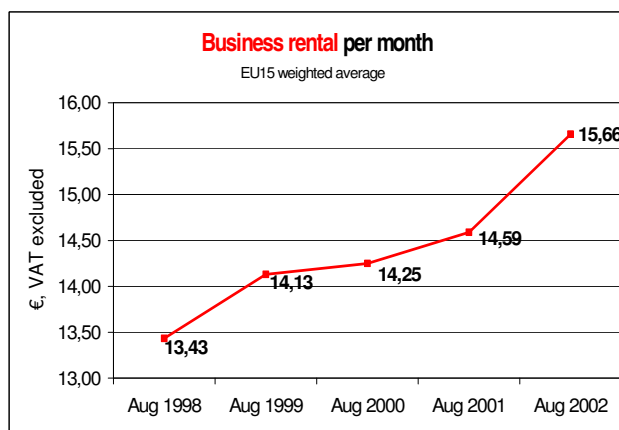


The following charts show the EU weighted average variation in nominal terms of the residential and business monthly line rental charge.

**Chart 79**



**Chart 80**



### 7.3.AVERAGE MONTHLY EXPENDITURE (composite call basket)

The figures presented in this section are intended to provide an estimate of the average monthly expenditure of a “standard” European consumer (business and residential). The Basket Methodology for Telecommunications Cost Comparison has been devised by the OECD and accepted in most countries as the most stable and neutral method of comparison<sup>20</sup>.

The user is assumed to have a contract for the provision of voice telephony services with the incumbent operator, and to use only this operator for all types of calls (local, long-distance, international, calls to mobile). Since consumers are making increasing use of call-by-call carrier selection, in particular for specific highly discounted types of calls (i.e. international and long-distance), the figures given below are purely indicative, and do not necessarily reflect the cheapest solution available.

The charts below show the average monthly expenditure for standard residential and business users as of August 2002, expressed in €-PPP, based on the standard tariffs charged by the incumbent operators (i.e. excluding any discount packages). This means that lower costs can be achieved if the user subscribes to one or more discounted packages.

The basket of calls used to estimate average monthly expenditure is the new “composite OECD basket”<sup>21</sup>, which includes not only fixed national calls (as did the old basket), but also fixed international calls and calls to mobile networks.

The OECD residential/business baskets are defined as follows (on an annual basis):

The fixed (i.e. non-recurring) charges include the annual line rental charge plus the charge for the installation of a new line (depreciated over 5 years). Fixed charges for residential users include VAT, while for business users VAT is excluded.

The usage charge for residential users refers to a basket of 1.200 national calls to fixed lines, plus 120 calls (with an average duration of 2 minutes) to mobile networks<sup>22</sup>, plus 72 international calls<sup>23</sup>. The usage charges for national calls to fixed lines are calculated with a weighted distribution<sup>24</sup> over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during

<sup>20</sup> A full description of the methodology can be found in “Performance indicators for public telecommunications operators”, ICCP Series No.2.2, OECD 1990.

<sup>21</sup> The revised OECD baskets were adopted in May 2000.

<sup>22</sup> Representing 10% of the number of calls to fixed lines.

<sup>23</sup> Representing 6% of the number of calls to fixed lines.

<sup>24</sup> A full description of the revision to the baskets and the weighted distribution (distances, time and day points and call duration) can be found in the document ‘OECD Telecommunications Basket definitions’, June 2000, available at <http://www.oecd.org/pdf/M00005000/M00005340.pdf>

the weekend). The call duration varies from 2.5 to 7 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. Only 36% of the calls are within normal business hours; 64% are for distances below 10 km; 9% are for distances above 100 km.

The usage charge for business users refers to a basket of 3 600 national calls to fixed lines plus 360 calls (with an average call duration of 2 minutes) to mobile networks<sup>22</sup>, plus 216 international calls<sup>23</sup>. The usage charges for national calls to fixed lines are calculated with a weighted distribution<sup>24</sup> over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend), and with a call duration of 3.5 minutes regardless of time of day and distance. The usage for business users is weighted towards business hours, and with typically short calls. Over 86% of the calls are within normal business hours; 64% are for distances below 10km; 12.5% are for distances above 100 km.

It is important to note that the exact figures are not directly comparable with those published in the Seventh report, due to differences in PPP values. The value of the baskets in August 2001, according to 2002 PPP, are those shown in the following charts.

**Chart 81**

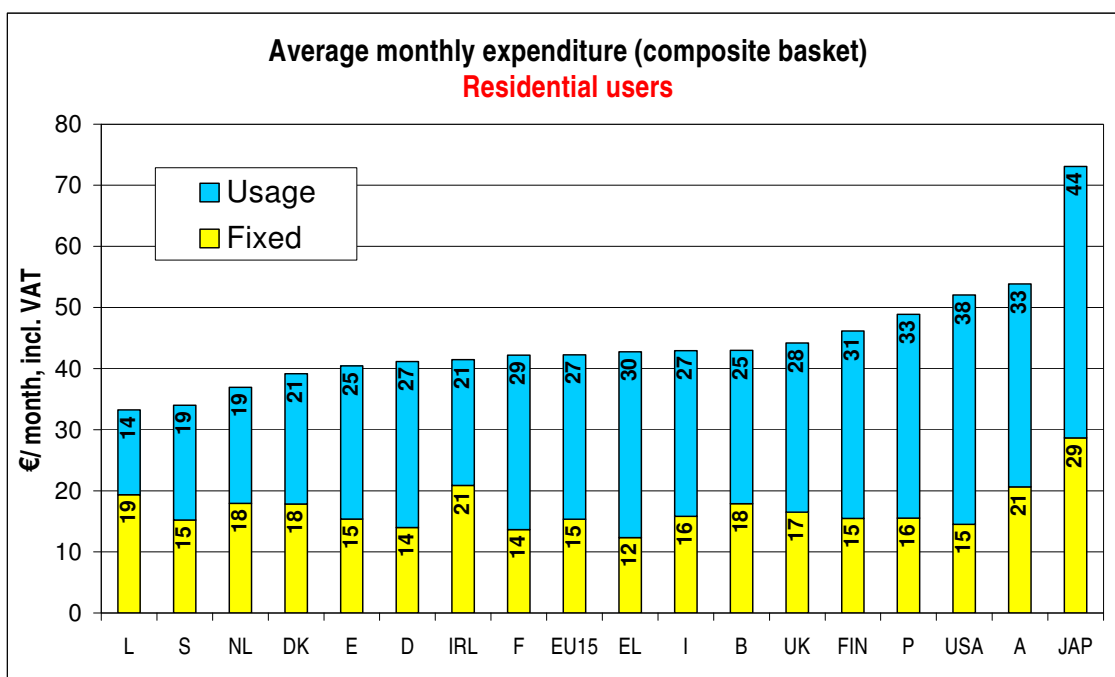
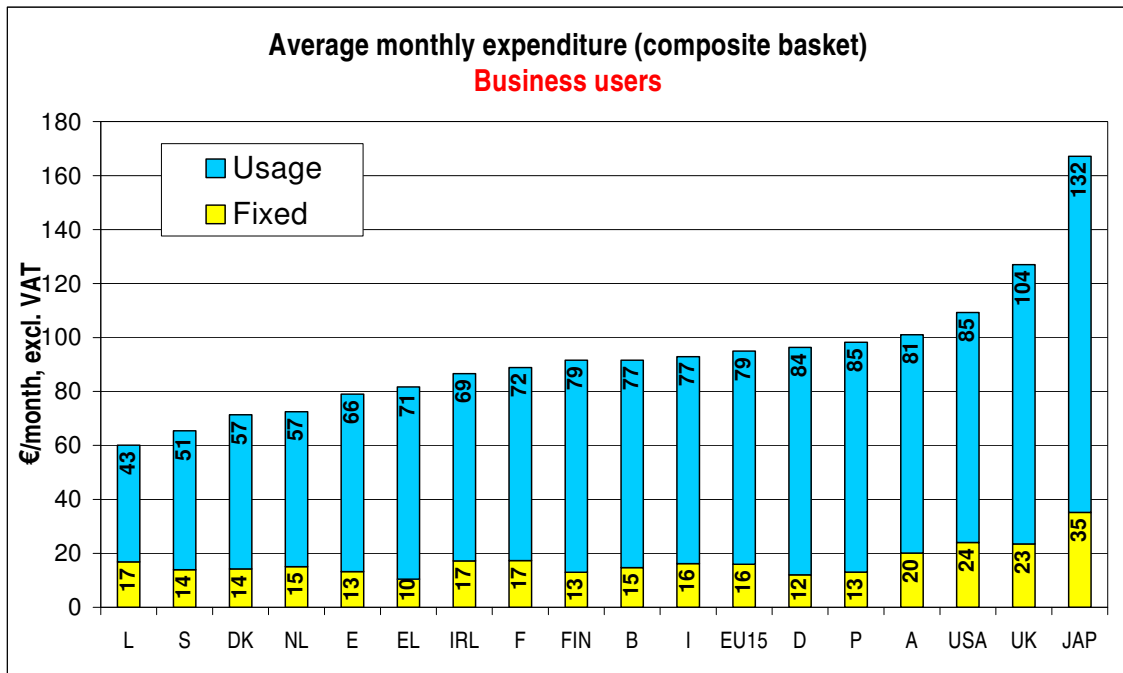


Chart 82



## 7.4. FIXED NATIONAL CALLS

### 7.4.1. Prices charged by the incumbent operators for individual fixed national calls

This section shows the prices charged by the incumbent operators for individual fixed calls (the same call prices apply to business and residential users). Where the incumbent operator uses a unit-based charging system, the price of calls of different duration and/or distances may in some cases be identical, where both calls are charged the same number of units. Any call set-up charges, minimum charges and/or call specific duration allowances have been taken into account.

Prices refer to peak hours (weekdays 11.00) and are expressed in €-PPP including VAT. Except where otherwise specified, the figures refer to August 2002.

Prices are indicated for three-minute and 10-minute calls over two distances: 3 km (equivalent to a local call) and 200 km (equivalent to a national call). In several countries the tariff changes at exactly one of these distances: in these cases, the rates for the lower distance band are used.

The price of a three-minute call is more affected by the magnitude of the call set-up charge than the price of a 10-minute call.

Where different tariff packages exist (Austria and the Netherlands), the basic, residential package is selected. Otherwise the standard tariff is used. No discount packages are taken into account.

The EU average value is the average of the EU countries weighted according to population in 1999.

Chart 83

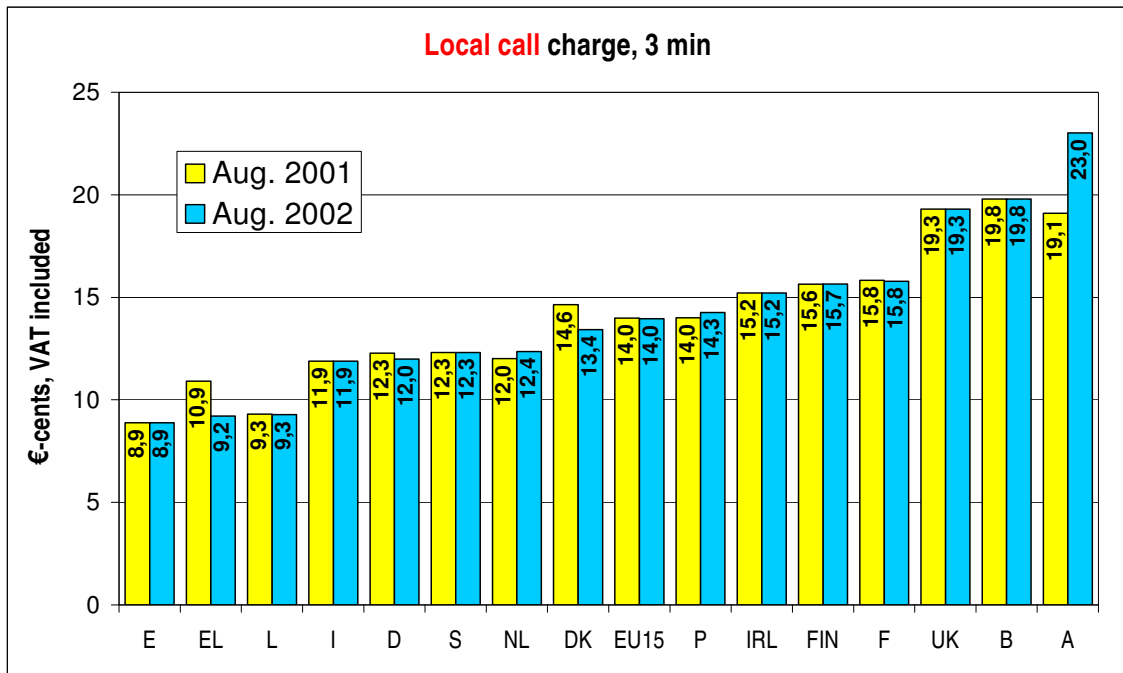


Chart 84

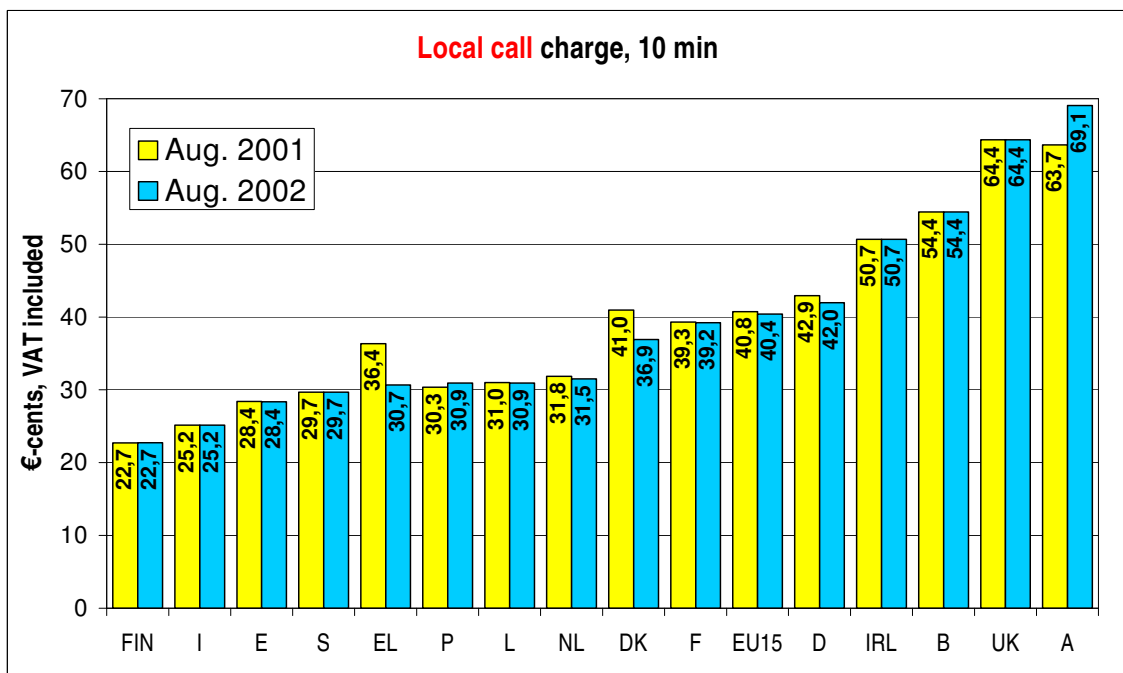


Chart 85

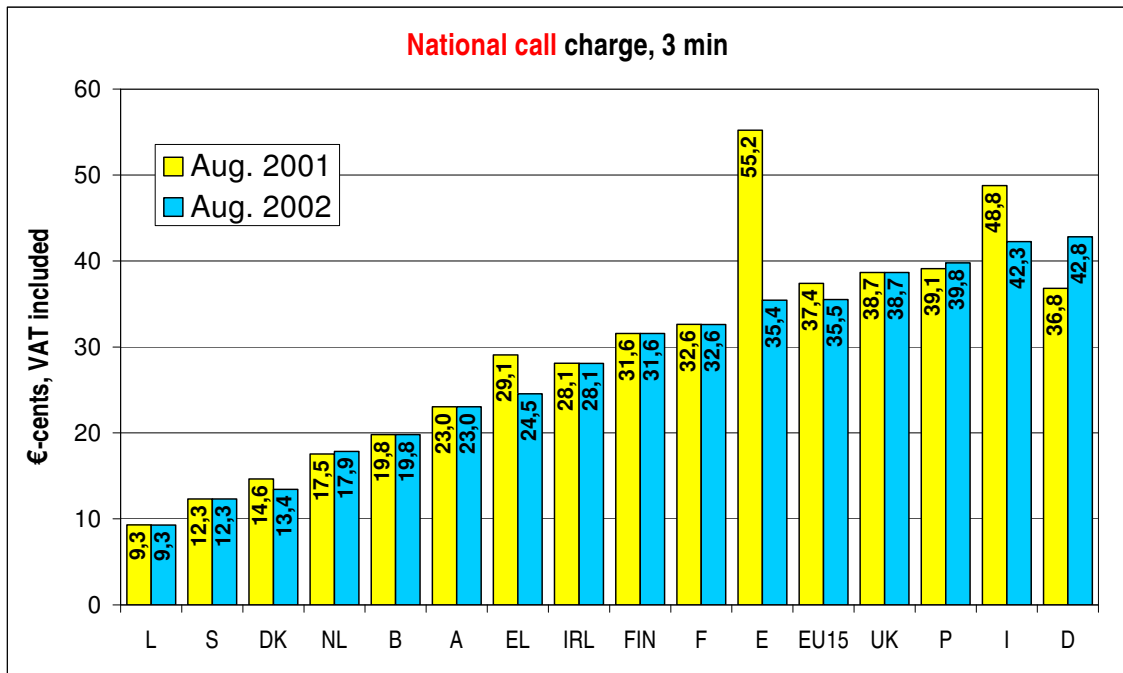
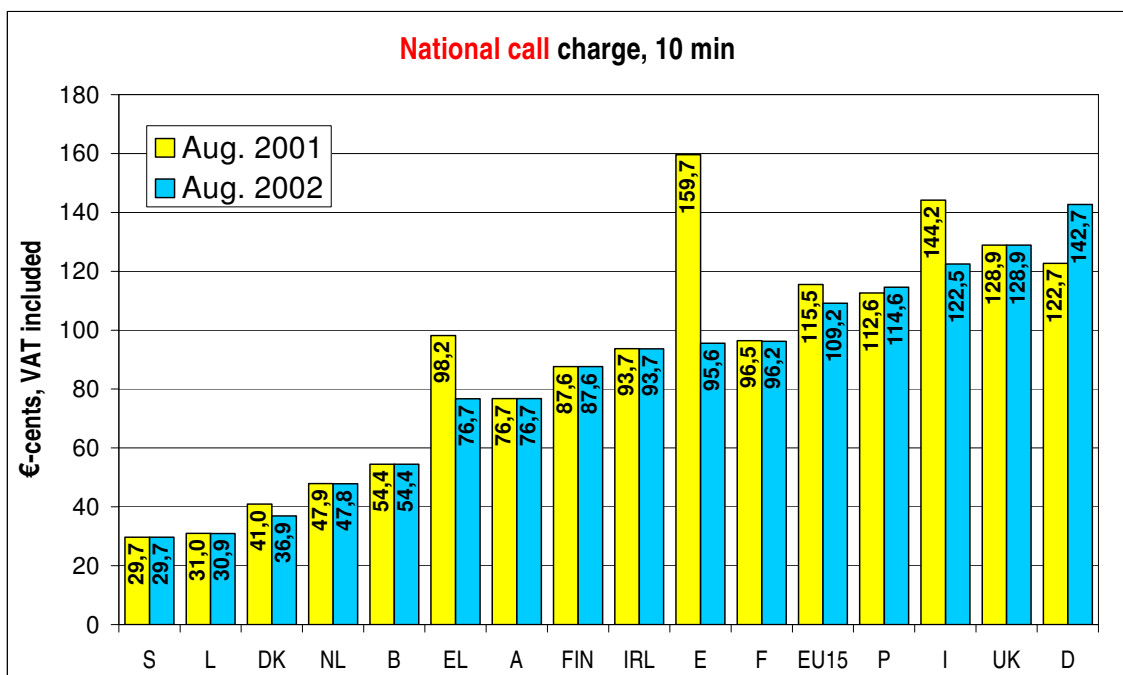
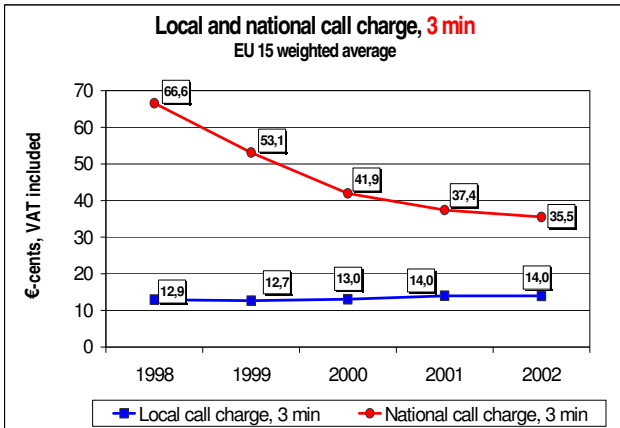


Chart 86

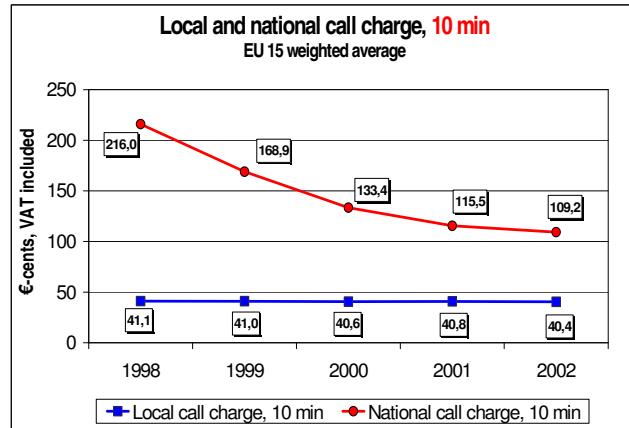




**Chart87**



**Chart88**

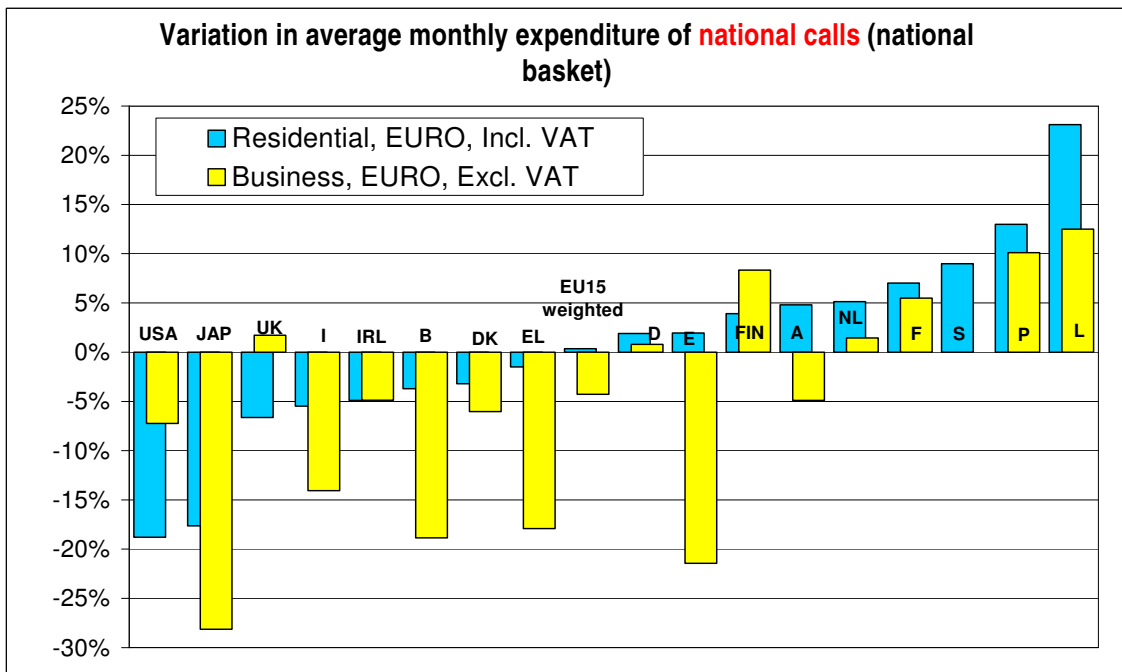


**7.5.TREND OF THE BASKET FOR FIXED NATIONAL CALLS (NATIONAL BASKET)**

The following charts show the variation of the monthly expenditure of residential and business users on fixed national calls between August 2000 and 2002 (in order to maintain consistency over time, the “old” OECD basket<sup>25</sup> is used, which, unlike the “composite”, does not include international calls).

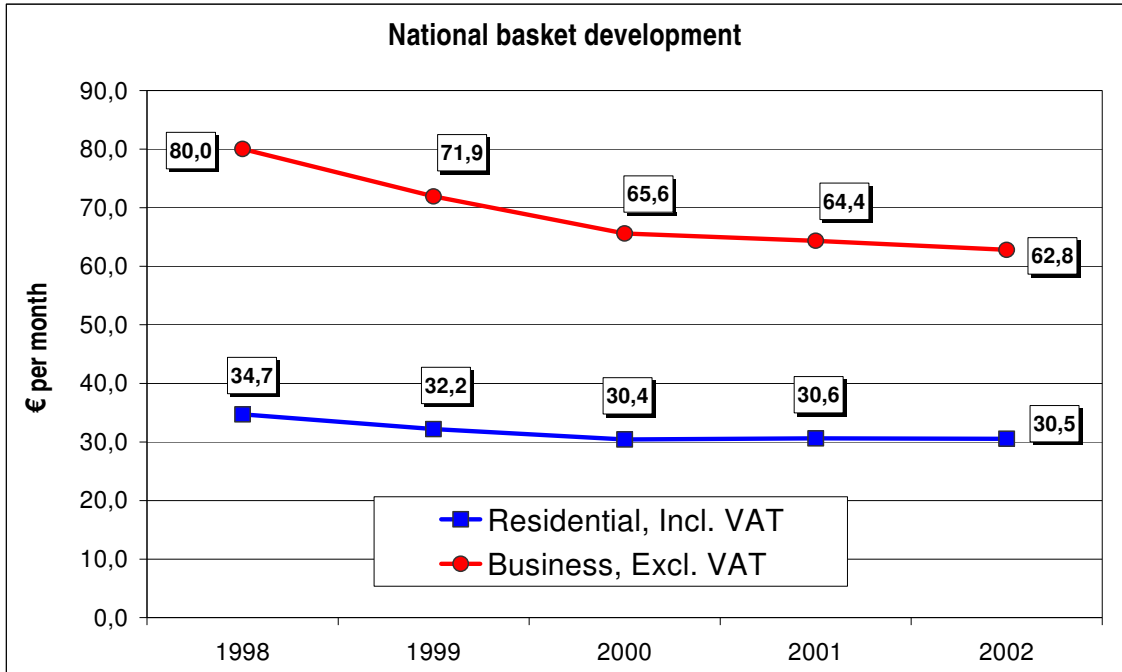
The variation in the international basket is shown in section 7.

**Chart 89**



<sup>25</sup> A full description of the methodology can be found in “Performance indicators for public telecommunications operators”, ICCP Series No.2.2, OECD 1990.

Chart 90



### 7.6.ALTERNATIVE NATIONAL OPERATORS

This section compares the prices charged for public voice telephony services by the incumbent operators in a sample of EU Member States and by the biggest competitor in each Member State.

Chart 91

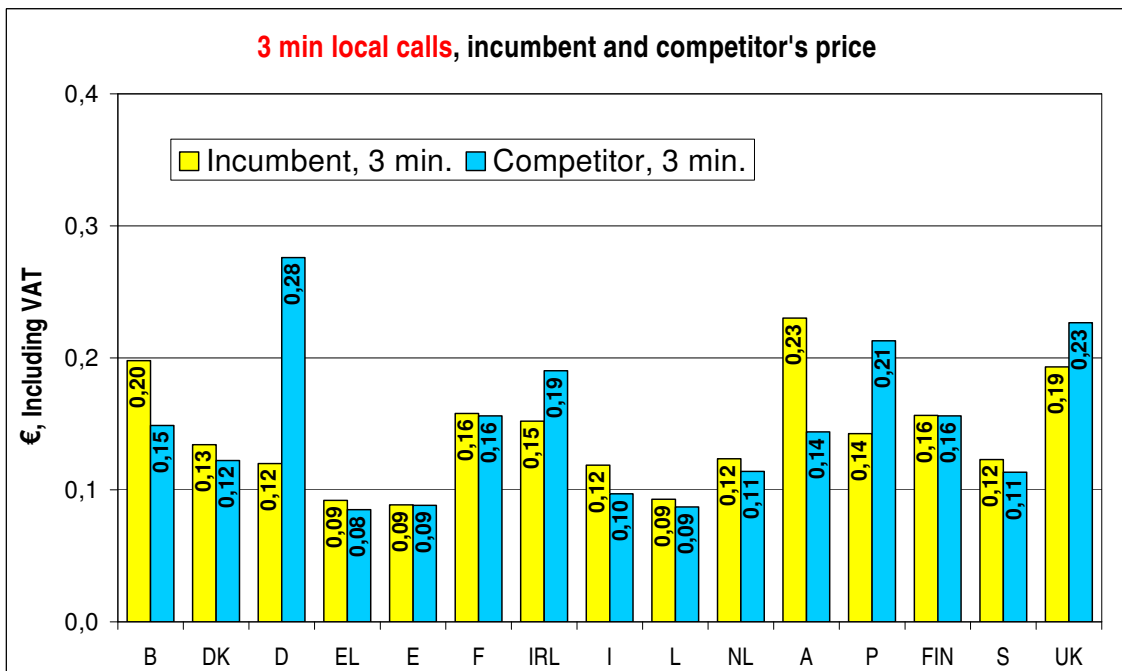


Chart 92

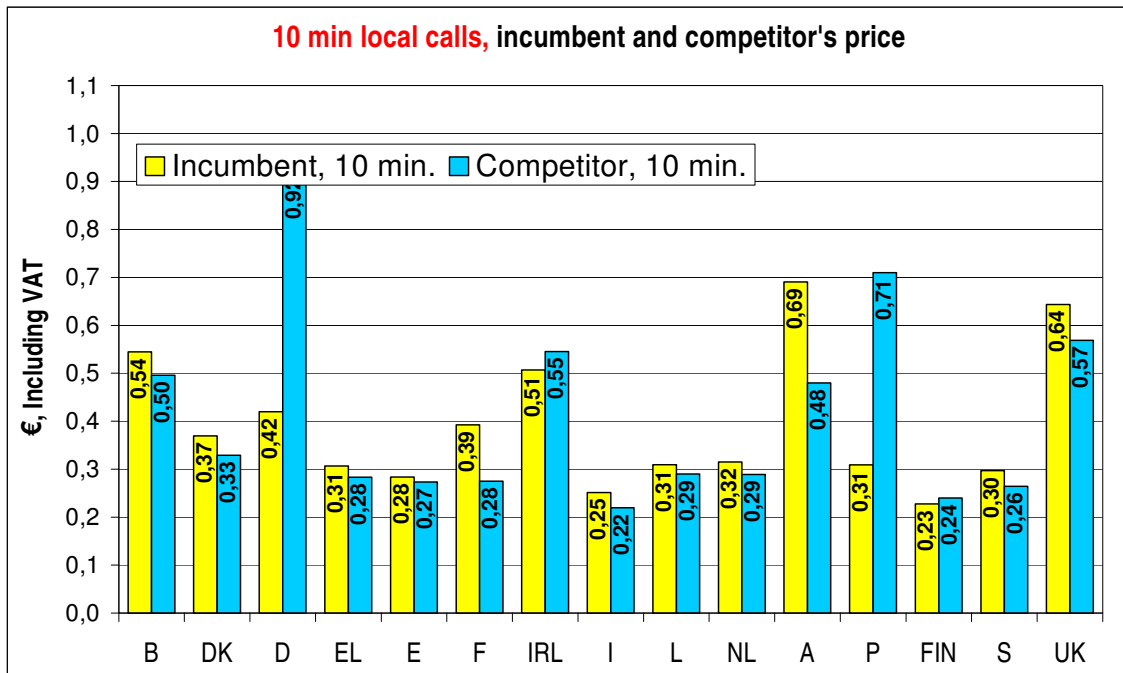


Chart 93

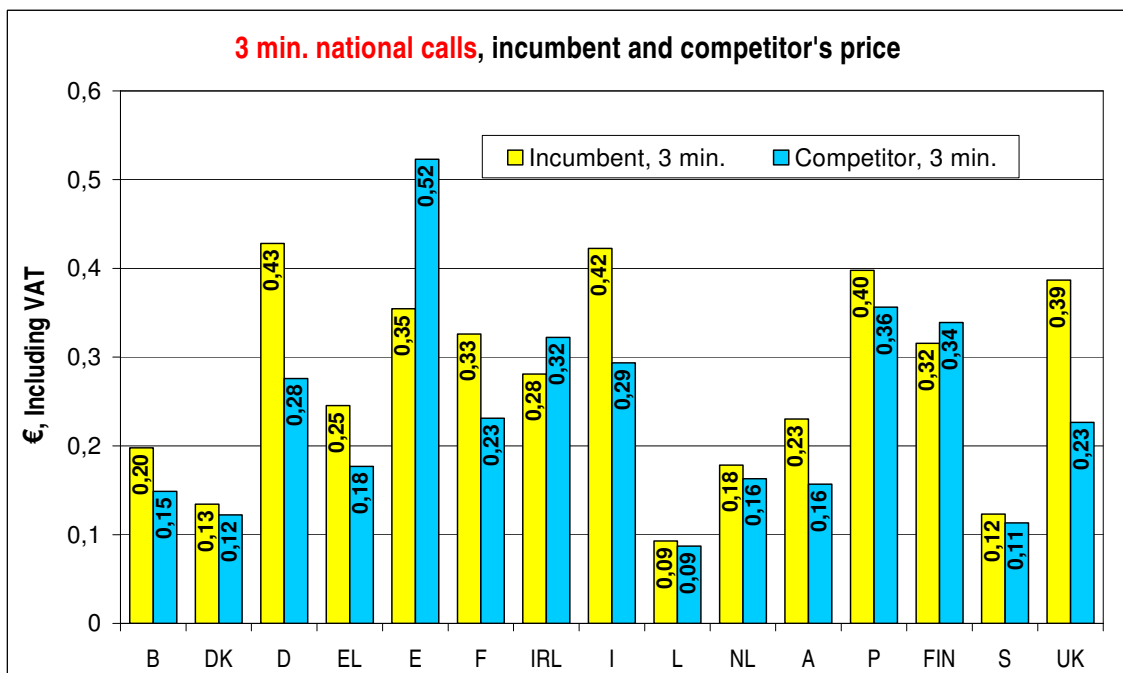
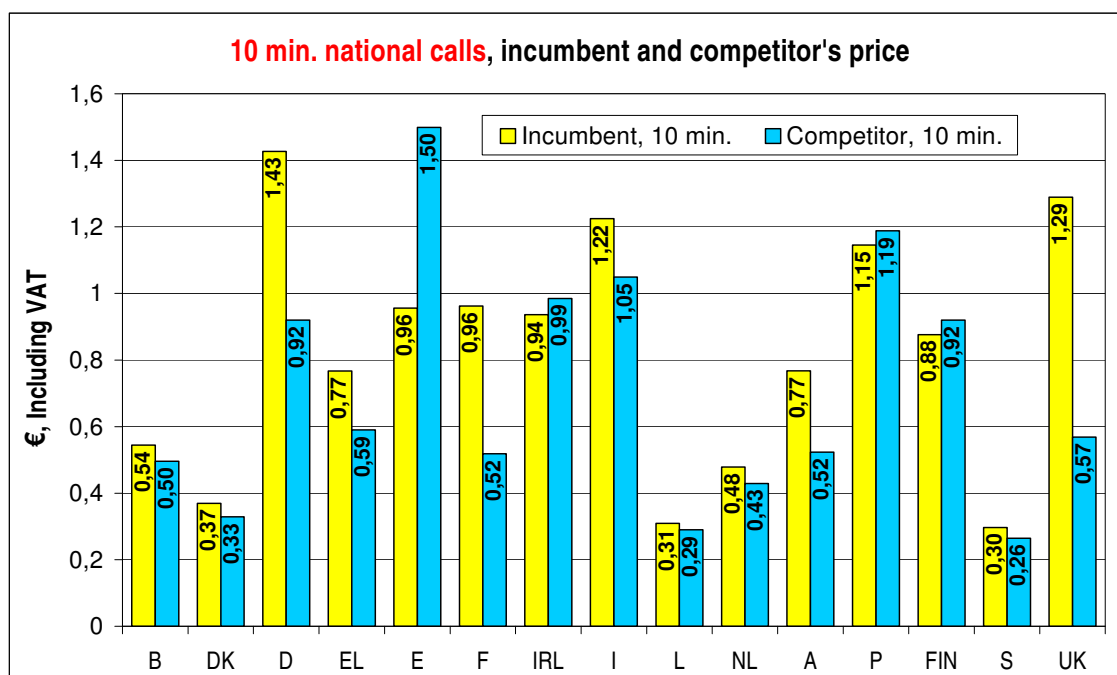


Chart 94



## FIXED INTERNATIONAL CALLS

The following charts show the prices of the international call basket (an estimate of the average cost of an international call in each country) and the actual price of a 10-minute call to specified destinations (within Europe, to Japan and to the USA).

### 7.7. PRICE OF AN AVERAGE FIXED INTERNATIONAL CALL (international call basket)

The basket of international calls for each country provides an estimate of the average cost of an international call.

For the basket comparison of international PSTN call charges, the OECD Traffic weight basket methodology is used. The basket<sup>26</sup> calculates **an average charge** for calls to all OECD destination countries.

The residential basket includes VAT. Call charges are weighted between peak and off-peak hours: 25% for peak hours and 75% for off-peak hours. The business basket excludes VAT. Call charges are weighted 75% for peak hours and 25% for off-peak hours. The average price of an international call is lower for business users than for residential users because of the heavier weighting given to three-minute peak-hour calls, which are on average cheaper than five-minute off-peak calls, and because VAT is excluded for business users but included for residential users.

International call charges vary widely with the destination, and the basket results are based on a weighted average call charge. Traffic weighting is used, as defined by the OECD for the destination weighting, as per the revision in 2000. This method applies a weight to each destination based on the traffic volumes reported on that route (ITU statistics).

The EU average value is the average of the EU countries weighted according to population in 1999.

<sup>26</sup> A full description of the revision to the baskets and the weighted distribution (distances, time and day points and call duration) can be found in the document 'OECD Telecommunications Basket definitions', June 2000, available at <http://www.oecd.org/pdf/M00005000/M00005340.pdf>

Chart 95

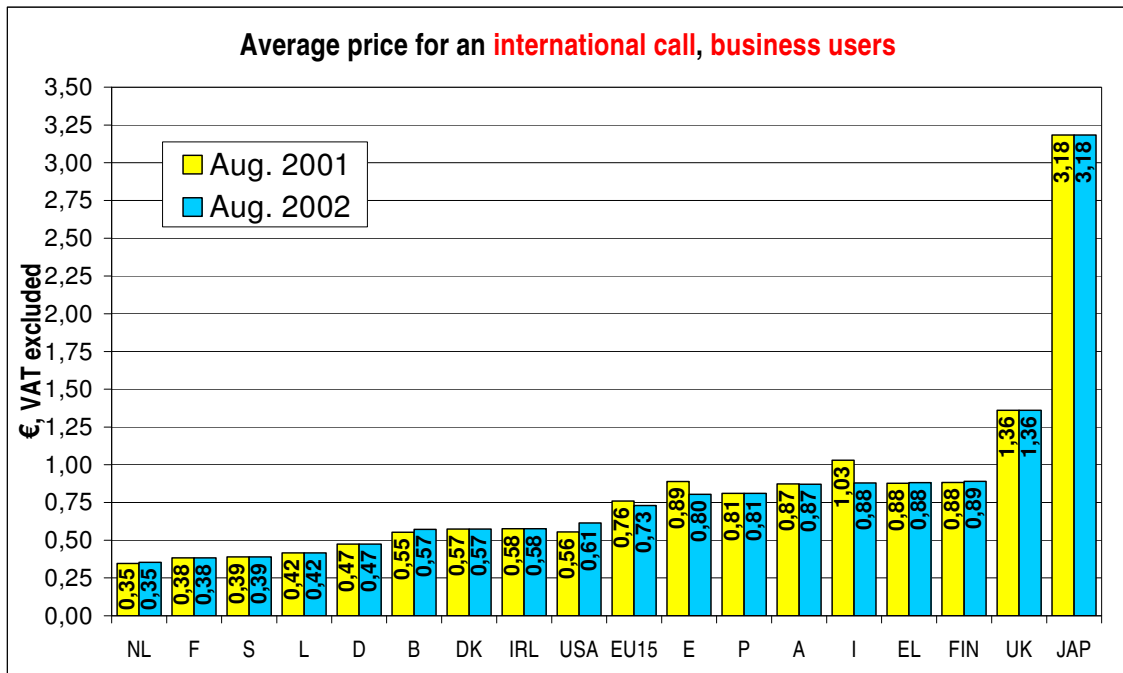


Chart 96

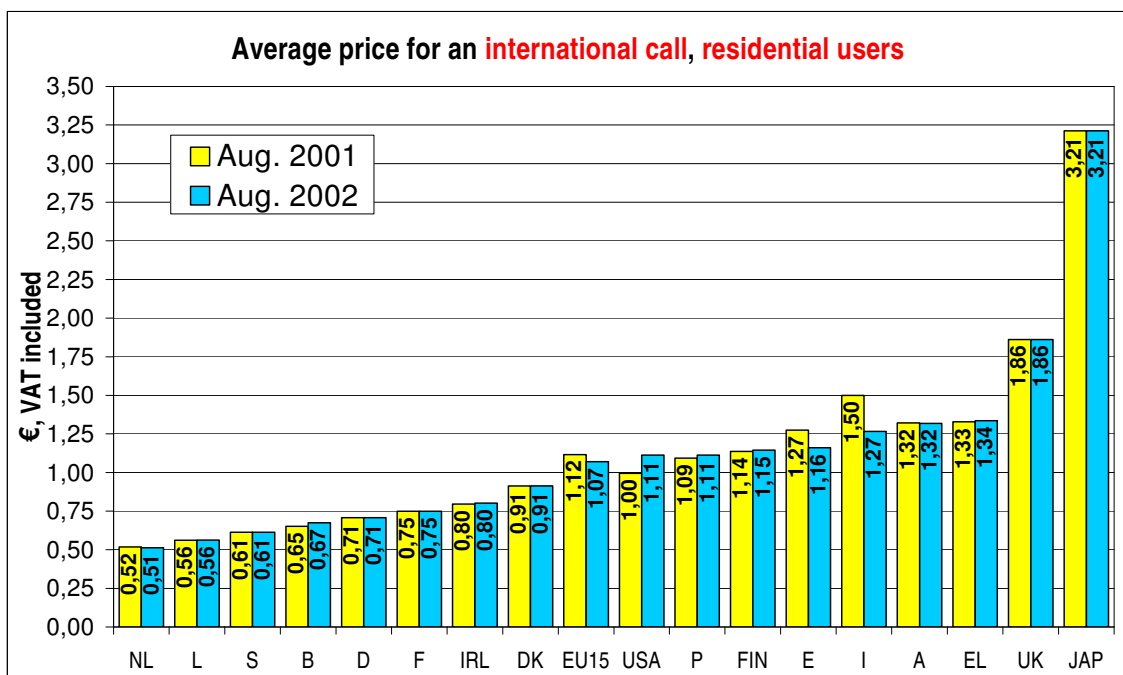
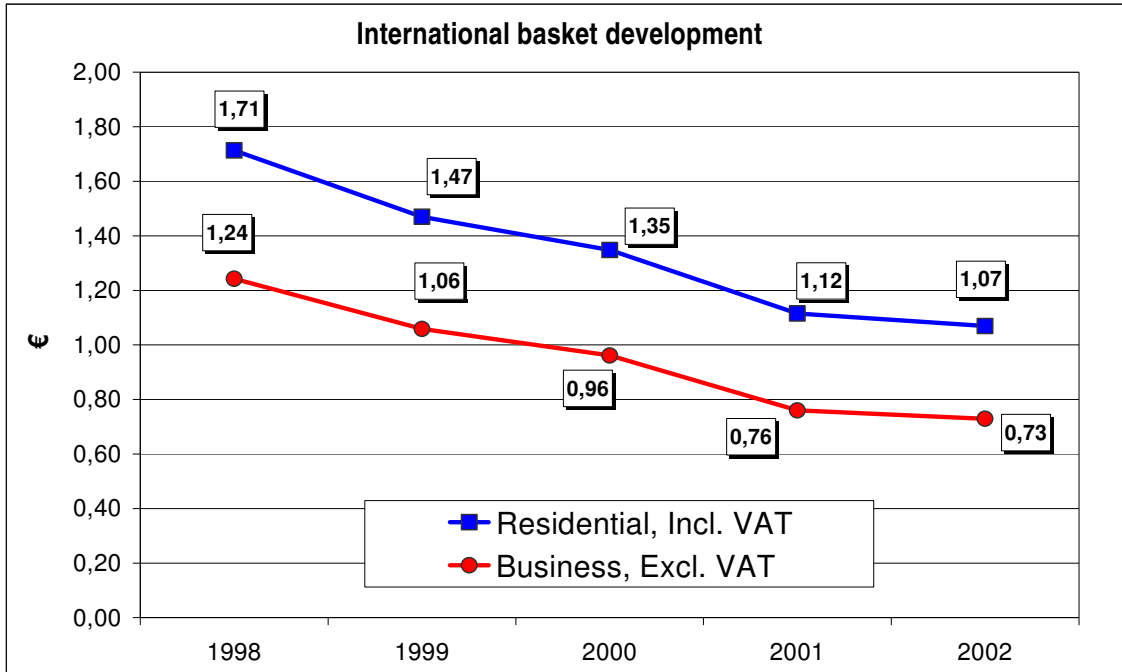


Chart 97



### 7.8.PRICE OF CALLS TO EU, JAPAN, USA

The following two charts show the prices of a 10-minute international call (including VAT) during peak hours (weekday 11.00) to four different destinations: neighbouring country<sup>27</sup> (near EU), more distant country<sup>28</sup> (far EU), Japan and the USA.

Figures are expressed in €-PPP at August 2002 values, including VAT, and they refer to the European incumbent operators and the EU weighted average.

<sup>27</sup> The neighbouring countries are defined as: France for Belgium (and *vice-versa*);, Germany and the United Kingdom; Sweden for Denmark and Finland; Italy for Greece (and *vice-versa*); Portugal for Spain (and *vice-versa*); the United Kingdom for Ireland, the USA and Japan; Germany for Luxembourg, the Netherlands and Austria.

<sup>28</sup> The more distant countries are defined as: Greece for Belgium, Denmark, Germany, France, Ireland, Luxembourg, the Netherlands, Austria, Finland, Sweden, the United Kingdom, the USA and Japan; Denmark for Greece, Spain, Italy and Portugal.

Chart 98

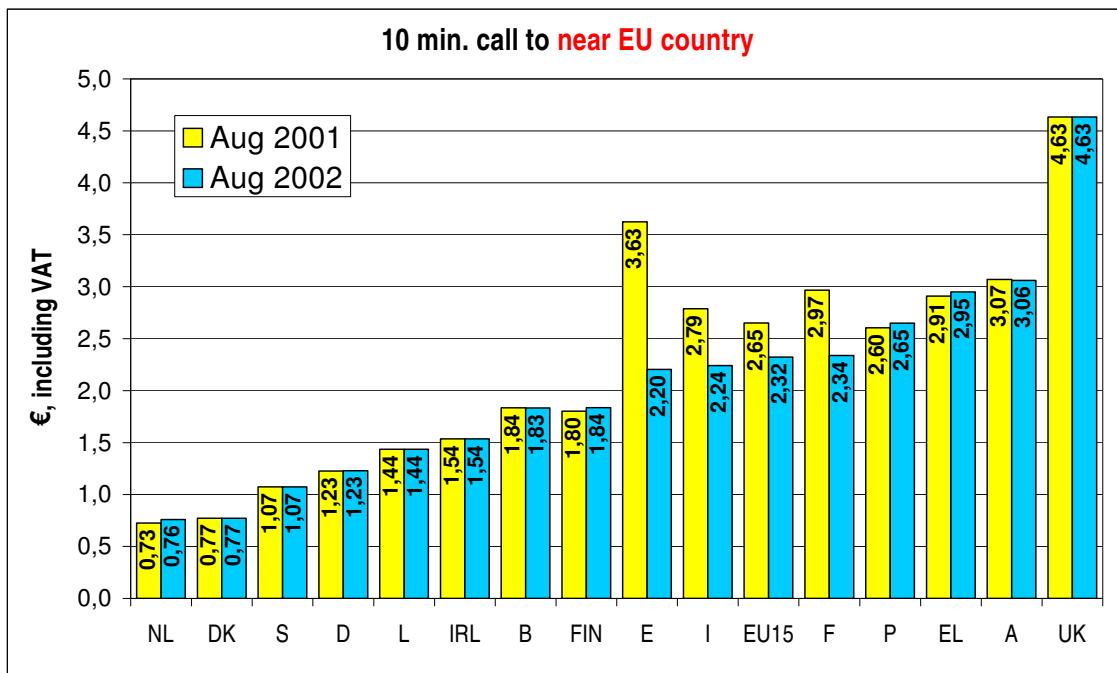
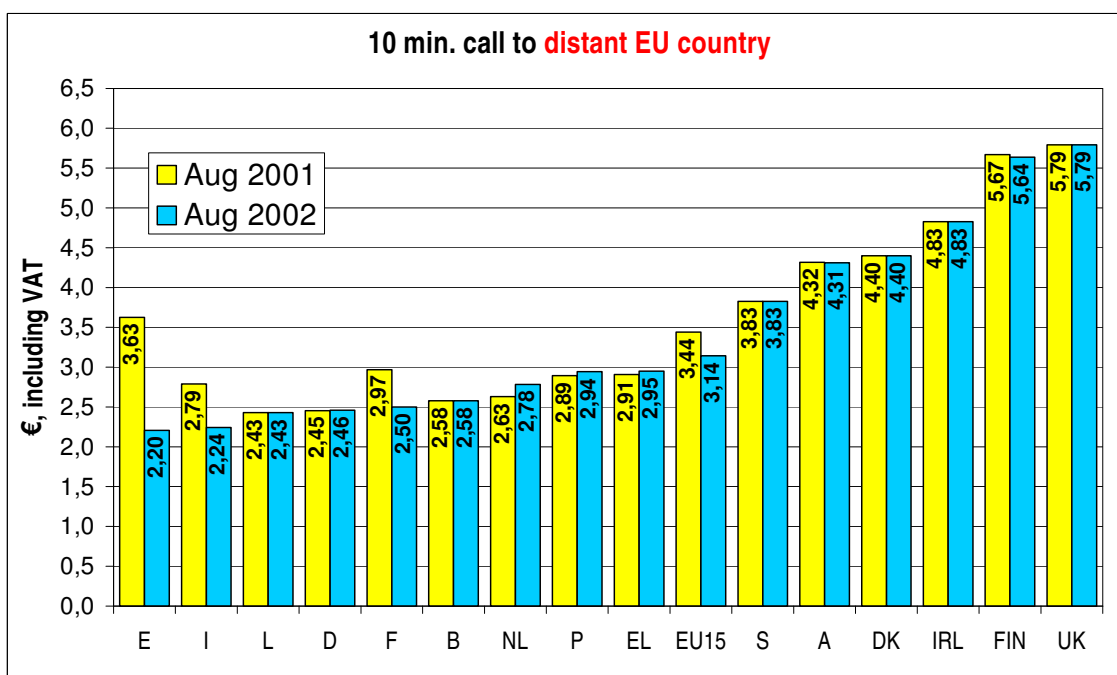
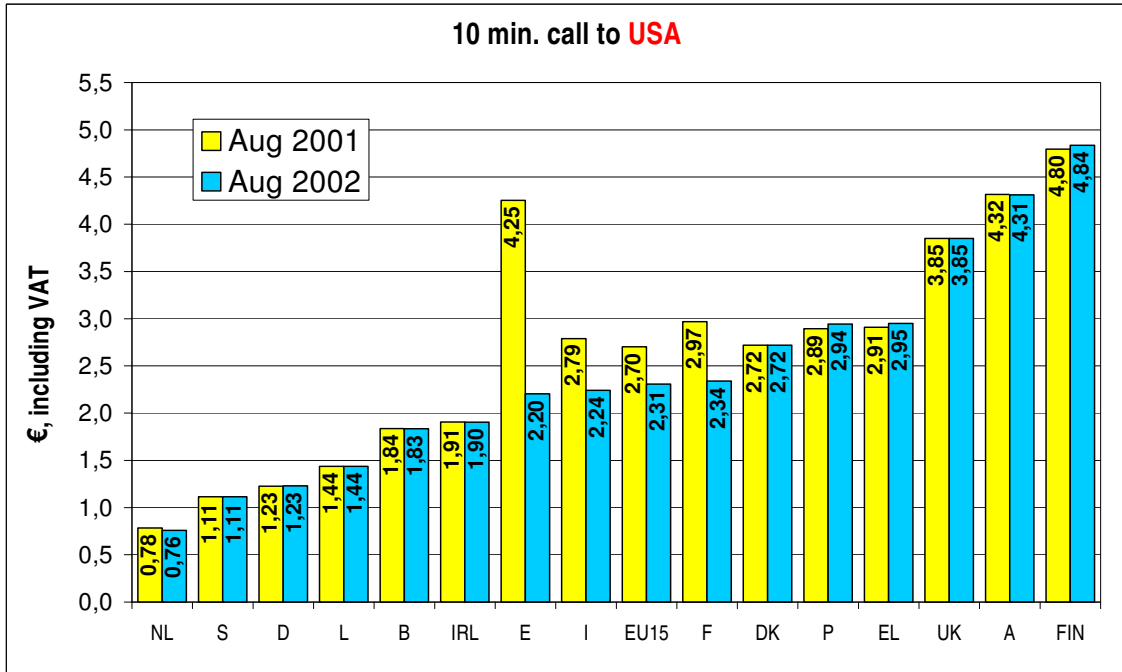


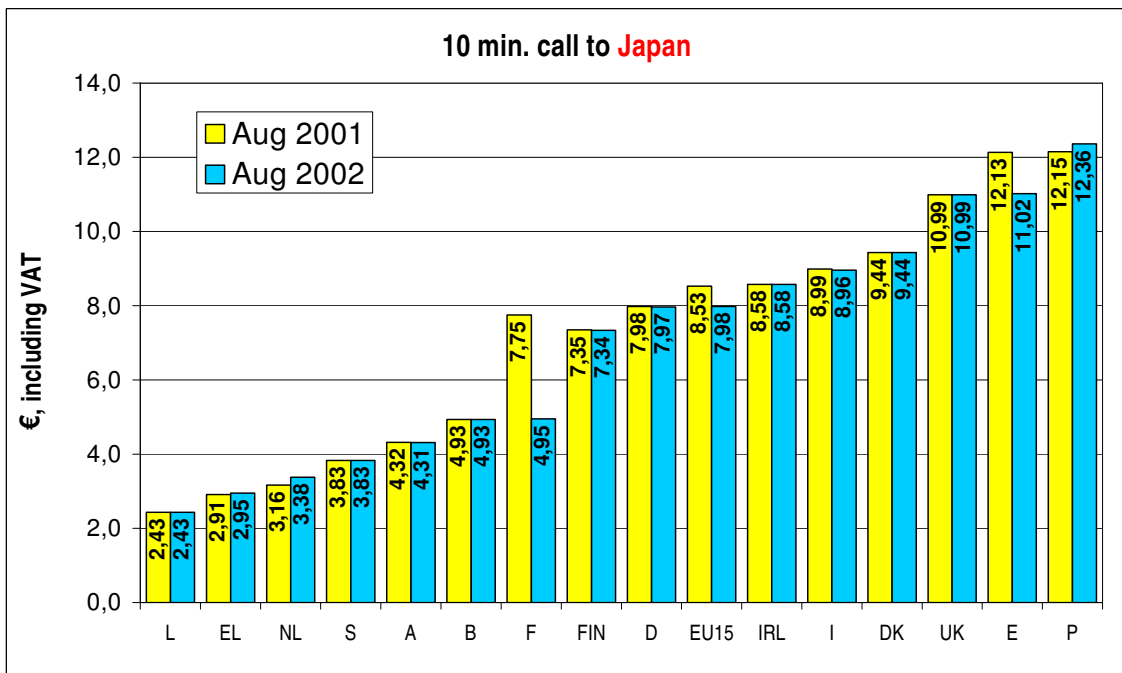
Chart 99



**Chart 100**



**Chart 101**



**7.9.ALTERNATIVE INTERNATIONAL OPERATORS**

The equivalent prices for competitor providers in the EU countries are shown in the charts below. One competitor per country has been analysed. The prices are shown for a 10 minute call, at peak time weekdays.

Prices include VAT and are applicable for August 2002.



Chart 102

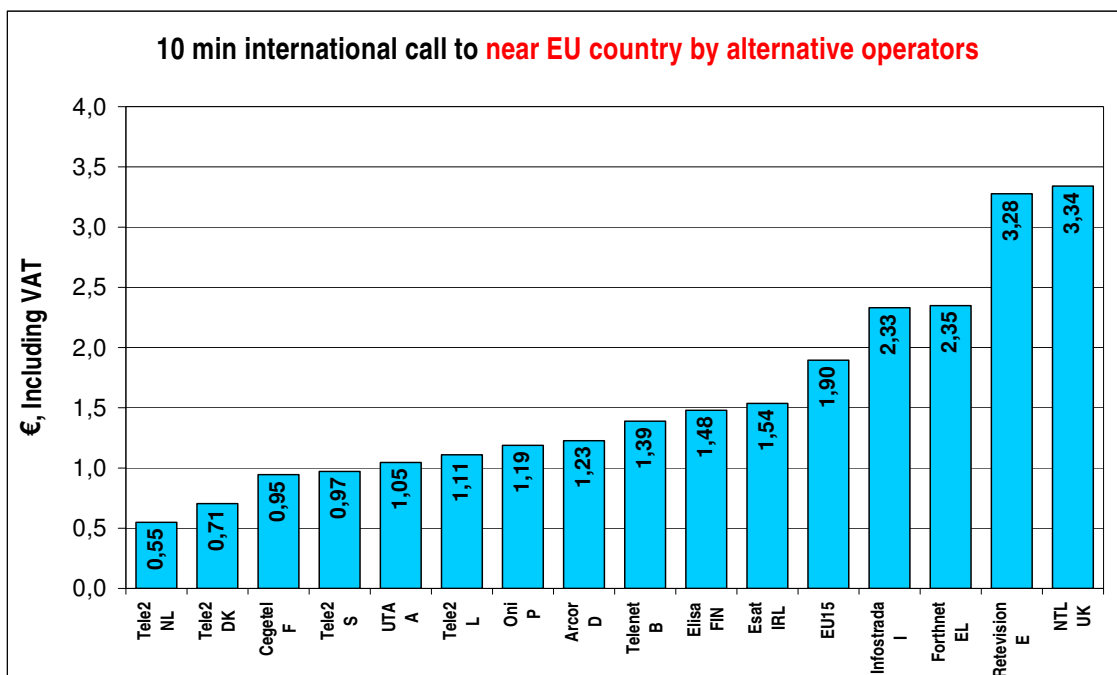


Chart 103

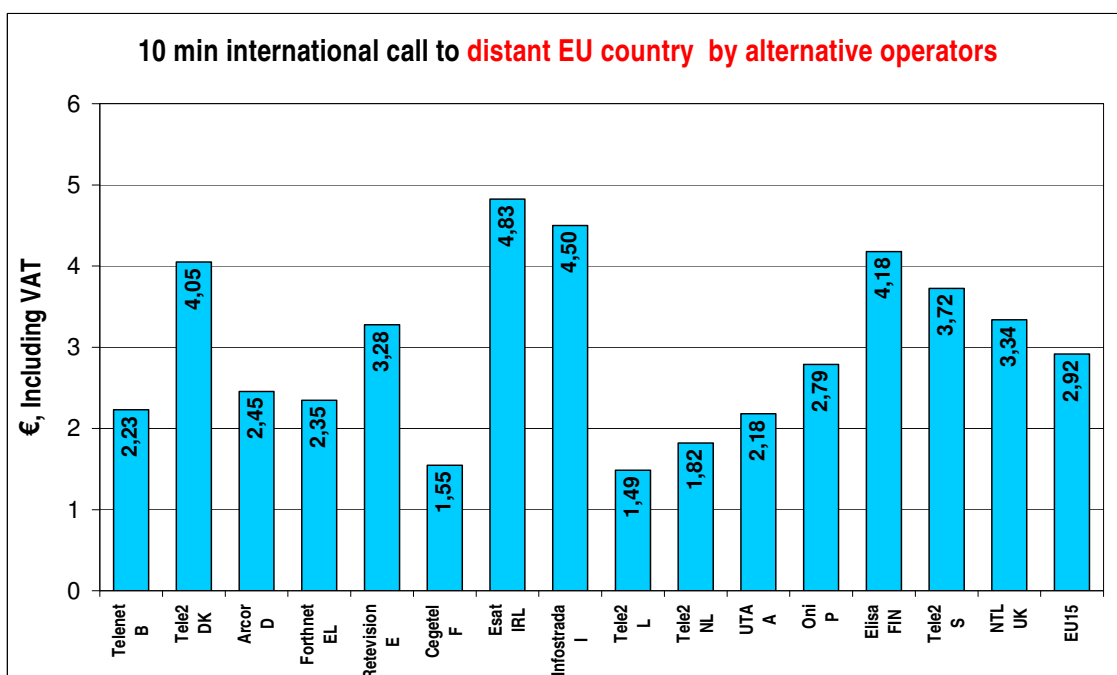


Chart 104

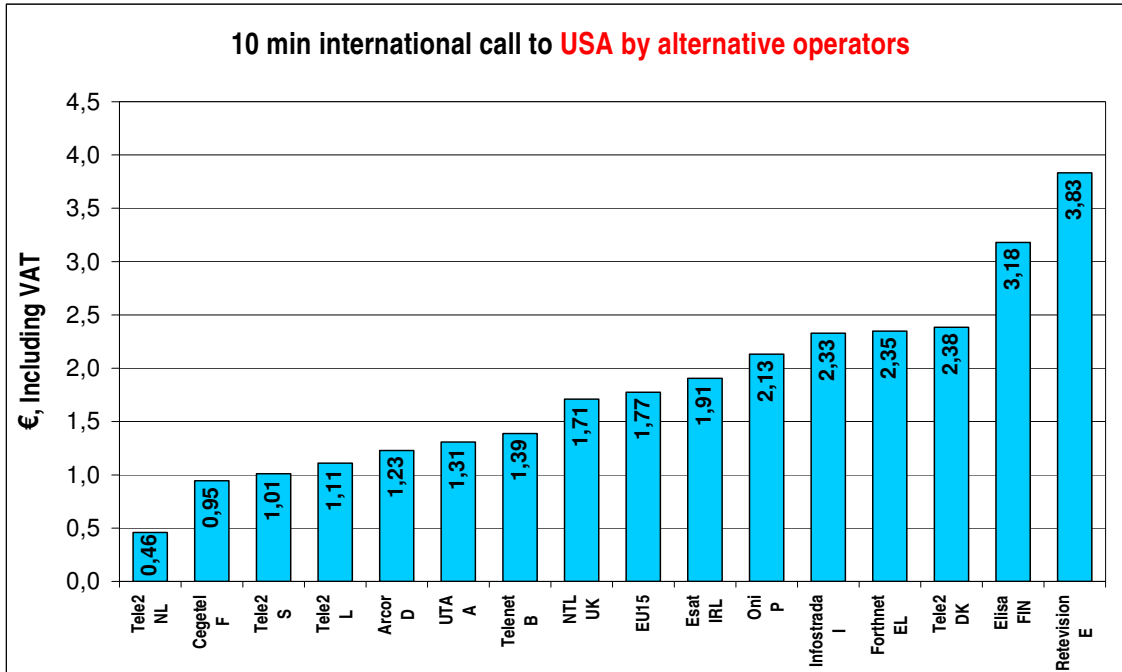
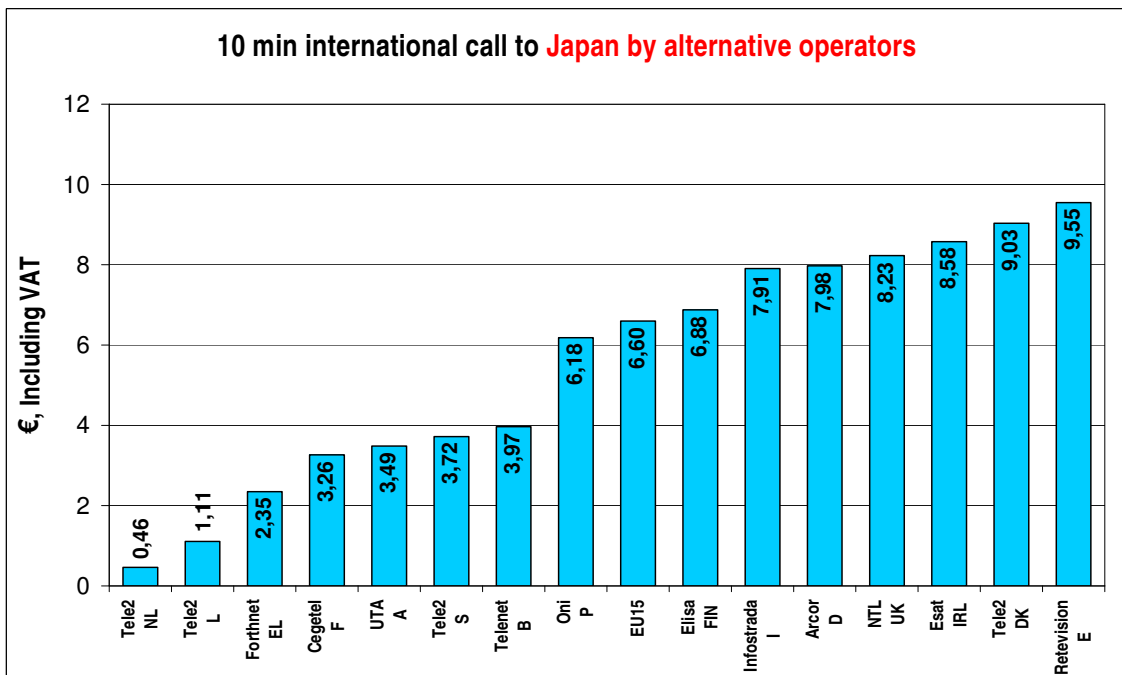


Chart 105



## 8 LEASED LINES RETAIL TARIFFS

This section contains an overview of prices charged by incumbent operators in each Member State for national and international leased line services as at 1 August 2002 to end users. Figures do not cover wholesale prices. Price developments are also analysed over the period August 1998-2002.

The figures and the information are taken from a study carried out by Total Research-Total Research Teligen for the Commission. Data on standard retail prices charged by incumbent operators have been collected in each country.

### 8.1. INCUMBENTS' NATIONAL LEASED LINES

National leased line data is provided from 1998 onwards. 2 distances are covered: 2 km (local circuits), and 200 km. Tariffs are taken from the incumbent operator in each country. Other operators may offer other prices.

In order to properly reflect the tariff structures used in some countries the circuits may be considered in one of two different ways, depending on tariff structure. The one to apply will differ from carrier to carrier. The principles used in this report for calculating the price of a full circuit are:

|                | 1: When tariff specifies local tail prices separately, in addition to main circuit. |                     | 2: When tariff specifies a single price for the circuit, end to end, including local tails. |                     |
|----------------|---|---------------------|---|---------------------|
|                | Local tail length   | Main circuit length | Local tail length   | Main circuit length |
| 2 km circuit   | 1 km  | 0                   | 0   | 2 km                |
| 200 km circuit | 2 km  | 196 km              | 0   | 200 km              |

Note: The local tail length is per tail, i.e. there will be 2 such tails with each circuit.

Where several tariff options exist depending on type of location, the criteria for choice is as follows:

- 2 km circuits are always within a major city (usually the Capital)
- 200 km circuits are between a major city and a “minor” city

As the definitions vary between countries, the type of tariff option chosen will also vary. The countries where the price may vary with location or other non-distance related definitions, are: Belgium, France, Austria, Finland, Sweden and the UK.

Some operators apply termination charges per local end, without necessarily covering the local tail circuit within that charge.

4 types of circuits are covered: 64 kb/s, 2 Mb/s, 34 Mb/s and 155 Mbit/s. As not all carriers publish tariffs for all these bitrates and all years, there may be some gaps in the information, especially for higher bitrates.

Some carriers offer 2 Mb/s circuits as both structured and unstructured. In this analysis only unstructured circuits are included.

Also, some carriers offer different types of leased lines, often in the form of “basic circuits” and circuits in a managed network. Only “basic circuits” are included in this analysis, as the managed network services are not comparable between carriers.

Lately a few carriers have decided not to publish their prices for some or all types of leased lines. This makes it increasingly difficult to present a full overview of the prices in all 15 EU countries.

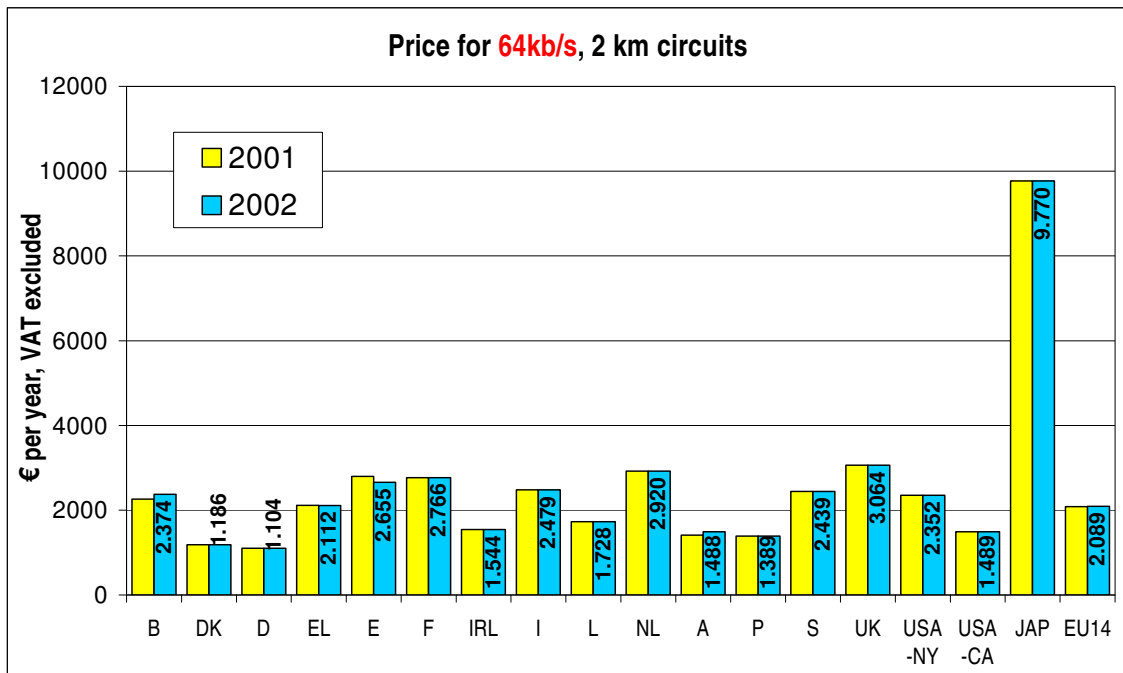
For the USA the prices of Verizon intra-LATA circuits for New York state have been used. The bitrates of leased lines offered in some countries may be different from the ones found in most EU member States. Some operators may offer 56 kb/s instead of 64 kb/s, 1.5 Mb/s instead of 2 Mb/s, 45 or 50 Mb/s instead of 34 Mb/s, and 140 or 150 Mb/s instead of 155 Mb/s. Prices shown in the tables and graphs in this section of the report have been adjusted according to the difference in capacity.

All prices are presented in EURO per month, excluding VAT.

National leased lines prices as at 1 August 2002.

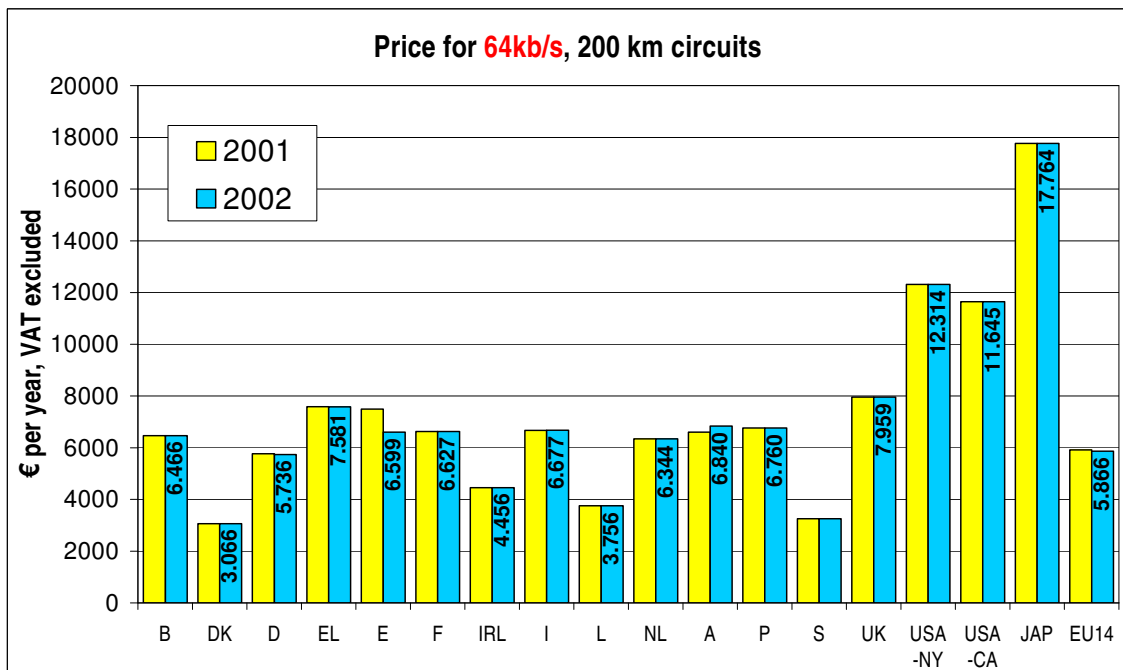
8.1.1. 64 Kbit/s

Chart 106



- Data for Finland not available.

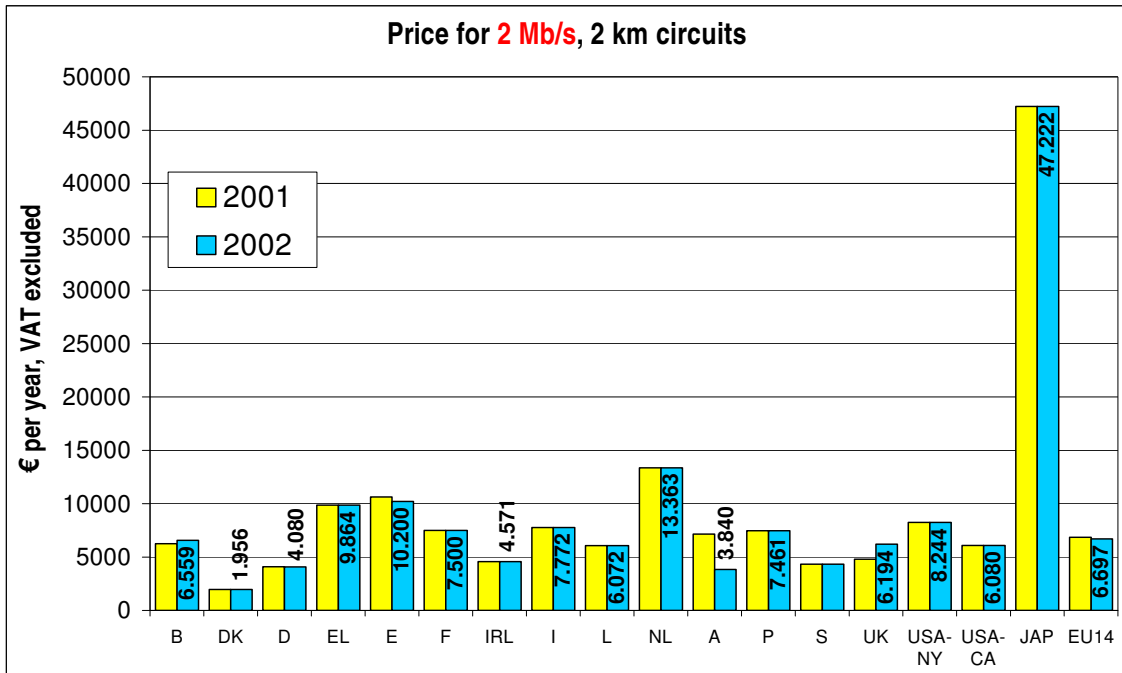
Chart 107



- Data for Finland not available.

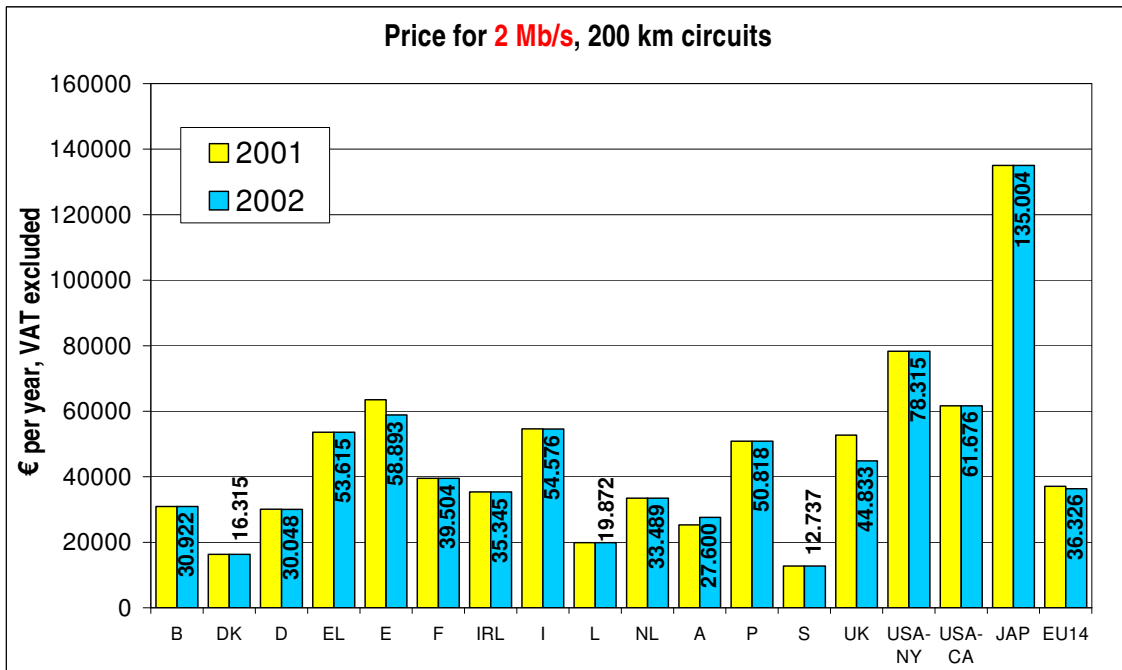
8.1.2. 2 Mbit/s

Chart 108



- Data for Finland not available.

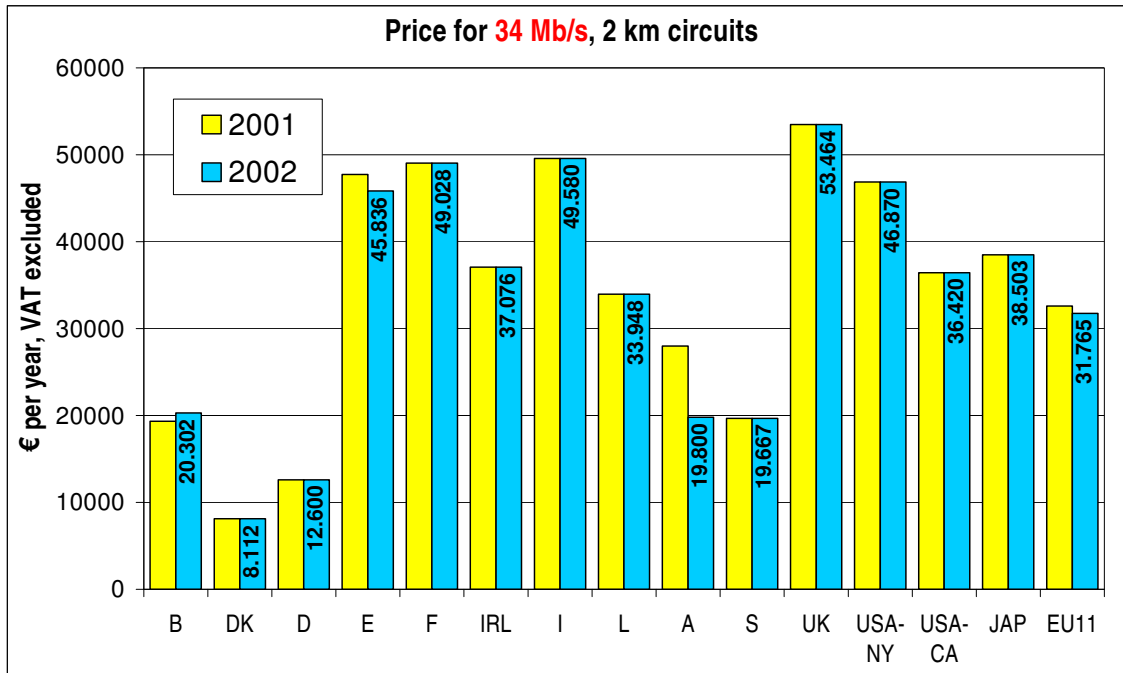
Chart 109



- Data for Finland not available.

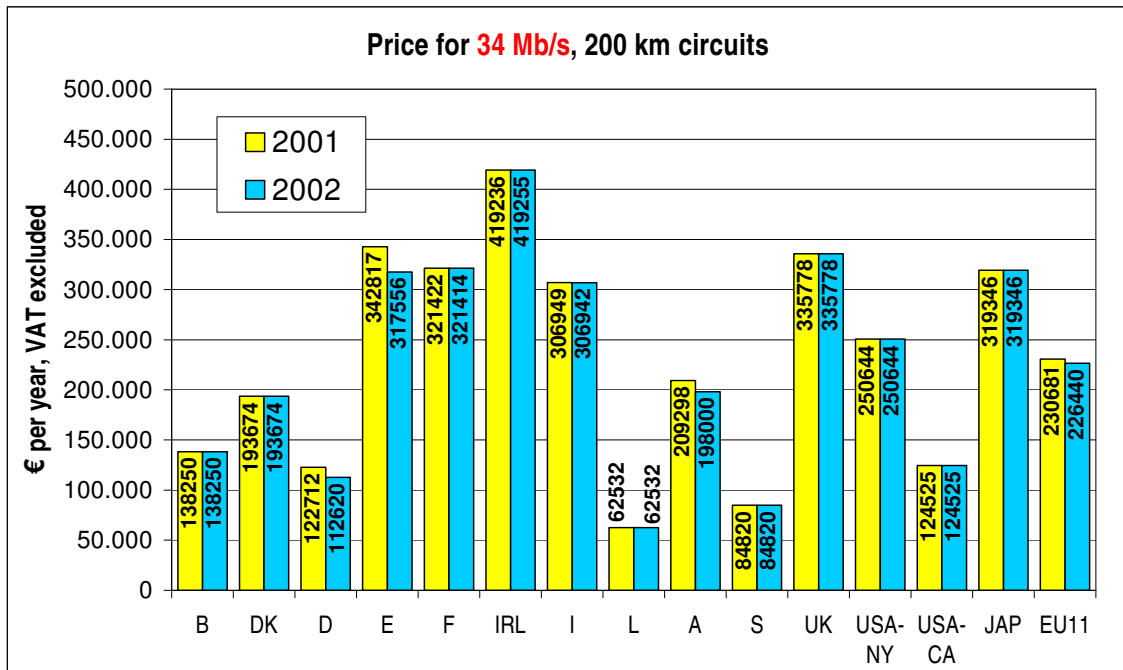
8.1.3. 34 Mbit/s

Chart 110



- Data for EL, NL, P and FIN not available.

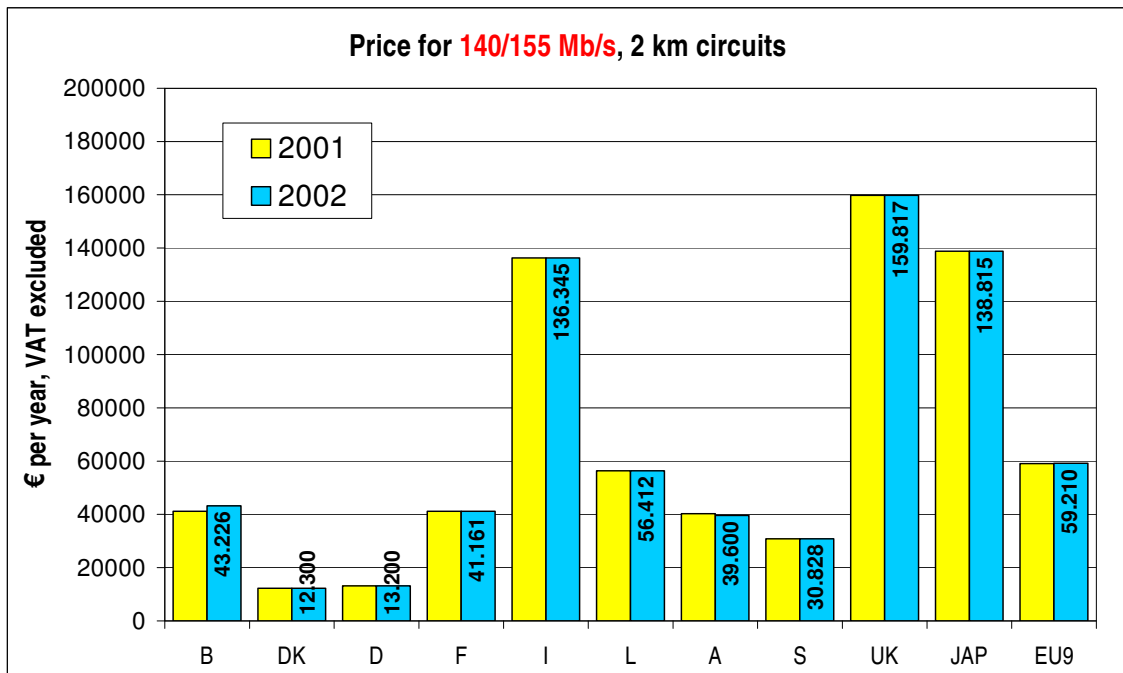
Chart 111



- Data for EL, NL, P and FIN not available.

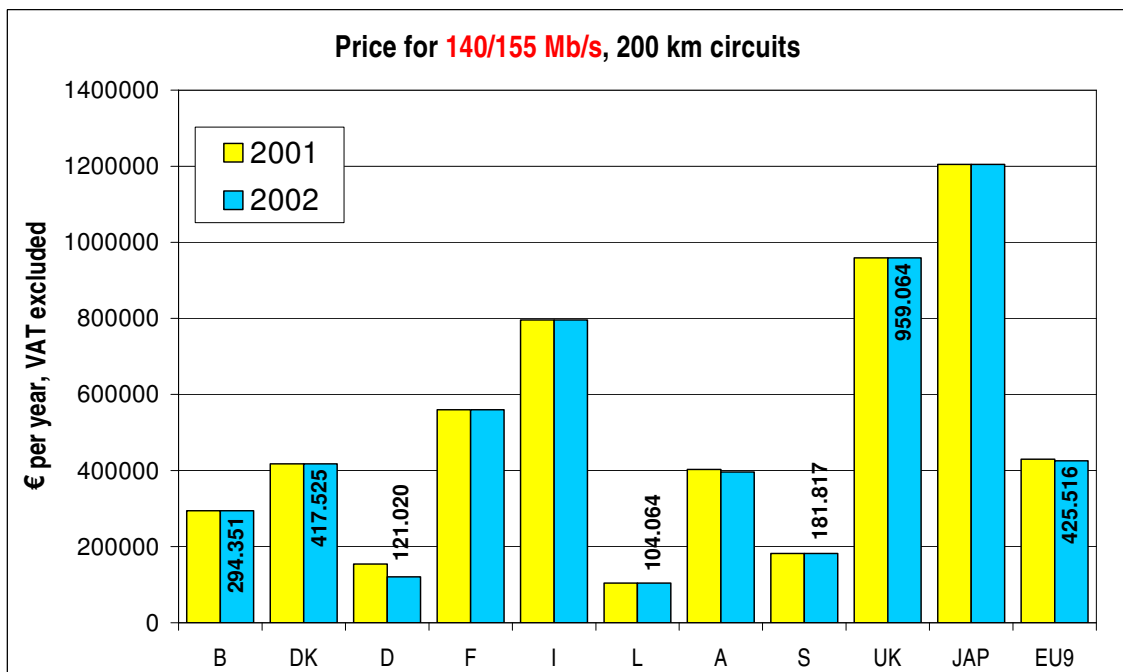
8.1.4. 155 Mbit/s

Chart 112



- Data for E, EL, IRL, NL, P and FIN not available.

Chart 113



Data for E, EL, IRL, NL, P and FIN not available.



## 8.2.NATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2002)

Chart 114

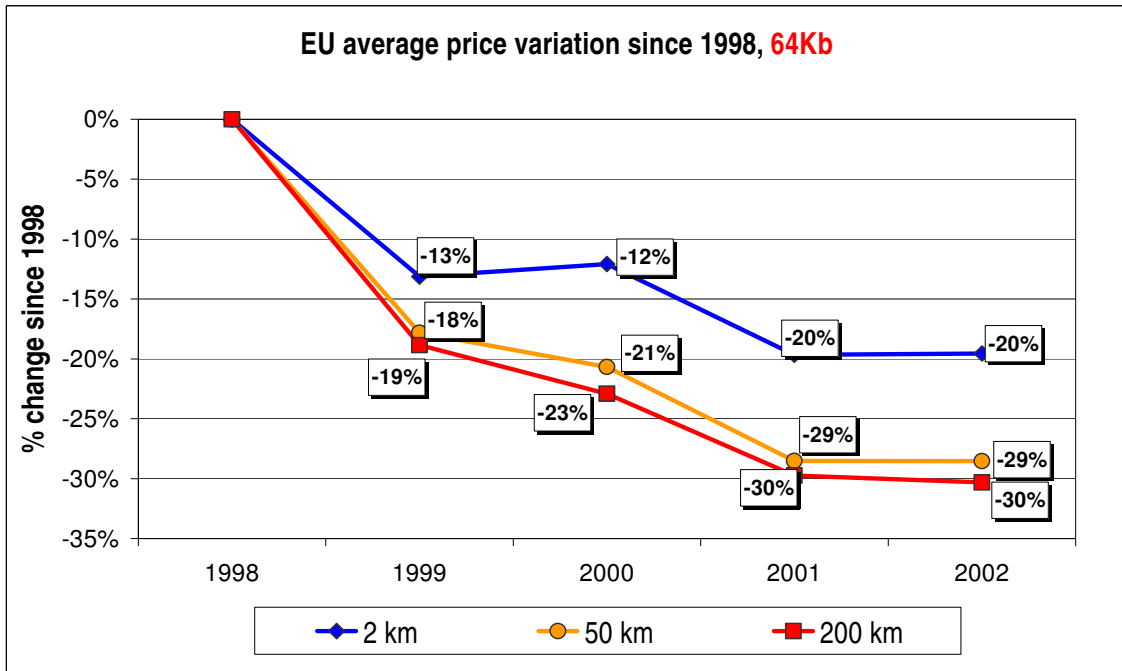


Chart 115

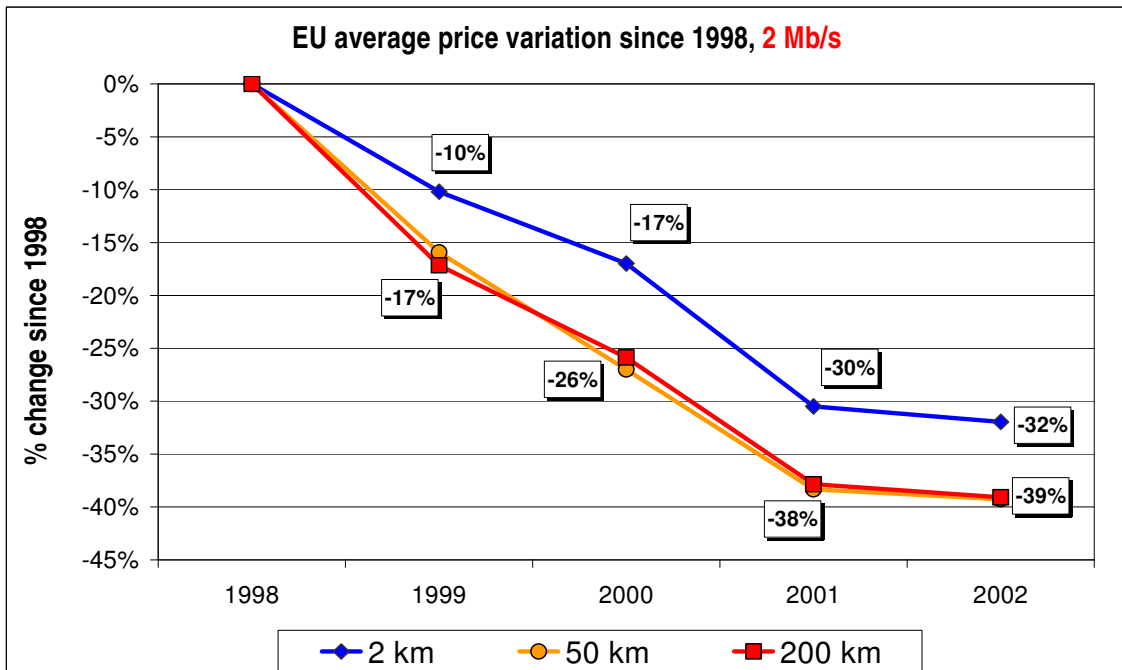
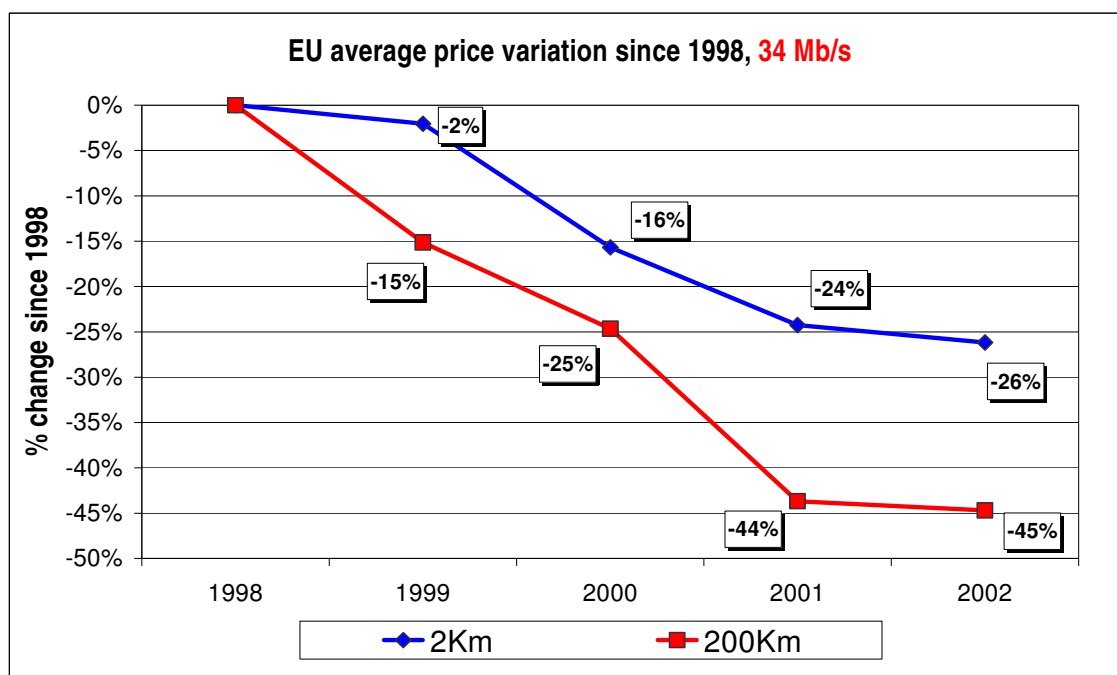


Chart 116



### 8.3.INTERNATIONAL LEASED LINES PRICES

This section examines the standard retail prices (annual rental) for international leased line services (half-circuits in each country) charged by the incumbent operators in each Member State. An analysis of the price development over the period from August 1998 to August 2002 is also included.

Three destinations are covered: international half circuits to the nearest EU country (hereafter “near EU”), to the most distant EU country (“far EU”) and to the USA. Near and far EU countries are defined in the table below:

Three types of circuits are considered: digital 64 Kbit/s, 2 Mbit/s and 34 Mbit/s. Given that price information on 155 Mbit/s international lines is only available for a few Member States, the analysis of these circuits is omitted.

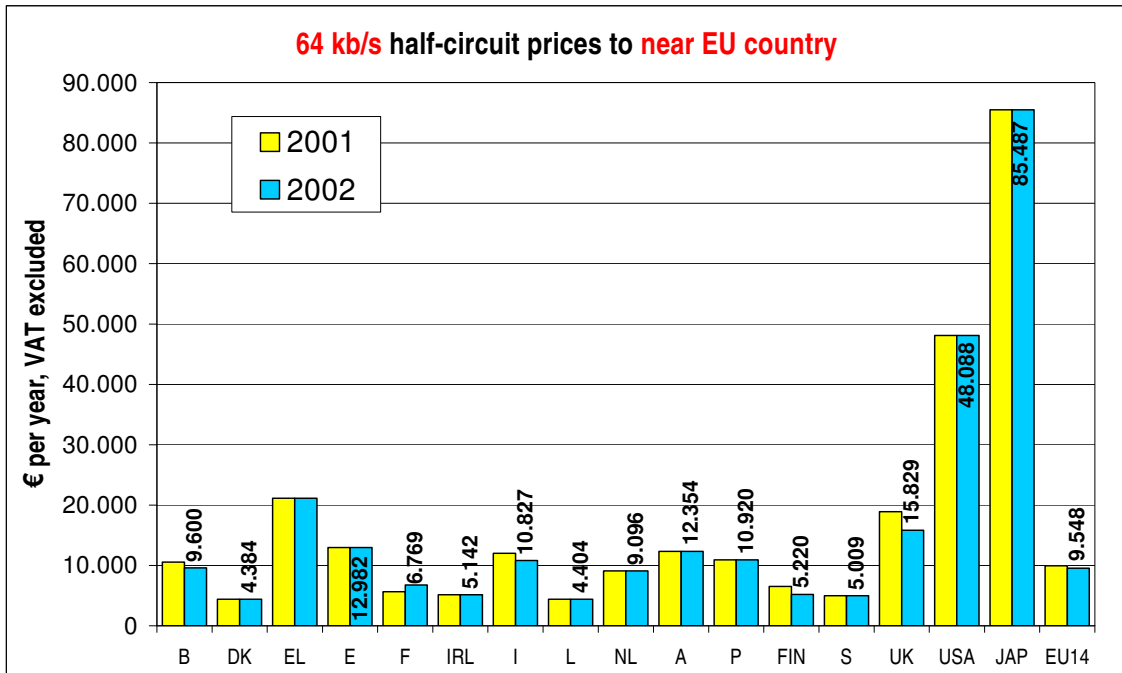
The data is presented with the following parameters:

- All charges in Euro per month
- Excluding VAT
- Germany is not included in the analysis because Deutsche Telekom does not publish prices for international half circuits.
- The years from 1998 are covered
- Variable / 1 year contract (shortest term available).
- AT&T prices are used for USA

Data refer to January for A, February for EL, F, I, NL and FI, April for B and DK, May for E, June for S and UK, and July for IRL, L, and P.

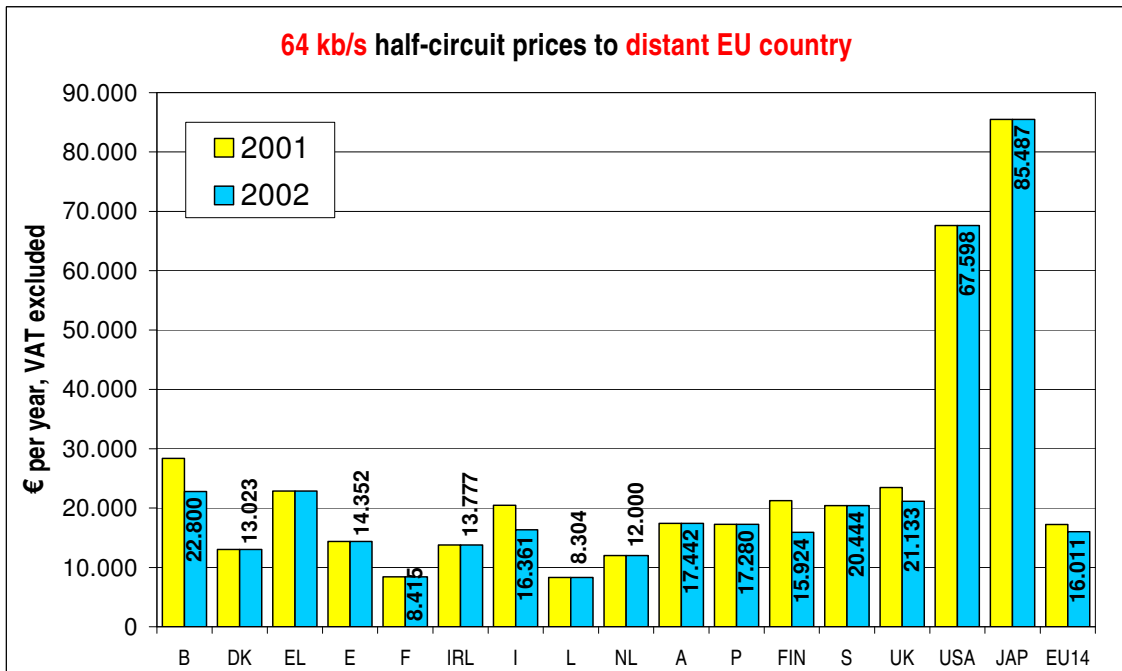
### 8.3.1. 64 Kbit/s

Chart 117



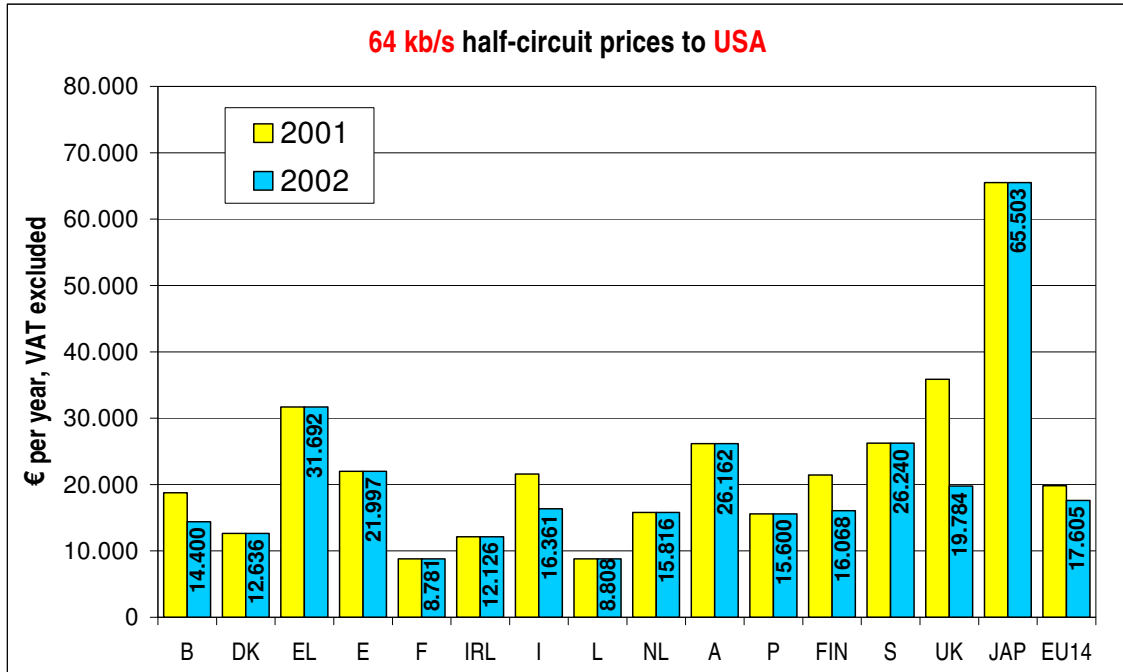
- Data for D not available.

Chart 118



- Data for D not available.

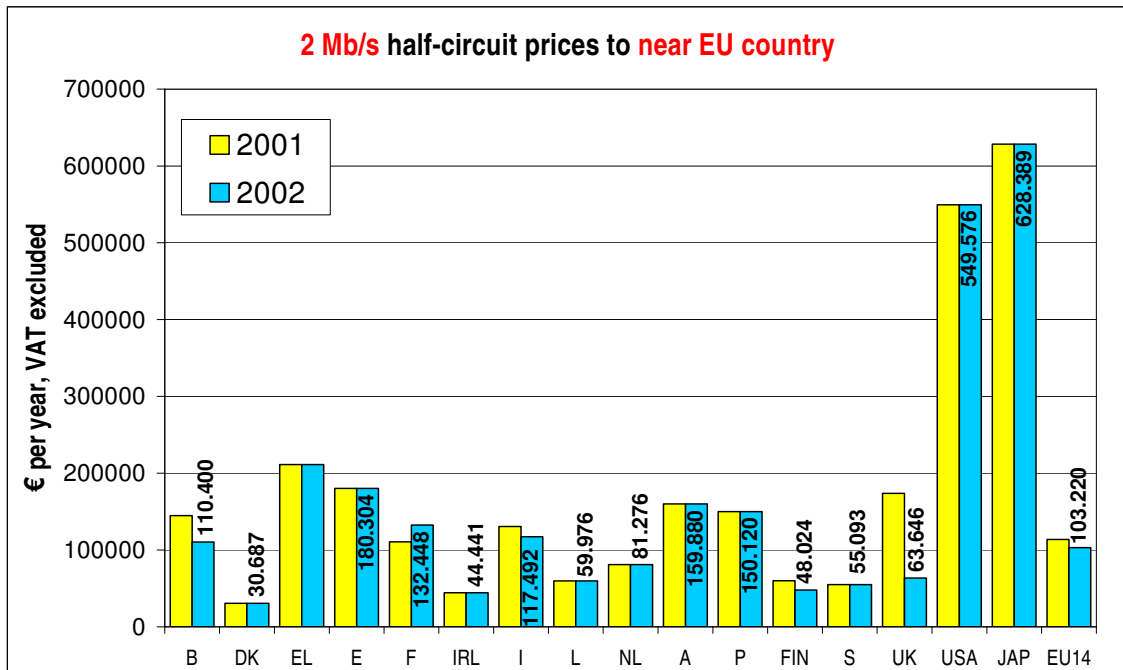
**Chart 119**



- Data for D not available.

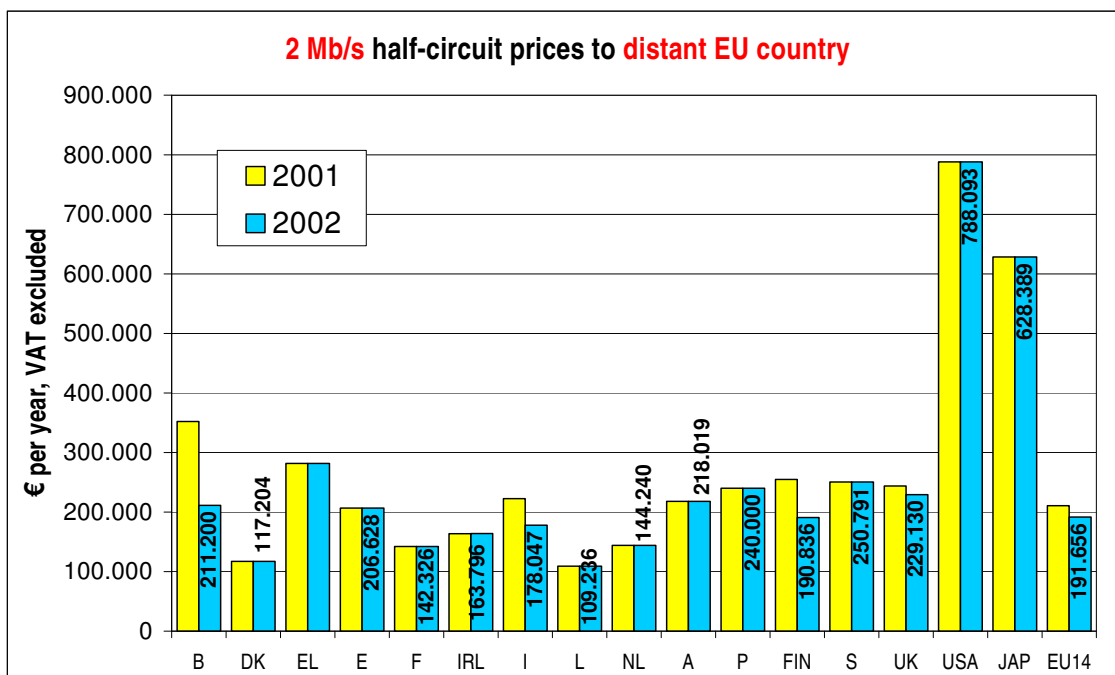
**8.3.2. 2 Mbit/s**

**Chart 120**



- Data for D not available.

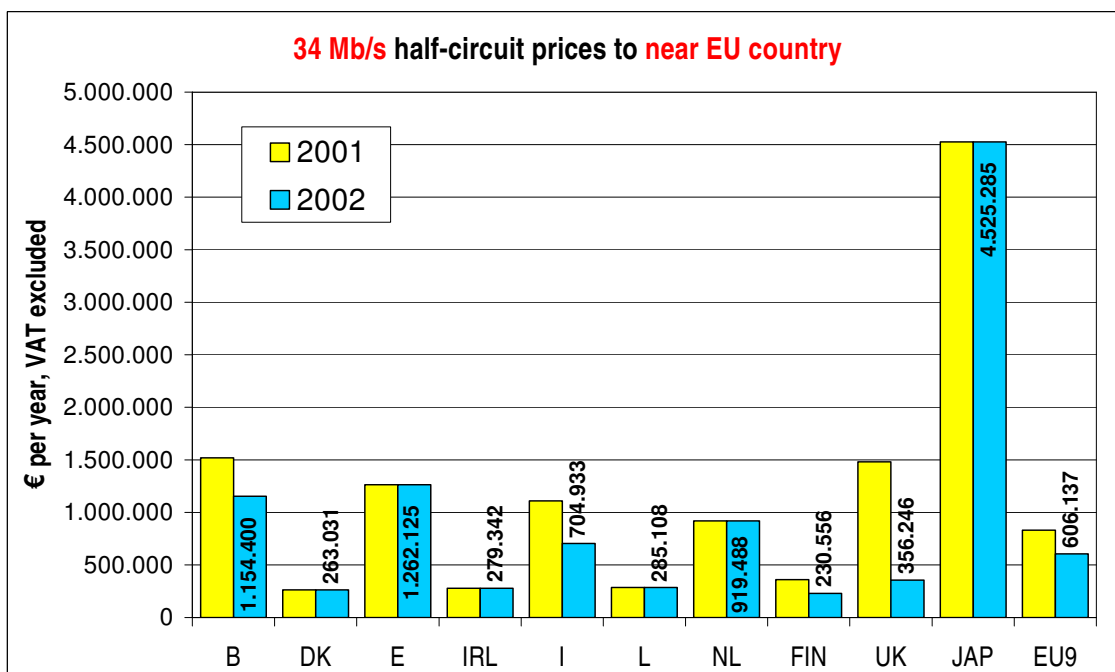
**Chart 121**



- Data for D not available.

**8.3.3. 34 Mbit/s**

**Chart 122**



- Data for D, EL, F, A, P and S not available.

8.4.INTERNATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 AUGUST 2002)

Chart 123

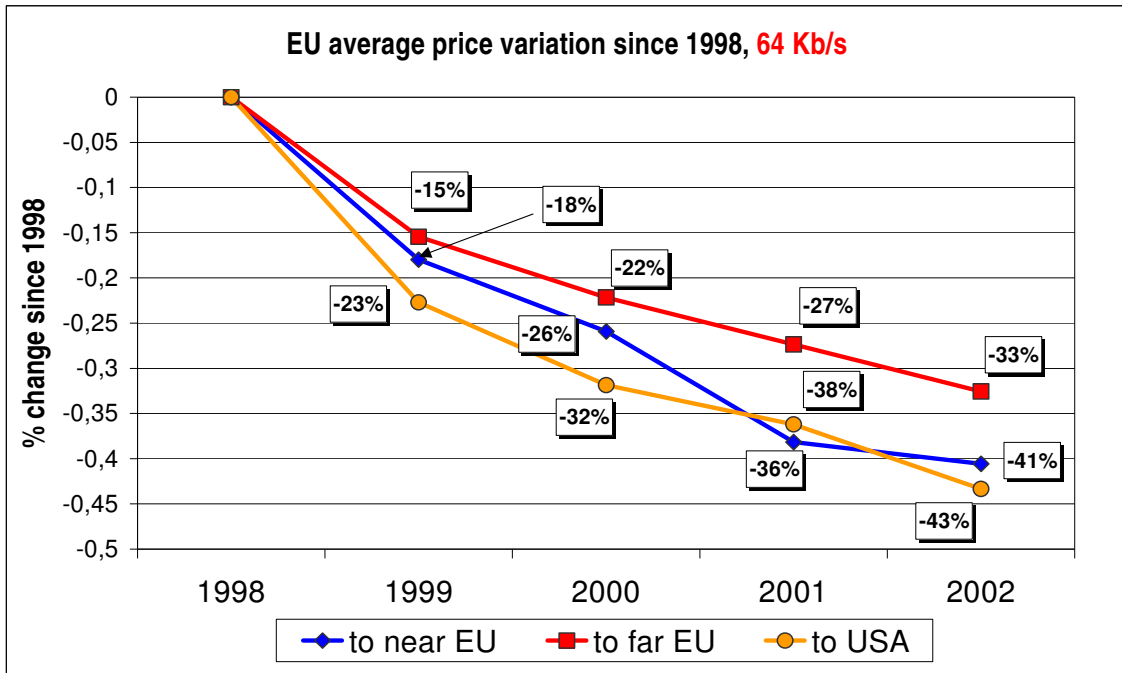
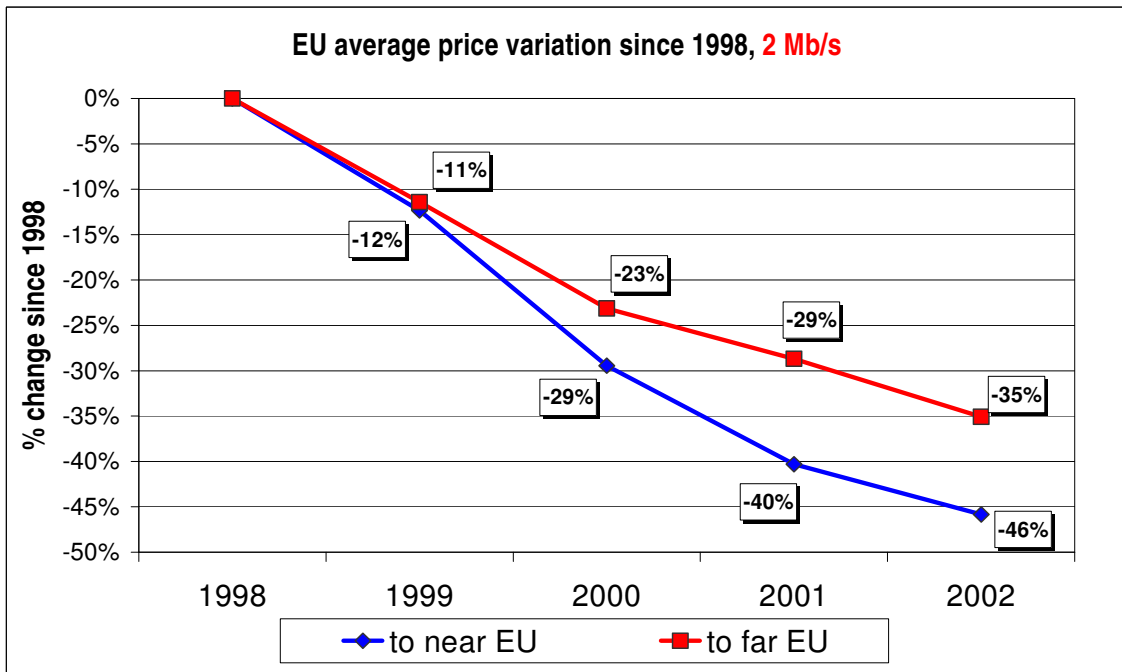


Chart 124



## 9 EXCHANGE RATES

This section explains the exchange rates used in Annexes I and II.

### 9.1. EXCHANGE RATE USED IN SECTION 6 ON INTERNET, SECTION 7 ON PUBLIC VOICE TELEPHONY TARIFFS AND SECTION 8 ON LEASED LINE TARIFFS.

Table 5 Exchange rates, national currency to Euro

|             | Exchange rate to<br>euro <= 2001 | Exchange rate to<br>euro => 2002 |
|-------------|----------------------------------|----------------------------------|
|             | EURO                             | EURO                             |
| Austria     | 0.07267283                       | 1                                |
| Belgium     | 0.02478935                       | 1                                |
| Denmark     | 0.13430931                       | 0.13430931                       |
| Finland     | 0.16818878                       | 1                                |
| France      | 0.15244832                       | 1                                |
| Germany     | 0.51129972                       | 1                                |
| Greece      | 0.0029347                        | 1                                |
| Ireland     | 1.26968004                       | 1                                |
| Italy       | 0.00051646                       | 1                                |
| Japan       | 0.00925189                       | 0.00925189                       |
| Luxembourg  | 0.02478935                       | 1                                |
| Netherlands | 0.45378228                       | 1                                |
| Portugal    | 0.00498798                       | 1                                |
| Spain       | 0.00601012                       | 1                                |
| Sweden      | 0.10794124                       | 0.10794124                       |
| UK          | 1.62999185                       | 1.62999185                       |
| USA         | 1.14495077                       | 1.14495077                       |

### 9.2. EXCHANGE RATE USED IN SECTION 1.5 ON ADMINISTRATIVE AND NUMBERING FEES

The exchange rate to Euro used in section 1.5 on administrative and numbering fees are the same as in table 5, except for the following:

|         | EURO      |
|---------|-----------|
| Denmark | 0.1346058 |
| Sweden  | 0.1146319 |
| UK      | 1.4993537 |

### 9.3. EXCHANGE RATE USED IN SECTION 3 ON INTERCONNECTION AND SECTION 5.2 ON PRICES FOR LOCAL LOOP

The exchange rate to Euro used in section 3 on interconnection and section 5.2 on price for local loop are the same in table 5, except for the following:

|         | EURO       |
|---------|------------|
| Denmark | 0.13460581 |
| Sweden  | 0.10729038 |
| UK      | 1.59387950 |

# **ANNEX 2**

## **REGULATORY DATA**



F:\dgc1\telecom\Implemen\2002\CONSEIL\15227-A2.en2

## TABLE OF CONTENTS

|     |  |    |
|-----|--|----|
| 1.  | TARIFFS .....  | 5  |
| 2.  | COST ACCOUNTING AND ACCOUNTING SEPARATION .....                  | 7  |
| 3.  | NUMBERING .....  | 13 |
| 4.  | IMPLEMENTATION OF DECISION NO. 128/1999/EC (UMTS DECISION) ..... | 16 |
| 5.  | UNIVERSAL SERVICE SCHEME .....                                   | 27 |
| 6.  | DIRECTORY AND DIRECTORY ENQUIRY SERVICES .....                   | 29 |
| 7.  | ITEMISED BILLING AND CALL BARRING .....                          | 33 |
| 8.  | DATA PROTECTION .....  | 41 |
| 9.  | NATIONAL REGULATORY AUTHORITIES .....                            | 47 |
| 10. | QUALITY OF SERVICE .....   | 54 |
| 11. | DIGITAL TELEVISION .....   | 61 |

## List of tables

|   |    |
|---|----|
| Table 1: Fixed public voice telephony tariffs of SMP operators: rebalancing, regulation and report on the evolution of tariffs..... | 5  |
| Table 2: Current and planned cost methodologies for calculating interconnection and unbundling charges .....                        | 7  |
| Table 3: Verification of compliance with the cost accounting system .....   | 9  |
| Table 4: Scope of the audit .....   | 11 |
| Table 5: Preparation of separated accounts.....   | 12 |
| Table 6: Availability of carrier selection (CS) and pre-selection (CPS) by type of call.....  | 13 |
| Table 7: Availability of operator number portability by type of number .....  | 14 |
| Table 8: Situation of total ported number .....   | 15 |
| Table 9: 3G Network Deployment conditions in the EU.....  | 23 |
| Table 10: Financing schemes for universal service obligations (USO).....  | 27 |
| Table 11: Provision of directory and directory enquiry services .....   | 29 |
| Table 12: Competition in the market of directory services.....  | 31 |
| Table 13: Availability of itemised billing .....  | 33 |
| Table 14: Availability of call barring.....   | 38 |
| Table 15: Unsolicited calls, faxes and electronic mails (part I).....   | 41 |
| Table 16: Unsolicited calls, faxes and electronic mails (part II) .....   | 42 |
| Table 17: Storage of data and other provisions of the Data Protection Directive .....   | 43 |
| Table 18: Calling line identification (CLI) .....   | 45 |
| Table 19: National Regulatory Authorities: Legal status and mechanism of appointment .....  | 47 |
| Table 20: .....   | 50 |
| Table 21: Financing and staff of the national regulatory authorities for telecommunications services .....                          | 52 |
| Table 22: Quality of service.....   | 54 |
| Table 23: Quality of service for public fixed voice telephony.....  | 57 |
| Table 24: TV households (analogue and digital) in 2002.....   | 63 |
| Table 25: Digital TV households in 2002.....  | 65 |
| Table 26: Evolution of digital TV households from 2001 to 2002.....   | 68 |
| Table 27: Households able to receive interactive digital TV services in 2002.....   | 70 |
| Table 28: Enhanced and interactive television services.....   | 73 |
| Table 29: DTV equipment in 2002 .....   | 74 |
| Table 30: DTV equipment (STB + iDTV)- evolution 2001/2002 .....   | 77 |
| Table 31: DTV technology in the EU .....  | 79 |
| Table 32: Number of TV operators and additional information including legal aspects.....  | 80 |

## 1. TARIFFS

**Table 1: Fixed public voice telephony tariffs of SMP operators: rebalancing, regulation and report on the evolution of tariffs**

|            | <i>Tariff rebalancing completed</i>                              | <i>Type of regulation of end-user voice telephony tariffs of SMP operators</i> | <i>Date and reference of publication of the last report on the evolution of tariffs<sup>1</sup></i>                    |
|------------|--|--|--|
| <b>B</b>   | No   | Price cap  | July 2002 ( <a href="http://www.ibpt.be">www.ibpt.be</a> ) <sup>2</sup>  |
| <b>DK</b>  | Yes  | Price cap  | 20.6.2002, Tele Yearbook 2001 (published on <a href="http://www.itst.dk">www.itst.dk</a> ) <sup>3</sup>                |
| <b>D</b>   | No <sup>4</sup>  | Price ceiling (Price-cap)/approval by the NRA <sup>5</sup>                     | Communication No. 180/2002; Official Journal No. 6/02 of 03.04.02  |
| <b>EL</b>  | Yes  | NRA approval   | EETT Annual report 2001 (published on <a href="http://www.eett.gr">www.eett.gr</a> )                                   |
| <b>E</b>   | Yes  | Price-cap  | 30.7.2002, Informe anual CMT ( <a href="http://www.cmt.es">www.cmt.es</a> ) <sup>6</sup>                               |
| <b>F</b>   | Yes  | Prior approval of the Ministry in accordance with the ONP conditions           | Report 2000: "Le service public de télécommunications", publication every 4 years<br>Opinion on ART 01-475, 18.5. 2001 |
| <b>IRL</b> | Retail and wholesale price level controls currently under review | Price cap  | Review of Price Cap on Certain Telecommunications Services – ODTR Document 02/57, June 2002                            |
| <b>I</b>   | Yes  | Price cap/NRA approval   | 30.6.2002, AGCOM Annual report ( <a href="http://www.agcom.it">www.agcom.it</a> )                                      |
| <b>L</b>   | No   | Tariffs set freely by the operator<br>Proof of cost orientation requested      | None   |

<sup>1</sup> Article 3.2, Dir. 98/10/EC.

<sup>2</sup> [www.ibpt.be/Telecoms/ServiceUniversel/rapport2001.pdf](http://www.ibpt.be/Telecoms/ServiceUniversel/rapport2001.pdf)

<sup>3</sup> Please see <http://www.itst.dk/wimpblob.asp?objno=97331904>

<sup>4</sup> See communication Nr 75/2002 in the Official Journal No. 2/02 of 06.02.02

<sup>5</sup> Examination of evidence of anticompetitive rebates and discrimination.

<sup>6</sup> A comparison of fixed tariff is available on the NRA's website.

|            | <i>Tariff rebalancing completed</i> | <i>Type of regulation of end-user voice telephony tariffs of SMP operators</i>  | <i>Date and reference of publication of the last report on the evolution of tariffs<sup>1</sup></i>   |
|------------|-------------------------------------|---|---|
| <b>NL</b>  | Yes                                 | A. Safeguard price cap for the period 1 July 2002 till 1 July 2006. Tariffs may increase at the same level as the rate of inflation. Safeguard price cap applies to:<br>- subscription<br>- local calls<br>- national calls<br>- fixed to mobile calls.<br><br>B. Price squeeze<br><br>C. Ex ante approval by the NRA under ONP conditions (cost orientation) | Several documents published <sup>7</sup>  |
| <b>A</b>   | Yes                                 | Ex ante approval by the NRA under ONP conditions  | A report on market evolution for the year 2001 will be published in Q3/2002<br>A permanent comparison of the prices of all fixed operators is available at <a href="http://www.rtr.at">www.rtr.at</a> |
| <b>P</b>   | No <sup>8</sup>                     | Price limit <sup>9</sup>  | A study on the evolution of tariffs (1998-2001) is available since July 2002, at <a href="http://www.anacom.pt">www.anacom.pt</a> <sup>10</sup>   |
| <b>FIN</b> | Yes                                 | Freely set by operator <sup>11</sup>  | A study of telecommunications prices in 2001 <sup>12</sup> can be requested from the Ministry of Transport and Communications   |
| <b>S</b>   | No                                  | Set by operator, tariffs must be cost-oriented  | 13.11.2001 <sup>13</sup>  |
| <b>UK</b>  | Yes <sup>14</sup>                   | Price cap   | Several documents published up to 31.7.2002 <sup>15</sup>   |

<sup>7</sup> A: Memorandum of findings “Integral tariff regulation for end-user and interconnection services” of OPTA, 26 April 2002, OPTA/EGM-IBT/2002/201084. Policy framework: The assessment of the upper limit on the cost-orientation of end user tariffs for fixed telephony of KPN for the period of 1 July 2002 until 1 July 2006, 27.6.2002, OPTA/EGM/2002/201218.

B: “Guidelines Price squeeze OPTA and the NMa”, 28 February 2001, OPTA/EGM/2000/200494; “Decision price squeeze”, 28 June 2001, OPTA/EGM/2001/201632; “Actualisatie van constanten in de prijsstreekttoets, OPTA and the NMa”, 19.7.2002, OPTA/EGM/2002/201877

<sup>8</sup> According to data from PTC, the prices are not yet fully rebalanced. However, there are no restrictions to the elimination of the access deficit.

<sup>9</sup> In accordance with the agreement reached between the Directorate-General of Trade and Competition, ICP and Portugal Telecom, concerning fixed telephony services provided in the context of universal service.

<sup>10</sup> <http://www.anacom.pt/template15.jsp?categoryId=38329>

<sup>11</sup> Subject to the obligation of cost orientation for local calls.

<sup>12</sup> Price level of the Finnish telecommunications tariff in 2001.

<sup>13</sup> PTS examination of Telia AB’s prices for telephony line rental.

<sup>14</sup> Residential line rental income is not yet sufficient to cover fully allocated costs. However, the NRA believes that BT’s residential line rental charge now covers the incremental cost of providing the line. There are no regulatory constraints preventing BT from further rebalancing of its tariffs.

<sup>15</sup> These include: an annual statistical note (to be published at the end of August 2002) on the median bill of BT’s residential consumers; Oftel’s Consultative Documents “Competition in the provision of fixed telephony services”, 31 July 2001 and 31 January 2002, and Statement 20 June 2002, on the impact of price changes for different customer groups. Furthermore, typical bills payable by residential consumers with different leading suppliers can be compared through a free, industry-funded web-site, endorsed by Oftel at [www.phonebills.org.uk](http://www.phonebills.org.uk).

## 2. COST ACCOUNTING AND ACCOUNTING SEPARATION

**Table 2: Current and planned cost methodologies for calculating interconnection and unbundling charges**

|            | <i>Cost accounting system actually in place for interconnection by SMP operators</i> |  | <i>Cost accounting system actually in place for unbundling by SMP operators</i> |  | <i>Deadline for implementation of a system based on current costs</i>                    |
|------------|--|--|---|--|--|
|            | <i>Cost base</i>   | <i>Cost standard</i>                             | <i>Cost base</i>  | <i>Cost standard</i>                             |  |
| <b>B</b>   | Historic/Current <sup>16</sup>   | FDC  | Historic  | Retail minus for full unbundling                 | Implemented for network assets   |
| <b>DK</b>  | Historic and best practice   | FDC  | Historic and best practice  | FDC  | LRAIC planned for 31.12.2002   |
| <b>D</b>   | Forward-looking costs  | LRAIC  | Forward-looking costs   | LRAIC  | Implemented  |
| <b>EL</b>  | Current  | LRAIC  | Current   | LRAIC  | Ongoing implementation <sup>17</sup>   |
| <b>E</b>   | Multistandard  | Multistandard                                    | ( <sup>18</sup> )   | (see note 18)                                    | Implemented  |
| <b>F</b>   | Current  | LRIC + mark-up for common costs + specific costs | Current   | LRIC + mark-up for common costs + specific costs | Work on LRIC completed; official decision to move to LRIC to be taken for the 2003 offer |
| <b>IRL</b> | LRAIC  | LRIC   | Historic  | FDC  | LRIC planned for 1.4.03  |
| <b>I</b>   | Current  | FDC  | Historic  | FDC  | Implemented  |
| <b>L</b>   | Historic   | FDC  |   |  | LRIC in principle for the RIO 2001 and 2002  |

Legend:

Cost base: historic, current, forward-looking

Cost standard: LRIC: long-run incremental costs  
LRAIC: long-run average incremental costs  
FDC: fully distributed costs  
EDC: embedded direct costs

<sup>16</sup> With regard to network assets, historic costs are converted into current costs.

<sup>17</sup> EETT has approved the LRAIC methodology subject to certain improvements regarding Shared Access to the Local Loop that the SMP operator (O.T.E) must implement (EETT Decision 252/67 29-4-2002). EETT is currently auditing the LRAIC tariffs for LLU and Interconnection.

<sup>18</sup> The prices of the unbundled local loops have been set by the Comisión Delegada del Gobierno in December 2001. The collocation prices have been established by CMT, taking into account average costs, on the basis of a study carried out by independent consultants with a specific expertise on the subject, who gave to the CMT the market value of a cost. The associated services and the peak rate (modified by CMT by Resolution of 29 April 2002), have been determined taking as a basis a study of an independent consultant applying the “bottom-up” methodology.

|            | <i>Cost accounting system actually in place for interconnection by SMP operators</i>                                  |   | <i>Cost accounting system actually in place for unbundling by SMP operators</i>                 |  | <i>Deadline for implementation of a system based on current costs</i>  |
|------------|---|---|---|--|--|
|            | <i>Cost base</i>  | <i>Cost standard</i>  | <i>Cost base</i>  | <i>Cost standard</i>   |  |
| <b>NL</b>  | Current   | EDC for originating i/c<br>Bottom-up LRIC for terminating i/c   | Current   | EDC  | Implemented  |
| <b>A</b>   | Current   | FDC <sup>19</sup>   | Current   | FDC  | Implemented  |
| <b>P</b>   | Historic, forward-looking and current <sup>20</sup>   | FDC   | (21)  | (21)   | No deadline fixed <sup>22</sup>  |
| <b>FIN</b> | Historic/Current  | Company specific <sup>23</sup>  | Historic/Current  | Company specific   | Ongoing implementation   |
| <b>S</b>   | Historic  | FDC   | Historic  | FDC  | Planned for January 2004   |
| <b>UK</b>  | BT: Forward looking/ current<br>Concert: Forward looking/current<br>Kingston Communications : Forward looking/current | BT: LRIC + FDC<br>Concert: LRIC + FDC<br>Kingston Communications: CCA (Current Cost Accounting) + FDC | BT: Forward looking/current<br>Concert: N/A<br>Kingston Communications: Forward looking/current | BT: LRIC + FDC<br>Concert: N/A<br>Kingston Communications: CCA + FDC | BT: Implemented<br>Concert: Implemented<br>Kingston Communications: Implemented for interconnection. For unbundling, to be implemented within the next 18 months |

<sup>19</sup> Telekom Austria uses the FDC top-down model; the NRA uses the forward-looking LRAIC bottom-up model.

<sup>20</sup> The interconnection prices were approved taking into account the following elements: i) expected costs: evolution and revision of traffic volumes for the current year; ii) expected efficiency gains; iii) practices in the EU.

<sup>21</sup> When establishing costs/prices for a new service, ANACOM identifies in the accounting system of PTC (ABC), the resources used and the activities necessary to supply the new service. The actual expenses and budget are also used to determine a cost for the local loop.

<sup>22</sup> Without prejudice to footnotes 20 and 21, it should be noted that ANACOM assesses the situation taking into consideration the expected impact generated by the application of systems based on current costs on price variations.

<sup>23</sup> The NRA does not set charges for SMP organisations. Operators set their own prices. There are more than 50 SMP operators in Finland and their interconnection and ULL prices must be cost-based. Cost structures, prices and accounting systems vary between operators. The NRA uses both FDC top down models based on historic costs and a current costs methodology when evaluating the cost orientation of charges.

**Table 3: Verification of compliance with the cost accounting system**

|            | Verification of compliance with the CAS by a competent and independent body |                   |  | Statement concerning compliance                   |   |
|------------|---|-------------------|--|---|---|
|            | Voice telephony   | Interconnection   | Last accounts verified (accounting year) | Date of last publication                          | Reference in the national Official Journal or other                                 |
| <b>B</b>   | Yes   | Yes               | 2001 (interconnection <sup>24</sup> )    | End of July 2002 <sup>25</sup>                    | www.ibpt.be <sup>26</sup>   |
| <b>DK</b>  | Yes   | Yes               | 2000 <sup>1</sup>                        | <del>16</del> 8.10.2001-2002                      | www.itst.dk <sup>27</sup>   |
| <b>D</b>   | Yes <sup>28</sup>   | Yes               | 2001                                     | March 2002 <sup>29</sup>                          | Official Journal of the RegTP 6.3.2002  |
| <b>EL</b>  | Yes   | Yes <sup>30</sup> | 2000                                     | 2002 (voice telephony)                            | Decision EETT 242/25 of 14.01.02  |
| <b>E</b>   | Yes   | Yes               | 2000 <sup>31</sup>                       | 13.06.2002  | www.cmt.es  |
| <b>F</b>   | Yes   | Yes               | 2000                                     | 4.07.2001 (1999 accounts) soon for 2000 accounts  | Decision 01-564<br>Decision 01-664  |
| <b>IRL</b> | Yes   | Yes               | Year ended on 31.3.2001                  | 28.09.01  |   |
| <b>I</b>   | Yes   | Yes               | 1999 <sup>32</sup>                       | Decision no.337/02/CONS of 23.10.2002 (Year 1999) | October 2002<br><a href="http://www.agcom.it">www.agcom.it</a>                      |
| <b>L</b>   | No  | No                | None                                     | Planned for yearly report 2002                    | www.etat.lu/ILR/tele/decis/index.htm  |
| <b>NL</b>  | Yes   | Yes               | 2000 <sup>33</sup>                       | 2001  | Decision OPTA/IBT/2000/202891, also at <a href="http://www.opta.nl">www.opta.nl</a> |
| <b>A</b>   | Yes <sup>34</sup>   | Yes <sup>34</sup> | None                                     | 21.10.2002 <sup>34</sup>                          | RASR 1/02, <a href="http://www.rtr.at">www.rtr.at</a>                               |

<sup>24</sup> 1999 for accounting separation. Accounting separation is implemented and verified by BIPT.

<sup>25</sup> For voice telephony for accounting year 1998; for interconnection: an update of the public description of the “top-down model 2000” is foreseen.

<sup>26</sup> For interconnection: news – communications – 21/12/2000 Description of the BIPT cost model for the calculation of the interconnection tariffs for the year 2001 (Dutch or French).

<sup>27</sup> Please see <http://www.itst.dk/wimpdoc.asp?page=tema&objno=111258557> (VT) and <http://www.itst.dk/wimpdoc.asp?page=tema&objno=111258739> (IC).

<sup>28</sup> The voice telephony is regulated in Germany within the Price Cap procedure. Within the framework given thereby, the final customer tariffs are approved within specific procedures.

<sup>29</sup> Next publication in the Official Journal of RegTP probably end 2002/beginning 2003. In accordance with the administrative regulations for cost calculation - published in the Official Journal No 120/2001 - RegTP will publish annually in its Official Journal a general report on the compliance of the provisions and thus on the further development of the cost calculation system. This report concludes with a statement indicating whether the operator has a suitable cost calculation system.

<sup>30</sup> The verification has been completed at the end of July 2002.

<sup>31</sup> The verification for the year 2001 is under way.

<sup>32</sup> The verification for the year 2000 is under way.

<sup>33</sup> However, no public verification took place.

<sup>34</sup> Costing data is verified by the NRA, on the basis of experts' opinions, in the context of individual proceedings for approval of the incumbent's tariffs and interconnection dispute settlements. However, no verification is done on an annual basis.



|            | <i>Verification of compliance with the CAS by a competent and independent body</i> |   |  | <i>Statement concerning compliance</i>                                 |   |
|------------|--|---|--|--|---|
|            | <i>Voice telephony</i>   | <i>Interconnection</i>                        | <i>Last accounts verified (accounting year)</i>                        | <i>Date of last publication</i>  | <i>Reference in the national Official Journal or other</i>  |
| <b>P</b>   | Yes  | Yes   | 2000 <sup>35</sup>   | 21.08.01   | Diário da República nº193, Série III, de 21.08.01<br>www.anacom.pt/ <sup>36</sup><br>www.anacom.pt/ <sup>37</sup> |
| <b>FIN</b> | Yes <sup>38</sup>  | Yes   | 2000   | 21.12.2001   | Report 246/539/2001 to the Ministry   |
| <b>S</b>   | Yes  | Yes   | 2000   | 2001   |   |
| <b>UK</b>  | Concert: Yes<br>Kingston Com.: Yes<br>BT: Yes                                      | Concert: Yes<br>Kingston Com.: Yes<br>BT: Yes | Concert: 31.12.01<br>Kingston Communications: 31.03.02<br>BT: 31.03.01 | Concert: 30.06.02<br>Kingston Communications: 31.07.02<br>BT: 19.12.01 | Concert / Kingston Communications / BT: The audit report is contained within the regulatory accounts              |

<sup>35</sup> The accounting system of notified operators is audited yearly by independent bodies, selected yearly by ANACOM, via a public tender. Auditors which work for the notified operators are excluded from the tender.

<sup>36</sup> <http://www.anacom.pt/template13.jsp?categoryld=1612>

<sup>37</sup> <http://www.anacom.pt/template13.jsp?categoryld=10892>

<sup>38</sup> Finland does not require cost orientation for local calls, interconnection and ULL. International and long-distance voice telephony calls are not regulated, because there is considered to be effective competition on those markets. During autumn 2001 Ficora carried out 10 economic inspections and 8 inspections during spring 2002 targeted at operators with SMP.

**Table 4: Scope of the audit**

The information in this table is based on a study conducted for the European Commission by Andersen Business Consulting<sup>39</sup>. Data concerning Germany, Austria and Sweden have been updated on the basis of information provided by the NRAs.

|            | <i>Cost model</i>            |                                  |                              | <i>Accounting separation</i> |
|------------|------------------------------|----------------------------------|------------------------------|------------------------------|
|            | <i>Methodology</i>           | <i>Accuracy and completeness</i> | <i>Volumes</i>               | <i>Separated accounts</i>    |
| <b>B</b>   | (Yes <sup>40</sup> )         | (Yes <sup>40</sup> )             | (Yes <sup>40</sup> )         | Prepared by NRA              |
| <b>DK</b>  | Yes                          | Yes                              | Yes                          | Yes                          |
| <b>D</b>   | Not applicable <sup>41</sup> | Not applicable <sup>41</sup>     | Not applicable <sup>41</sup> | Not applicable <sup>42</sup> |
| <b>EL</b>  | Yes                          | Yes                              | Yes                          | Yes                          |
| <b>E</b>   | Yes                          | Yes                              | Yes                          | Yes                          |
| <b>F</b>   | Yes                          | Yes                              | Yes                          | Yes                          |
| <b>IRL</b> | Yes                          | Yes                              | Yes                          | Yes                          |
| <b>I</b>   | Yes                          | Yes                              | Yes                          | Yes                          |
| <b>L</b>   | No answer to survey          |                                  |                              |                              |
| <b>NL</b>  | Yes                          | Yes                              | Yes                          | No                           |
| <b>A</b>   | Yes                          | Yes <sup>43</sup>                | Yes <sup>43</sup>            | No <sup>43</sup>             |
| <b>P</b>   | Yes                          | Yes                              | Yes                          | Yes                          |
| <b>FIN</b> | (Yes <sup>44</sup> )         | (Yes <sup>44</sup> )             | No                           | (Yes <sup>44</sup> )         |
| <b>S</b>   | Yes                          | Yes                              | Yes                          | Not applicable <sup>42</sup> |
| <b>UK</b>  | Yes                          | Yes                              | Yes                          | Yes                          |

<sup>39</sup> *Implementation of cost accounting methodologies and accounting separation by telecommunications operators with significant market power*, July 2002.

<sup>40</sup> The audit mandated by the SMP is not imposed by the NRA; results of this audit were, for the first time in December 2001, communicated to the NRA.

<sup>41</sup> No regulatory cost model is developed by DTAG. DTAG only provides statutory cost accounting information, which are by essence audited. In certain cases such as price approval for local loop unbundling, RegTP uses its own cost model (WIK model).

<sup>42</sup> DTAG provides specific bottom up calculations.

<sup>43</sup> According to NRA's decision of 21<sup>st</sup> October 2002 .

<sup>44</sup> Audits of SMP-operators consist in a high level identification of the major inconsistencies.

**Table 5: Preparation of separated accounts**

The information in this table is based on a study conducted for the European Commission by Andersen Business Consulting<sup>39</sup>. Data concerning Belgium, Germany, Austria and Portugal have been updated on the basis of information provided by the NRAs.

|            | <i>Transfer charges</i>      | <i>Costs</i>                 | <i>Revenues</i>              | <i>Mean capital employed</i> |
|------------|------------------------------|------------------------------|------------------------------|------------------------------|
| <b>B</b>   | Yes                          | Yes                          | Yes                          | No                           |
| <b>DK</b>  | Yes                          | Yes                          | Yes                          | Yes                          |
| <b>D</b>   | Not applicable <sup>45</sup> | Not applicable <sup>45</sup> | Not applicable <sup>45</sup> | Not applicable <sup>45</sup> |
| <b>EL</b>  | No                           | Yes                          | Yes                          | NA                           |
| <b>E</b>   | No                           | Yes                          | Yes                          | NA                           |
| <b>F</b>   | Yes                          | Yes                          | Yes                          | NA                           |
| <b>IRL</b> | Yes                          | Yes                          | Yes                          | Yes                          |
| <b>I</b>   | Yes                          | Yes                          | Yes                          | Yes                          |
| <b>L</b>   | No answer to the survey      |                              |                              |                              |
| <b>NL</b>  | No                           | Yes                          | No                           | No                           |
| <b>A</b>   | No                           | No                           | No                           | No                           |
| <b>P</b>   | Yes                          | Yes                          | Yes                          | Yes                          |
| <b>FIN</b> | No                           | Yes                          | Yes                          | Yes                          |
| <b>S</b>   | (No) <sup>46</sup>           | (Yes) <sup>46</sup>          | (Yes) <sup>46</sup>          | (Yes) <sup>46</sup>          |
| <b>UK</b>  | Yes                          | Yes                          | Yes                          | Yes                          |

<sup>45</sup> Within the bottom up calculations (see above footnote 42)

<sup>46</sup> Separated accounts are prepared but not made public.

### 3. NUMBERING

This section presents the status of availability of carrier selection (CS), carrier pre-selection (CPS) and number portability by type of call. Data have been provided by the national regulatory authorities and give the situation at August 2002.

Greece has been granted a deferment until 1 January 2003 for the carrier pre-selection and number portability. Carrier Selection and carrier pre-selection are not compulsory for calls from mobile networks.

**Table 6: Availability of carrier selection (CS) and pre-selection (CPS) by type of call**

|            | From fixed networks |                   |                                       |         |                 |        |   |        | From mobile networks |     |
|------------|---------------------|-------------------|---------------------------------------|---------|-----------------|--------|---|--------|----------------------|-----|
|            | Local calls         |                   | Long-distance and international calls |         | Calls to mobile |        | Calls to non geographic numbers <sup>47</sup> |        | Mobile calls         |     |
|            | CS                  | CPS               | CS                                    | CPS     | CS              | CPS    | CS  | CPS    | CS                   | CPS |
| <b>B</b>   | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | Yes   | Yes    | No                   | No  |
| <b>DK</b>  | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | Yes   | Yes    | Yes                  | Yes |
| <b>D</b>   | No                  | No                | Yes                                   | Yes     | Yes             | Yes    | No  | No     | No                   | No  |
| <b>EL</b>  | Yes                 | 1/2/03            | Yes                                   | 1/12/02 | Yes             | 1/2/03 | Yes   | No     | No                   | No  |
| <b>E</b>   | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | 1/3/03  | 1/3/03 | Yes <sup>48</sup>    | Yes |
| <b>F</b>   | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | No  | No     | No                   | No  |
| <b>IRL</b> | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | Yes   | Yes    | No                   | No  |
| <b>I</b>   | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | No  | No     | No                   | No  |
| <b>L</b>   | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | Yes   | Yes    | No                   | No  |
| <b>NL</b>  | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | No  | No     | No                   | No  |
| <b>A</b>   | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | No/Yes <sup>49</sup>                          | No/Yes | No                   | No  |
| <b>P</b>   | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | No  | No     | Yes <sup>50</sup>    | No  |
| <b>FIN</b> | Yes                 | Yes               | Yes                                   | Yes     | Yes             | Yes    | No  | No     | Yes <sup>51</sup>    | Yes |
| <b>S</b>   | Yes                 | Yes <sup>52</sup> | Yes                                   | Yes     | Yes             | Yes    | No  | No     | No                   | No  |
| <b>UK</b>  | Yes                 | Yes <sup>53</sup> | Yes                                   | Yes     | Yes             | Yes    | Yes   | Yes    | Yes <sup>54</sup>    | No  |

<sup>47</sup> For example, emergency numbers, free-phone numbers, premium rate services, personal numbers. Mobile numbers are excluded.

<sup>48</sup> Applicable to SMP operators for international calls from 1/12/2000.

<sup>49</sup> CS and CPS for numbers of private networks and some number ranges for personal numbers, not available for any other non-geographic numbers.

<sup>50</sup> Obligation imposed on all mobile operators from 31/3/2000 for international calls.

<sup>51</sup> CS and CPS only for international calls.

<sup>52</sup> No need to dial area code for local CPS calls anymore.

**Table 7: Availability of operator number portability by type of number**

|                | B       | DK  | D       | EL     | E   | F       | IRL   | I   | L   | NL  | A                 | P   | FIN  | S   | UK  |
|----------------|---------|-----|---------|--------|-----|---------|-------|-----|-----|-----|-------------------|-----|------|-----|-----|
| Geographic     | Yes     | Yes | Yes     | 1/1/03 | Yes | Yes     | Yes   | Yes | Yes | Yes | Yes               | Yes | Yes  | Yes | Yes |
| Non-geographic | Yes     | Yes | Yes     | 1/1/03 | Yes | No      | Yes   | Yes | No  | Yes | Yes <sup>55</sup> | Yes | Yes  | Yes | Yes |
| Mobile         | 1/10/02 | Yes | 1/11/02 | 1/7/03 | Yes | 30/6/03 | 11/02 | Yes | No  | Yes | No                | Yes | 8/03 | Yes | Yes |

Chart 1 and Chart 2 show the percentage of geographic and non-geographic numbers allocated to incumbents and new entrants.

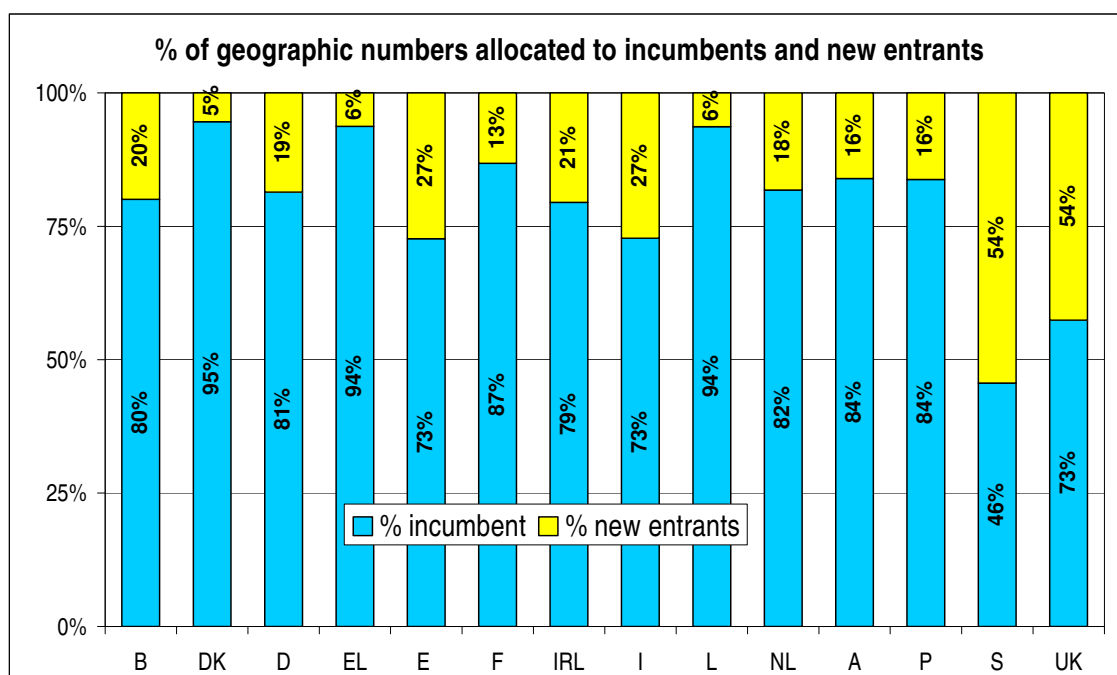
The figures do not take into account the type of numbers allocated (i.e. number of digits) and very often the great majority of the 2 digit numbers (i.e. the most valuable resources) are allocated to the incumbent.

The non-geographical number in Germany refer to freephone and shared cost.

Figure for Austria is based on the number of blocks allocated to incumbent and new entrants and not on the total number allocated. Each number in one “Block” has the same first 3 digits. The whole number length (3 to 7 digits) depends on the number of speech channels which are addressed by this number and of the geographical area where this block is used.

Data for Finland is not available.

**Chart 1**



<sup>53</sup> CPS (using switch software) available on BT’s network for local calls (and calls to non-geographic, mobile, paging, personal numbers) since 12/2001

<sup>54</sup> Vodafone and mmO2 are designated as SMP in the mobile sector. As a result, they must not unduly discriminate in the provision of interconnection services, including Indirect Access (IA) and must meet all reasonable requests for access. In December 1999, following a dispute, OfTel imposed the obligation to provide IA on Vodafone and mmO2 on a retail minus basis. However, no mobile IA providers offer services to consumers.

<sup>55</sup> Except for numbers which do not conform to the Numbering Plan.

**Chart 2**

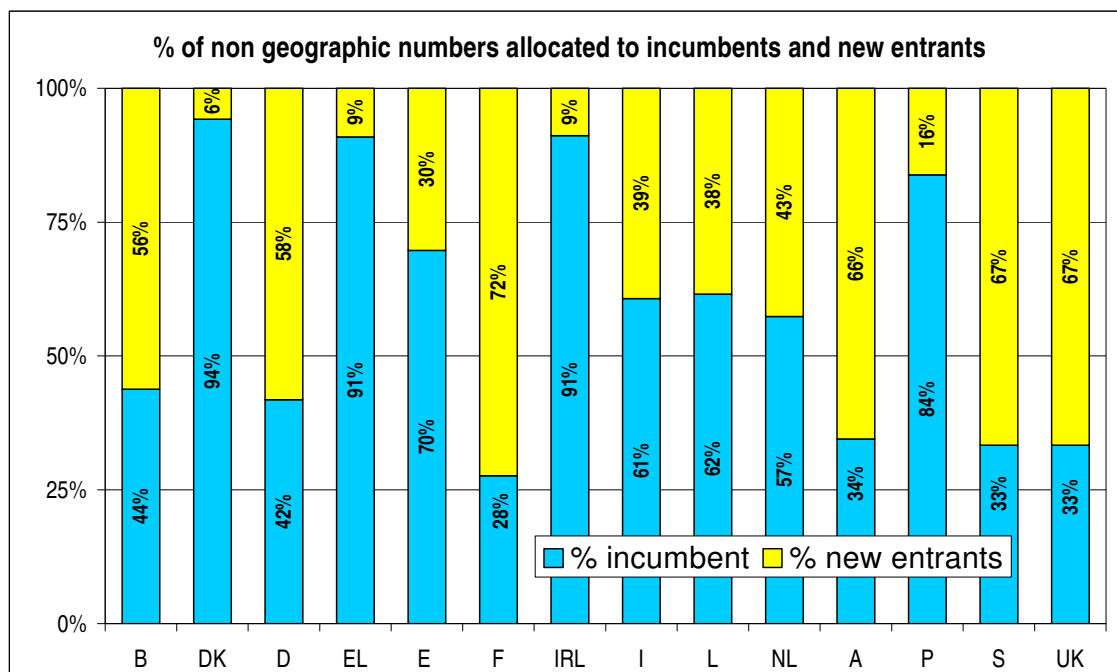


Table 8 shows the situation of the total ported number. Figures represent only the total number of transactions for changing that have taken place. Furthermore, figure do not take into account which or whether any of these numbers have been returned to their original operator.

Data for Germany and the United Kingdom are not available.

Figure for Belgium refers to 1.05.2002

Figure for Denmark refers to 31.12.2001

Figure for Netherlands refers to the period from 1/1/2001 to June 2002. Data from 1/1/1999 to 31.12.2000 are unknown.

Figure for Spain refers to 10,07,2002

**Table 8: Situation of total ported number**

|            | <i>Total ported number</i> | <i>% ported number /tot subscriber lines</i> |
|------------|----------------------------|--|
| <b>B</b>   | 413 696                    | 9,85%  |
| <b>DK</b>  | 364 000                    | 12,70%                                       |
| <b>EL</b>  | Deferment                  | Deferment                                    |
| <b>E</b>   | 327 250                    | 1,60%  |
| <b>F</b>   | 50 000                     | 0,15%  |
| <b>IRL</b> | 12 180                     | 0,76%  |
| <b>I</b>   | 71 000                     | 0,27%  |
| <b>L</b>   | 46                         | 0,01%  |
| <b>NL</b>  | 363 299                    | 3,89%  |
| <b>A</b>   | 6 707                      | 0,17%  |
| <b>P</b>   | 23 578                     | 0,56%  |
| <b>FIN</b> | 15 00                      | 0,47%  |
| <b>S</b>   | 5 677                      | 0,10%  |

#### 4. IMPLEMENTATION OF DECISION NO. 128/1999/EC (UMTS DECISION)

##### REPORTING REQUIREMENTS

The UMTS Decision<sup>56</sup> (Article 12) requires the Commission to keep developments in the field of UMTS under review and to report to the European Parliament and to the Council within two years on the effectiveness of action taken pursuant to the Decision.

The Commission has published in March 2001 and June 2002 two Communications on the subject of Third generation mobile communications (3G)<sup>57</sup>, which include an analysis on the regulatory situation in the Member States and market developments and propose action lines to be taken in this field. These Communications, together with the present Report, fulfil the reporting requirements under the Decision.

This report covers the following aspects: implementation of the provisions of the UMTS Decision, factual data on the licensing process in the Member States, including licence conditions defined at the national level, and an assessment of the effectiveness of action taken under the UMTS Decision.<sup>58</sup>

##### IMPLEMENTATION OF THE DECISION

The UMTS Decision has to be seen in the general context of the EC regulatory framework<sup>59</sup>, in particular Directive 1997/13/EC (“Licensing Directive”) which sets out the principles to be complied with by the Member States when licensing telecommunications services.<sup>60</sup>

A distinction has to be drawn between the requirements of the UMTS Decision and Community legislation in general and the conditions imposed by Member States pursuant to their own competence as licensing and spectrum management authorities.

<sup>56</sup> Decision No 128/1999/EC of the European Parliament and of the Council of 14 December 1998 on the co-ordinated introduction of a third-generation mobile and wireless communications system (UMTS) in the Community, OJ L 017, 22. 01.1999, p. 1. Text available online at:

[http://europa.eu.int/information\\_society/topics/telecoms/radiospec/mobile/legislation/index\\_en.htm](http://europa.eu.int/information_society/topics/telecoms/radiospec/mobile/legislation/index_en.htm).

<sup>57</sup> Communication on “The Introduction of Third Generation Mobile Communications in the European Union: State of Play and the Way Forward, COM(2001)141 of 20 March 2001; Communication on “Towards the full Roll-out of Third Generation Mobile Communications”, COM(2002)301 of 11 June 2002. These are available online at:

[http://europa.eu.int/information\\_society/topics/telecoms/radiospec/mobile/communications/index\\_en.htm](http://europa.eu.int/information_society/topics/telecoms/radiospec/mobile/communications/index_en.htm)

<sup>58</sup> The following sources have been used in the compilation of this report: answers to the questionnaire sent to national administrations in the context of the preparation of the Commission 8<sup>th</sup> implementation report; study on “Comparative assessment of the licensing regimes for 3G mobile communications in the European Union and their impact on the mobile communications sector”, carried out for the Commission by consultants McKinsey, 25 June 2002. The study is available at:

[http://europa.eu.int/information\\_society/topics/telecoms/radiospec/mobile/studies/index\\_en.htm](http://europa.eu.int/information_society/topics/telecoms/radiospec/mobile/studies/index_en.htm).

<sup>59</sup> See Recital 9 of the UMTS Decision, recalling the relevant Community legal framework.

<sup>60</sup> Directive 97/13/EC of the European Parliament and of the Council of 10 April 1997 on a common framework for general authorisations and individual licences in the field of telecommunications services, OJ L 117, 7.5.1997, p.15.

## 4.1.CO-ORDINATED AUTHORISATION APPROACH AND LICENSING

Article 1 of the UMTS Decision stresses that the aim of the decision is to facilitate the rapid and co-ordinated introduction of compatible UMTS networks and services in the Community on the basis of internal market principles and in accordance with market demand.

On that basis, Article 3 of the Decision requires that Member States establish an authorisation system by 1 January 2000 in order to allow for the co-ordinated and progressive introduction of UMTS services on their territory by 1 January 2002 at the latest.

All Member States have now effectively implemented the UMTS Decision in this regard and have awarded 3G licences, assigning frequencies allocated to 3G in accordance with the relevant ERC Decisions, which in turn were adopted as a result of mandates given to the CEPT under the Decision.<sup>61</sup>

### 4.1.1. *Licensing process in the Member States*

The initial round of licensing took place during a period of over two years, from March 1999 (*Finland*) to June 2002 (*Ireland*). At 1 January 2002, all Member states had issued 3G licences, except Luxembourg and Ireland where the licensing process was finalised in May and June 2002, respectively. In total, 62 licences for 3G had been awarded in the EU at 30 October 2002, of which 14 licences went to new entrants on the relevant national markets (in *Denmark, Germany, Spain, Ireland, Italy, Luxembourg, Austria, Portugal, Sweden* and *the United Kingdom*).

The Member States have used different types of selection methods to award 3G licences. Some have used auctions (*Austria, Belgium, Denmark, Germany, Greece, the Netherlands* and *the United Kingdom*), while others comparative selection procedures (*Finland, France, Ireland, Luxembourg, Portugal, Spain* and *Sweden*). In *Italy* a hybrid approach was employed.

The number of licences offered in each Member State varied. *Belgium, Spain, Italy, Ireland, Portugal, France, Finland, Sweden* and *the United Kingdom* offered one licence more than the existing GSM ones (N+1), while Luxembourg offered two more (N+2). In *Denmark* and *the Netherlands* the licences offered were equal to the number of existing mobile operators. *Austria, Germany* and *Greece* did not fix the number of licences in advance but set out thresholds based on the number of frequency blocks on offer.

At the end of the initial round of licensing, in some Member States (*Belgium, France, Greece, Ireland, and Luxembourg*) not all the available licences had been assigned. In France two licences out of four were issued in June 2001 and one more licence was issued in October 2002 following a second licensing round. The conditions (timing and award methods) for the issuing of licences for the remaining spectrum in these countries have not yet been decided.

### 4.1.2. *Highlights on national licence conditions*

The UMTS Decision and other relevant Community law set out a procedural framework for the introduction of 3G in the European Union. The determination of specific licence conditions falls within the competence of individual Member States, subject to the principles set out in the Licensing Directive.

#### *a- Licence fees and payment modalities*

The price paid for 3G licences varies considerably across the Member States. Some € 103.9bn was paid in auctions and € 5.2bn in comparative bids, for a total of around €109bn.<sup>62</sup>

---

<sup>61</sup> See below, section 4.3.

<sup>62</sup> Source: study on 3G licensing by McKinsey, June 2002 (see footnote 58 above).



Some Member States revised the fees associated with 3G licences. In its 2002 Budget Law, *France* reduced the fees for a 3G licence from €4.95bn to €619m, coupled with an annual charge of 1% on 3G revenues. *Spain*, also in its 2002 Budget Law, reduced by some 65% the charges associated with the reservation of radio frequencies (including 3G) and introduced a cap on future increases of 5% on an annual basis until 2006. This reduction followed the substantial increases in the charges that had been effected by the Budget Law for 2001.

Payments for 3G licences were fixed according to different modalities: immediate payments, instalments and an annual percentage of revenues. Up-front payments were required in *Belgium, Germany* and *the Netherlands*, while *Portugal, Denmark, Finland* and *Ireland* provided for payments in instalments. In *Italy* and the *United Kingdom*, 3G licensees had the option to choose between immediate payments and instalments. In *France, Luxembourg, Spain, Austria, Greece* and *Sweden* there is, to varying degrees, provision for payments to be calculated by reference to a percentage of revenues.

#### b- Licence duration

In the majority of the Member States the duration of 3G licences is 20 years, except in *Luxembourg, the Netherlands, Portugal* and *Sweden* where licences were awarded for a period of 15 years. In *Italy* and *France*, licence duration has been extended from 15 to 20 years.

#### c- Launch of services

The Decision does not set a deadline for the launch of 3G services but merely requires that the Member States put in place an authorisation system allowing operators to offer services from 1 January 2002, according to commercial demand.

A deadline for the launch of 3G services has been provided for in some Member States, either by general provision or specifically in each individual licence (*Belgium, Greece, France, Ireland, Luxembourg, the Netherlands* and *Portugal*). In some cases (*Belgium, Spain* and *Portugal*), the original launch date has been postponed.

#### d- Rollout/Coverage requirements

Rollout and/or coverage requirements are provided for to varying degrees in all Member States. Detailed information on the regulatory provisions concerning coverage and/or launch obligations can be found in the table in Annex.

## **4.2. ROAMING RIGHTS AND OBLIGATIONS**

### **4.2.1. Community-wide roaming**

Ensuring seamless compatible communications and coverage across the EU is a key aspect of the Decision. Article 3, paragraph 3 of the Decision requires the Member States to ensure that licences for 3G allow transnational roaming in the Community. UMTS was widely accepted by 3G licensees as the technical platform for providing 3G services thus ensuring interoperability and transnational roaming.

Furthermore, according to Article 4.1 of the UMTS Decision, the Member States shall encourage 3G licensees to negotiate among themselves cross-border roaming agreements to ensure seamless Community-wide service coverage. No indications have been received so far that would anticipate difficulties in the provision of cross-border roaming in the EU.

#### 4.2.2. *Less populated areas*

According to Article 4.2 of the UMTS Decision, Member States may take action, where necessary, to ensure coverage of less-populated areas. In this respect, most Member States have some form of legal provision governing national roaming (see table in Annex) and/or geographic sharing.

In all Member States national roaming between GSM (2G) and 3G operators (“2G-3G roaming”) is possible and/or mandated, subject to certain conditions. Only in *Germany* is this not regulated by specific provisions. In some cases, operators who are holders of both 2G and 3G licences have an obligation to provide national roaming on their 2G network to operators who hold only a 3G licence (subject to certain conditions).

The possibility of concluding national roaming agreements between 3G operators (“3G-3G roaming”) is also explicitly provided for in some Member States (*Denmark, Spain, France, Finland, Italy, Luxembourg and Greece*).

Geographic sharing refers to agreements concluded by 3G operators in order to ensure coverage of different areas of the national territory via national roaming and thus facilitate geographic coverage of their services. Differently from general roaming agreements, these agreements have a specific geographic scope. In the majority of the Member States, geographic sharing agreements, where allowed, do not count towards rollout/coverage obligations provided by the licences (the exception is *Spain and Finland*).

#### 4.3. CO-OPERATION WITH CEPT<sup>63</sup>

The UMTS Decision<sup>64</sup> requires that compatible UMTS networks and services be provided in frequency bands to be harmonised by CEPT to ensure interoperability of services as well as roaming capabilities at Community-wide level, on the basis of internal market principles and in accordance with commercial demand.

Pursuant to Article 5 of the UMTS Decision, the Commission may give CEPT mandates *inter alia* to harmonise frequency use. Such mandates define the tasks to be performed and lay down a timetable. The mandates issued by the Commission resulted in decisions of the CEPT’s European Radiocommunications Committee (ERC).

The Commission has until now issued four mandates to CEPT under the UMTS Decision. These mandates were adopted according to comitology procedures.<sup>65</sup> Taking into account spectrum bands identified by the International Telecommunications Union (ITU), the first (Mandate 1) required CEPT to harmonise the use of the bands 1900-1980, 2010-2025 and 2110-2170 MHz for terrestrial UMTS services to allow for the use of such bands by 1 January 2002 in accordance with commercial demand. These bands constitute the so-called “core band”.

A further mandate (Mandate 2) resulted in an ERC Decision which contains the spectrum plan for the usage of the ‘core band’ and provides a common approach to be followed by CEPT administrations when licensing 3G services to be operated in the “core band”.

The need to make additional spectrum for 3G available in due time has been identified at the global level and the issue was put on the agenda of the WRC in 2000. In this respect, the Commission issued in July 1999 a Mandate 3 for the development of a common plan to

---

<sup>63</sup> *Conférence Européenne des postes et télécommunications/ European Conference of Postal and Telecommunications Administrations*. The following two committees are of particular relevance in the context of the implementation of the UMTS Decision: the European Committee for Telecommunications and Regulatory Affairs (ECTRA) and the European Radiocommunications Committee (ERC).

<sup>64</sup> Article 3, paragraph 3, first indent. To be read together with Article 5.

<sup>65</sup> Pursuant to the procedure laid down in Article 17 of the Licensing Directive.

identify additional frequency bands for the provision of 3G services in the Community, with a view to making them available between 2005 and 2010. This resulted in a European Common Proposal to the World Radio Conference (WRC) to secure 160MHz of additional spectrum for UMTS, that was subsequently accepted by WRC-2000.<sup>66</sup>

All Member States have implemented the ERC Decisions resulting from these mandates.<sup>67</sup>

In March 2001, the Commission issued a fourth mandate to CEPT (Mandate 4) to undertake preliminary investigations and to adopt a first set of harmonising measures necessary to ensure the availability in the Community of additional frequency bands for the provision of UMTS/IMT-2000 services.<sup>68</sup> Work under this mandate is currently being undertaken and is expected to be completed by the end of 2002.

#### **4.4.CO-OPERATION WITH ETSI**

Article 6 of the UMTS Decision provides that the Commission shall take all necessary measures, where appropriate in co-operation with ETSI, to promote a common and open standard for the provision of compatible UMTS services in Europe.

The basic concept for UMTS was developed by ETSI through a transparent and open process and was later proposed to the ITU. This proposal was incorporated in the ITU recommendation defining IMT-2000, the family of standards for 3G.<sup>69</sup>

At the European level, action has been taken to ensure the availability of harmonised standards for terminal equipment. To this end, the Commission granted in 1999 to ETSI a general mandate for elaborating harmonised standards for a large variety of equipment, including UMTS/IMT-2000, pursuant to Directive 1999/5/EC (the "R&TTE Directive").<sup>70</sup> These standards are now available. Similar standards are being developed for base stations.

#### **4.5.INTERNATIONAL ASPECTS**

##### ***4.5.1. Free circulation of UMTS equipment in third countries***

Article 9 of the UMTS Decision calls on the Commission to take the necessary measures to facilitate the introduction of UMTS services and the free circulation of UMTS equipment in third countries. The Commission has been pursuing a proactive policy in order to ensure that member countries of the ITU do not put barriers to the circulation of roaming equipment. This is reflected in two ITU recommendations concerning the global circulation of IMT-2000 standards.<sup>71</sup>

---

<sup>66</sup> Additional information on WRC-2000 can be found at: <http://www.itu.int/newsarchive/wrc2000/>.

<sup>67</sup> ERC Decision(97)07, ERC Decision (00)01 and ERC Decision (99)25.

<sup>68</sup> Mandate to CEPT to harmonise frequency usage in order to facilitate a co-ordinated implementation in the Community of third generation mobile and wireless communication systems operating in additional frequency bands as identified by WRC-2000 for IMT-2000 systems, 9 March 2001.

<sup>69</sup> Recommendation Q.1701 (03/99) on a framework for IMT-2000 networks. Text available at <http://www.itu.int/ITU-T/imt-2000/recommendations.html>.

<sup>70</sup> Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity, OJ L 91, 7.4.1999, p. 10. This Directive regulates the placing on the market, the free movement and putting into service in the Community of radio equipment and telecommunications terminal equipment. Information the Directive and standards adopted pursuant to it can be found at: <http://europa.eu.int/comm/enterprise/rte/gener.htm>.

<sup>71</sup> Recommendation M.1579 on global circulation of IMT-2000 terminals and Recommendation M.1581 on generic unwanted emission characteristics of mobile stations using the terrestrial radio interfaces of IMT-2000, both approved in July 2002.

#### 4.5.2. Definition of IMT-2000/UMTS standards

At the international level, detailed specifications for IMT-2000/UMTS have been developed in the global context by 3GPP<sup>72</sup>, a partnership of standardisation bodies created in December 1998. The process was entirely industry-led. The Commission, though not directly involved, supported this initiative as an appropriate means to establish common technical specifications at the global level.

The UMTS standard has been widely adopted by operators and today UMTS specifications have been chosen by over 110 3G licensees world-wide.

#### 4.6. VALIDITY OF THE DECISION

The UMTS Decision has a validity of 4 years from the date of its entry into force and is due to expire on 22 January 2003.

After expiry, the new regulatory framework for electronic communications and the Radio Spectrum Decision will provide an adequate basis to further ensure the co-ordinated development of 3G communications in the EU.<sup>73</sup>

#### Effectiveness of action taken under the Decision

The effectiveness of the action taken pursuant to the UMTS Decision has to be assessed in the context of general developments affecting the telecom markets over the last two years. These aspects have been extensively dealt with in the two Communications on 3G issued by the Commission in 2001 and 2002<sup>74</sup> and do not need to be repeated here. In summary, several factors have played a crucial role: the financial environment, the state of technology and lack of experience in the market for new wireless services, and the regulatory environment.

The market for 3G services is still largely untested. However, some wireless data services can already be provided via an upgrading of GSM networks to GPRS<sup>75</sup>. A positive development in this respect is that operators have now launched GPRS services in all Member States. This represents an important test for the future 3G market as it enables European customers to experience and familiarise themselves with '3G-like' services.

The general negative financial situation of the telecom sector has also affected the introduction of 3G in the EU and remains today a major hurdle for the sector. Other obstacles to the full rollout of 3G lie in difficulties of technical or administrative nature, notably problems in making available terminal equipment in sufficient quantities with a view to the commercial launch of 3G services, and difficulties in site acquisition that affect network deployment.

The UMTS Decision only provides for the setting up of the regulatory framework necessary for the introduction of 3G services in the Community. It is clear that the obstacles mentioned above go beyond the scope of the UMTS Decision and cannot be attributed to an ineffective implementation of the Decision. In this context, the Commission does not consider the fact that two Member States (*Luxembourg* and *Ireland*) did not complete the licensing process by the

<sup>72</sup> Third generation partnership project, including ETSI (Europe), ARIB (Japan), TTC (Japan), TTA (Korea) and T1 (USA).

<sup>73</sup> Decision No. 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision), OJ L 108, 24.04.2002, p.1.

<sup>74</sup> See footnote 57 above.

<sup>75</sup> General Packet Radio Service: an evolution of the GSM platform allowing for 'packet switched' transmission over GSM networks.

deadline of 1 January 2002 as affecting the overall schedule for the introduction of 3G services in the EU.

On the basis of its Communications on 3G, the Commission launched in 2001 and has fostered a continuous dialogue with the Member States and all stakeholders on actions to facilitate the introduction of 3G in the EU.

In this context, an important issue that has been discussed is the possibility for 3G operators to conclude agreements to share network infrastructure. This type of agreements allow operators to share network infrastructure at different levels, thus facilitating the deployment of 3G networks. Scope exists for network infrastructure sharing, to a greater or lesser extent, in all Member States (see table in Annex).

## **Conclusions**

The Commission considers that the requirements of the UMTS Decision have been effectively implemented in the Member States.

Ultimately, the effectiveness of action taken pursuant to the UMTS Decision, in the broader context of the development of mobile communications in the EU, can only be assessed once the market for 3G services is fully established and operational.

**ANNEX** – Table on 3G network deployment conditions in the EU

**Table 9: 3G Network Deployment conditions in the EU**

(Information provided by Member States: situation at August 2002, unless otherwise indicated)

|           | Number of 3G Licences awarded / offered<br>(Date of award) | Coverage/roll-out requirements  | Deadline for launch of 3G services? Date, including details of any postponement   | Legal provision governing national roaming for: 3G/2G; 3G/3G   | Network Infrastructure Sharing (NIS)                     |  |  |
|-----------|--|---|---|--|--|--|--|
|           |  |   |   |  | NIS regulatory provisions before 3G licensing            | NIS regulatory provisions in 3G licensing          | NIS regulatory guidelines post 3G licensing              |
| <b>B</b>  | 3 / 4<br>(March 2001)                                      | (a) 30% of population after three years;<br>(b) 40% of population after four years;<br>(c) 50% of population after five years;<br>(d) 85% after six years (to be reviewed).   | Yes:18 months after licence granted.<br>The Ministerial Decree of 13 March 2002 granted a postponement of a full year (also applicable to the coverage objectives)  | <b>3G/2G</b> : Yes, for a new entrant 3G operator<br><b>3G/3G</b> : No   | Yes, 2G  | None   | None   |
| <b>DK</b> | 4 / 4<br>(October 2001)                                    | <ul style="list-style-type: none"> <li>30% of population at the end of 2004</li> <li>80% of population at the end of 2008</li> </ul>  | No binding deadline for launch of 3G services. The deadline for performance of first coverage requirement is end of 2004.   | <b>3G/2G</b> : The regulation of national roaming is governed by the Telecommunications Act (ss. 43, 47 and 65) and the Executive Order on Interconnection.<br><b>3G/3G</b> : Same as above. | Yes  | None   | None   |
| <b>D</b>  | 6 / 6<br>(August 2000)                                     | The licensees are obliged to offer UMTS/IMT-2000 mobile services covering at least 25% of the population by 31.12.2003 and least 50% of the population by 31.12.2005. This obligation applies provided that the appropriate specifications for UMTS/IMT-2000 standards selected by the licensees are available in time before starting the service with sufficient stability and the appropriate technology is available in the market. | No However, see coverage obligations.   | <b>3G/2G</b> : No<br><b>3G/3G</b> : No   | Yes, 2G  | Yes  | Yes  |
| <b>EL</b> | 3 / 4<br>(July 2001)                                       | Coverage of at least 25 % of the Greek population by December 2003 ; Coverage of the Olympic Games facilities, venues in the Attica region and main connecting routes in the Attica region by June 2004;<br>Coverage of at least 50 % of the Greek population by December 2006  | January 2004 at the latest  | <b>3G/2G</b> : Telecommunications Law 2867/2000; Dec.218/36/2001 EETT<br><b>3G/3G</b> : As above   | No specific NIS provisions. Only competition law applies | Yes  | None   |
| <b>E</b>  | 4 / 4<br>(March 2000)                                      | Coverage obligation for technical tests in the cities with more than 250.000 inhabitants (26% of the population) by 1 June 2002.  | Original deadline postponed from August 2001 to June 2002. On 1 June 2002 the 3G became operational for technical tests. Commercial launches will be carried out according to the wishes of each operator without compulsory time limits. | <b>3G/2G</b> : Order CTE/601/2002, of 14 March, (BOE of 20/03/2002).<br><b>3G/3G</b> : As above  | Yes  | Yes;<br>3G-2G national roaming, though temporarily | Yes;<br>Order CTE/601/2002 of 14 March: national roaming |

|     | Number of 3G licences awarded / offered<br>Date of award | Coverage/roll-out requirements  | Deadline for launch of 3G services? Date, including details of any postponement   | Legal provision governing national roaming for: 3G/2G; 3G/3G   | Network Infrastructure Sharing (NIS)          |   |   |
|-----|--|---|---|--|---|---|---|
|     |  |   |   |  | NIS regulatory provisions before 3G licensing | NIS regulatory provisions in 3G licensing   | NIS regulatory guidelines post 3G licensing                     |
| F   | 2 / 4<br>(June 2001)<br>1 / 2<br>(October 2002)          | Yes (% of population)<br>SFR : 75% by July 2003; 98,9% by July 2006; 99,3% by July 2009<br>Orange France : 58% by July 2003; 94% by July 2006; 98% by July 2009<br>Bouygues: 20% by November 2004; 60% by November 2007; 75% by November 2010   | Yes (SFR : March 2002, Orange France : June 2002)subject to availability of equipment (conditions of availability not yet fulfilled).<br>Bouygues: 30 October 2004 [to be verified once licence issued] | <b>3G/2G</b> : Yes. A 2G/3G operator must provide, on request, 2G national roaming to a 3G-only operator.<br><b>3G/3G</b> : permitted  | Yes, 2G                                       | Yes   | ART's position announced 10 December 2001                       |
| IRL | 3 / 4<br>(July-Sept 2002)                                | For 'A' licence: 80% demographic coverage: 53% of the national population by the end of December 2005; 80% coverage by the end of December 2007.<br>For 'B' licences: 53% demographic coverage: 33% demographic coverage by the end of June 2006; 53% demographic coverage by the end of June 2008. | Launch of commercial services no later than 1 January 2004 was a minimum requirement for obtaining a licence in the 3G competition  | <b>3G/2G</b> : No legal provision but a pre-condition to enter the 3G licence competition was that all Applicants for either the "A" or "B" licences who are currently licensed to provide GSM services and networks in Ireland will be required to agree to an obligation to provide national roaming facilities onto their GSM network to all new market entrants who meet the minimum roll-out requirement to qualify for roaming. The national roaming obligation will apply for a period of five years from the date of the granting of the 3G licence to the new market entrant, and will become effective only when the new market entrant has rolled out a 3G mobile radio access network infrastructure capable of serving at least 20% of the Irish population.<br><b>3G/3G</b> : No.  | Yes, 2G                                       | Applicants were invited to commit to provide access to radio transmission sites under their control | Code of Practice to be developed in consultation with licensees |
| I   | 5 / 5<br>(Nov. 2000)                                     | Yes, coverage only.<br>20 region capital cities by June 30, 2004<br>103 province capital cities by Dec. 31, 2006  | No  | <b>3G/2G</b> : Yes (deliberation n. 388/00/Cons):<br>- Incumbents with 3G licence have to offer roaming to new entrants, for all commercialised services, data included, for 30 months over the national territory and for 60 months over the provincial capital territories, not already covered by the new entrant.<br>- Existing operators with SMP have to offer roaming with cost orientated conditions.<br>- New entrants have to show proof to have covered at least 10% of national population by their own frequencies, and to have started the commercial service. Alternatively they should show proof of ability to fulfil those requirements within next 6 months, upon specific authorisation by NRA.<br><b>3G/3G</b> : Yes: Based on commercial agreements. Frequency sharing is allowed. Coverage obtained by means of frequency sharing doesn't count towards the coverage obligations. | Yes, 2G                                       | Yes (based on Telecommunications Act and 3G specific regulation)                                    | None  |
| L   | 3 / 4<br>(May 2002)                                      | Yes, coverage requirement in the individual 3G licence. Information not public<br>No constraints in the law/regulation  | Yes, deadline for launch set individually in the 3G licence. Information not public   | <b>3G/2G</b> : Each 2G operator with a 3G licence must provide roaming on its 2G network to 3G operators on its own internal 3G-2G transfer terms<br><b>3G/3G</b> : Art. 28 (2) of Grand-Ducal Regulation of 14 December 2001  | Yes, 2G                                       | Yes   | -   |
| NL  | 5 / 5<br>(July 2000)                                     | Yes; built-up areas of all cities with more than 25,000 inhabitants, along all main connecting arteries and some motorways and airports by 1 January 2007   | 1 January 2007; a minimum outdoor service level of 144 kbit/s is required   | <b>3G/2G</b> : Yes, through provisions in the Telecoms Act relating to special access<br><b>3G/3G</b> : Yes, see above   | Yes, 2G                                       | Yes (Roll Out obligations cannot be met by national roaming nor by shared core networks)            | Yes (NMa, OPTA and V&W Memorandum of 26 September 2001)         |

|     | Number of 3G licences awarded / offered<br>(Date of award) | Coverage/roll-out requirements   | Deadline for launch of 3G services? Date, including details of any postponement   | Legal provision governing national roaming for: 3G/2G; 3G/3G  | Network Infrastructure Sharing (NIS)  |  |  |
|-----|--|--|---|---|---|--|--|
|     |  |  |   |   | NIS regulatory provisions before 3G licensing   | NIS regulatory provisions in 3G licensing  | NIS regulatory guidelines post 3G licensing  |
| A   | 6 / 6<br>(Nov. 2000)                                       | Yes<br>25% by the end of 2003<br>50% by the end of 2005  | None except coverage obligations  | 3G/2G : Yes. 3G providers who already have a 2G licence are obliged to make available network capacity (national roaming) to other holders of 3G licences who, on their part, do not have a 2G licence. The obligation will take effect only after the new entrant has achieved 20% coverage of the population and for a time period not exceeding 4 years<br>3G/3G: No | Yes   | Yes  | Yes<br>(28 January 2002)   |
| P   | 4 / 4<br>(Sept. 2000)                                      | Yes. Offer of speed preferably above 128 Kbps for 20% of the population by end of 1st year of activity, 40% by end of 3rd year, 60% by end of 5th year. Compared to the objectives fixed during the contest, the operators themselves assumed coverage obligations higher than those provided, either as regards transmission speed, or as regards coverage by reference to population or land area. | Telecel : January 2002 ;<br>TMN : December 2001 ;<br>Oniway : November 2001 ; Optimus :<br>December 2001.<br>By Order n°111/MES/2001 of 31/12/2001, the launch date was postponed until 31.12.2002, due to the difficulties with equipment provision, be it terminal or network infrastructure. | 3G/2G Despite the absence of any legal obligation, the conclusion of 3G/2G roaming agreements was a positive criterion within the beauty contest for the attribution of 3G licences.<br>3G/3G : No  | Yes   | Yes<br>(One of the criteria in the 3G licence selection procedure)   | Yes (Clarification document published 24 October 2001)   |
| FIN | 4/4<br>(March 1999)  | Yes, according to commitments made in the licence applications.  | 1.1.2002 for the provision of network.<br>No, for end user services   | 3G/2G : Yes, in the law<br>3G/3G::No (According to commercial agreement)  | Yes, 2G   | None<br>(Based on Telecommunications Markets Act)  | None   |
| S   | 4 / 4<br>(Nov. 2000)                                       | When applying for licenses, all 4 licensees committed themselves to cover at least 8.860.000 people in Sweden. The individual commitments were laid down in the license conditions.  | No, not for the mere launch of services, but, when applying for licences, all 4 licensees committed themselves to provide network capacity for mobile telephony services according to UMTS/IMT 2000 to 8.860.000 people by 31/12/2003.  | 3G/2G : Yes.<br>3G/3G: No.  | No mandatory NIS provisions   | Yes  | None   |
| UK  | 5 / 5<br>(June 2000)                                       | Yes - 80% population coverage by 31 December 2007.   | No  | 3G/2G : Yes - agreement between Hutchison 3G UK Ltd and a 2G operator if an agreement cannot be reached.<br>3G/3G: No   | Yes, laid out in mobile PTO licence 1 granted to 2G operators, but only triggered if licensee has SMP | Yes, see preceding column. 3G licensees have same mobile PTO licence and obligations as 2G operators. Wireless Telegraphy Act licence includes provisions on facility sharing. | Yes<br>Joint DTI, RA and OFTEL information note of May 2001 outlines issues arising from NIS by 3G operators |





## 5. UNIVERSAL SERVICE SCHEME

**Table 10: Financing schemes for universal service obligations (USO)**

| Member State | Year | Does the national framework allow the setting up of a funding scheme for USO? | Have the organisation(s) in charge of USO requested funding? (Specify for every annual exercise) | Has an assessment of USO net cost taken place? If yes, please, specify the net cost | Has the funding scheme been activated? If not, specify the reason <sup>76</sup> | Has an annual report been published giving the calculated cost of USO, and identifying the contributions made by all the parties involved? |
|--------------|------|---|--|---|---|--|
| B            | 1999 | Yes   | No   |   |   |  |
|              | 2000 | Yes   | No   |   |   |  |
|              | 2001 | Yes   | Yes  | Still pending   |   |  |
| DK           | 1999 | Yes   | No   |   |   |  |
|              | 2000 | Yes   | No   |   |   |  |
|              | 2001 | Yes   | No   |   |   |  |
| D            | 1999 | Yes   | No   |   |   |  |
|              | 2000 | Yes   | No   |   |   |  |
|              | 2001 | Yes   | No   |   |   |  |
| EL           | 1999 | Yes   | No   |   |   |  |
|              | 2000 | Yes   | No   |   |   |  |
|              | 2001 | Yes   | No   |   |   |  |
| E            | 1999 | Yes   | Yes  | Yes.<br>The net cost calculation presented by the incumbent was not approved.       | No  | No   |
|              | 2000 | Yes   | Yes  | Yes<br>€ 268 M  | It was found that the net cost did not represent an unfair burden               |  |
|              | 2001 | Yes   | Yes  | Still pending   |   |  |
| F            | 1999 | Yes   | Yes  | Yes<br>€ 104,9 M <sup>77</sup>  | Yes   | No <sup>78</sup>   |
|              | 2000 | Yes   | Yes  | Yes.<br>€ 128,7 M <sup>79</sup>   | Yes   | Yes  |
|              | 2001 | Yes <sup>80</sup>   | Yes  | Yes, but provisional.<br>€ 415,7 M <sup>81</sup> .                                  | Yes   | No <sup>82</sup>   |

<sup>76</sup> NRAs may decide not to establish a universal service shared funding mechanism, even when the universal service obligations result in a net cost, when (i) this net cost does not represent an unfair burden for the operators concerned or (ii) it does not justify the administrative costs involved in the funding mechanism.

<sup>77</sup> Final evaluation, after integrating the indirect benefit and without social tariffs, which were not operational.

<sup>78</sup> ART's decision has been published, but contributions made by parties involved were not identified.

<sup>79</sup> Final evaluation after integration of the indirect benefit and with a very weak social tariffs.

<sup>80</sup> A draft ordinance on the financing of US, taking account of the ruling of the Court of Justice and deleting obsolete elements (i.e. additional remuneration) is to be approved.

<sup>81</sup> Provisional evaluation without taking account indirect benefits and with important provisions of social abonnement, which is operational. In order to make a comparison with the results of two previous, the final evaluation is to be taken into account.

<sup>82</sup> No yet, since the evaluation is provisional. Once the evaluation becomes definitive, the publication will include an annexe specifying contributions of the different operators.

| Member State | Year | Does the national framework allow the setting up of a funding scheme for USO? | Have the organisation(s) in charge of USO requested funding? (Specify for every annual exercise) | Has an assessment of USO net cost taken place? If yes, please, specify the net cost | Has the funding scheme been activated? If not, specify the reason <sup>76</sup>  | Has an annual report been published giving the calculated cost of USO, and identifying the contributions made by all the parties involved? |
|--------------|------|---|--|---|--|--|
| IRL          | 1999 | Yes   | Yes (6 months only)  | Still pending   |  |  |
|              | 2000 | Yes   | Yes  | Still pending   |  |  |
|              | 2001 | Yes   | No   |   |  |  |
| I            | 1999 | Yes   | Yes  | Yes<br>€ 62,40 M  | Yes  | Yes  |
|              | 2000 | Yes   | Yes  | Yes<br>€ 58,90 Mro  | Yes  | Yes  |
|              | 2001 | Yes   | Yes  | Still pending   |  |  |
| L            | 1999 | Yes   | No   |   |  |  |
|              | 2000 | Yes   | No   |   |  |  |
|              | 2001 | Yes   | No   |   |  |  |
| NL           | 1999 | Yes   | No   |   |  |  |
|              | 2000 | Yes   | No   |   |  |  |
|              | 2001 | Yes   | No   |   |  |  |
| A            | 1999 | Yes   | Yes  | Still pending   |  |  |
|              | 2000 | Yes   | Not yet  |   |  |  |
|              | 2001 | Yes   | Not yet  |   |  |  |
| P            | 1999 | Yes   | Yes  | Yes   | No.<br>The NRA does not admit to evaluate the cost of the provision of USO incurred before the full liberalization of the telecommunications market. | No   |
|              | 2000 | Yes   | No   |   |  |  |
|              | 2001 | Yes   | No   |   |  |  |
| FIN          | 1999 | No  | No   |   |  |  |
|              | 2000 | No  | No   |   |  |  |
|              | 2001 | No  | No   |   |  |  |
| S            | 1999 | No  | No   |   |  |  |
|              | 2000 | No  | No   |   |  |  |
|              | 2001 | No  | No   |   |  |  |
| UK           | 1999 | Yes   | Yes  | Yes.<br>Between net cost of £12M and net benefit of £8M.                            | No.<br>An unfair burden does not exist.  | No   |
|              | 2000 | Yes   | Yes  | Yes.<br>Between net cost of £12M and net benefit of £8M.                            | No.<br>An unfair burden does not exist.  | No   |
|              | 2001 | Yes   | Yes  | Yes.<br>Between net cost of £12M and net benefit of £8M.                            | No.<br>An unfair burden does not exist.  | No   |

## 6. DIRECTORY AND DIRECTORY ENQUIRY SERVICES

**Table 11: Provision of directory and directory enquiry services**

| <b>Member State</b> | <b><i>Is there at least one <u>directory</u> including <u>all subscribers</u><sup>83</sup> (of all operators) available to all users? If not, which type of subscribers are excluded? (Article 6.2.b, Dir. 98/10/EC)</i></b> | <b><i>Is there at least one <u>directory enquiry service</u> including <u>all subscribers</u><sup>83</sup> ( for all operators) available to all users? If not, which type of subscribers are excluded? (Article 6.2.c, Dir. 98/10/EC)</i></b> | <b><i>Have any specific measures been taken in order to guarantee the provision of these services to disabled users and users with special social needs? Please, specify.</i></b>   |
|---------------------|--|--|---|
| <b>B</b>            | No <sup>84</sup>   | No <sup>84</sup>   | Directory enquiry service by SMS  |
| <b>DK</b>           | Yes  | Yes  | The universal service obligation shall also include provision of a nation-wide directory enquiry service for numbers in the Danish numbering plan, as well as call completion to the numbers in question at a reduced rate, for blind persons, deaf-and-blind persons, visually impaired persons, persons with reading disabilities, and certain groups of physically disabled persons, who, via the service in question, may be compensated significantly for their handicap <sup>85</sup> . |
| <b>D</b>            | Yes <sup>86</sup>  | Yes <sup>87</sup>  | There are some provisions for disabled users and users with special social needs <sup>88</sup> .  |
| <b>EL</b>           | Not yet in practice <sup>89</sup>  | Not yet in practice <sup>89</sup>  | Blind/visually impaired are entitled to make 20 calls/month to the phone enquiry service free of charge. US provider is obliged to make a text-only version of his electronic directory available for the use of blind/visually impaired persons  |
| <b>E</b>            | Not yet in practice <sup>90</sup>  | Not yet in practice <sup>90</sup>  | Blind or those living with them are entitled to make 10 phone calls per month to Telefonica's directory enquiry service free of charge in the context of USO <sup>91</sup> .  |

<sup>83</sup> I.e. for subscribers of fixed telephony services, mobile contracts, mobile pre-paid services and personal numbers, except for those who have expressed opposition to being listed.

<sup>84</sup> For mobile pre-paid services, there is no legal obligation, so that subscriber's data are only included according to the operator's and the client's preference.

<sup>85</sup> Cf. Section 6 of Executive Order No. 1010 of 6 November 2000 on USO Services.

<sup>86</sup> According to TUDLV § 1.2b, the incumbent must provide a printed directory service, which is, in principle, yearly updated, including all the available subscribers' data provided that they have not opposed completely or partially their inclusion.

<sup>87</sup> According to TUDLV § 1.2a, the incumbent must provide a printed directory enquiry service, including all the available subscribers' data provided that they have not opposed completely or partially their inclusion. This also applies for foreign numbers.

<sup>88</sup> Cf. § 29 *Sozialgesetzbuch I* (SGB I).

<sup>89</sup> Provided for by EETT Decision 255/83 14.06.02 on U.S.O content

<sup>90</sup> O.M of 21 December 2001 on USO identifies criteria for the production and updating of directory services within US and identifies the data which are to be included. For mobile subscribers and those to whom special network numbers have been assigned, an opt-in approach applies, while an opt-out approach applies for fixed subscribers.

<sup>91</sup> C.f. OM 68/2002.

| <b>Member State</b> | <b><i>Is there at least one <u>directory including all subscribers</u><sup>93</sup> (of all operators) available to all users? If not, which type of subscribers are excluded? (Article 6.2.b, Dir. 98/10/EC)</i></b> | <b><i>Is there at least one <u>directory enquiry service including all subscribers</u><sup>93</sup> ( for all operators) available to all users? If not, which type of subscribers are excluded? (Article 6.2.c, Dir. 98/10/EC)</i></b> | <b><i>Have any specific measures been taken in order to guarantee the provision of these services to disabled users and users with special social needs? Please, specify.</i></b> |
|---------------------|---|---|---|
| <b>F</b>            | No <sup>92</sup>  | No  | There are some specific measures but they are not applied in practice because no financial compensation has been foreseen.  |
| <b>IRL</b>          | Yes   | Yes   | Yes – e.g specific measures for those with visual and hearing impairments (braille bills, specific directory enquiry services, minicom telephones).                               |
| <b>I</b>            | No <sup>93</sup>  | No <sup>93</sup>  | Yes, operators report annually to the NRA about the measures taken to provide these services to disabled users and users with special needs                                       |
| <b>L</b>            | Yes   | Yes   | Yes   |
| <b>NL</b>           | No <sup>94</sup>  | Yes   | No  |
| <b>A</b>            | Yes   | Yes   | No  |
| <b>P</b>            | Yes <sup>95</sup>   | Yes <sup>95</sup>   | Blind people or visually impaired are entitled to make 20 phone calls per month to the incumbent's directory enquiry service free of charge.                                      |
| <b>FIN</b>          | Yes   | Yes   | Yes, a special service financed by the Ministry of Social Affairs and Health.   |
| <b>S</b>            | No <sup>96</sup>  | Yes   | Yes. The Swedish NRA has procured a service for free directory enquiries for people with specific functional disabilities.  |
| <b>UK</b>           | No <sup>97</sup>  | No <sup>98</sup>  | A free directory service is available for those users unable to use a paper directory.  |

<sup>92</sup> Mobile and new entrants' subscribers are excluded. Mobile operators do not provide their data to the incumbent (Nevertheless, 30% of Orange subscribers have freely provided their data in order to include them in the directory) while new entrants have not signed the relevant convention with France Télécom). There are plans to approve an ordinance and a decree in order to set up a comprehensive directory.

<sup>93</sup> It will be available by the end of year 2002. Provisions have been introduced therefor by regulation 36/02/CONS, so that a fully operative directory, for all subscriber of all operators, will be available by the end of year 2002. As of 1 August 2002, available for subscribers of fixed telephony services.

<sup>94</sup> It will be available from September 2002.

<sup>95</sup> An opt-in approach is applied.

<sup>96</sup> The printed directory provided by a sub-contractor to Telia includes mobile numbers only on subscriber's request and for an extra fee.

<sup>97</sup> Although no subscribers are formally excluded from the core database, there have been difficulties in ensuring all mobile data is available.

<sup>98</sup> All subscribers have access to a directory enquiry service listing all available numbers. However, there have been difficulties in ensuring mobile subscriber data is available and this data is not comprehensively provided at present.

**Table 12: Competition in the market of directory services**

| Member State | How are the relevant subscribers' data provided to all organisations willing to provide directory services/directory enquiry services? (Please, specify) |   |   | How are prices for the provision of subscribers' data fixed?   |
|--------------|--|---|---|--|
|              | Data base set up by the NRA or independent body (Please, specify)  | Data base set up by the incumbent                 | Other. Please, specify.   |  |
| B            | No   | Yes <sup>99</sup>                                 | Operators have to put their data at the directory services providers' disposal on a cost-oriented price   | Fixed between the operators under IBPT's control   |
| DK           | No   | Yes<br>The incumbent's directory enquiry service. | Providers of telecommunications networks or services who reassign subscriber numbers to end-users shall deliver number information data to any parties who wish so. | The payment for delivering number information data shall not exceed the costs of delivering it (the marginal costs).   |
| D            | No   | Yes   |   | The price for the provision of subscribers' data, if any, must be cost-oriented <sup>100</sup> .<br>The Federal Competition Authority has noted that this is not a tariff of a telecommunications service.                                   |
| EL           | No <sup>101</sup>  |   | The procedure of collecting subscribers' data is described in EETT Decision 255/83 14.06.02 on U.S.O content.   | The provision of subscribers' data to the U.S.O provider must be cost oriented <sup>102</sup> .  |
| E            | By the NRA <sup>103</sup>  |   |   | For free   |
| F            | No   | Yes and commercialised.                           |   | This tariff, which has to be cost-oriented, will be defined by commercial agreements.  |
| IRL          |  | Yes   |   | Must be fair, cost-orientated and non-discriminatory.  |
| I            | Data base to be set up jointly by all operators (included the incumbent) and subscriber data to be provided to all organisations <sup>104</sup> .        | Yes   |   | For the database set up jointly by operators, prices are to be defined, on a fair and non discriminatory basis, by the end of 2002.<br>The data of the incumbent's database is provided free of charge.                                      |
| L            | Direct provision from operators to directory service providers.  | No  |   | Par comparaison  |
| NL           | No   | Incumbent has database for own directory services | Other publishers must get information from incumbent and new entrants separately.   | The incumbent buys data from new entrants at cost oriented tariffs. Tariffs are unknown.<br>New entrants do not contribute to publication costs.<br>Other publishers deal with operators at same terms, as provision of data is legal matter |

<sup>99</sup> The Incumbent set up the data base used by the universal directory enquiry service and the universal directory service. Operators have to put their data at the USO provider's disposal on a cost-oriented price

<sup>100</sup> C.f. TKG § 12 Abs. 1.

<sup>101</sup> Competition in directory services/directory enquiry services does not exist yet. However relevant provisions have been included in EETT Decision 255/83 14.06.02 on U.S.O content.

<sup>102</sup> C.f. EETT Decision 255/83 14.06.02 on U.S.O content.

<sup>103</sup> Although it has been foreseen that telephone service providers must provide CMT with their subscribers' data and CMT must provide the entitled entities with them, no provision have been included as regards how to do it. (Art. 14 RSU) The CMT, by resolution of 27 June 2.002, has set up a manual mechanism for the provision of subscribers' data to the directory services providers which will be applied transitorily until an automatic mechanism is set up by CMT.

<sup>104</sup> End of 2002. C.f. Reg. 36/02/CONS.

| <b>Member State</b> | <b>How are the relevant subscribers' data provided to all organisations willing to provide directory services/directory enquiry services? (Please, specify)</b> |  |   | <b>How are prices for the provision of subscribers' data fixed?</b>  |
|---------------------|---|--|---|--|
|                     | <b>Data base set up by the NRA or independent body (Please, specify)</b>  | <b>Data base set up by the incumbent</b> | <b>Other. Please, specify.</b>  |  |
| <b>A</b>            | No  | Yes                                      | Request of data can be made to all operators.   | By contract between the parties  |
| <b>P</b>            |   | Yes                                      |   | Price is fixed by the incumbent according to the principles of transparency and equality.  |
| <b>FIN</b>          |   |  | All operators shall submit information in a format appropriate for publication.   | Reasonably proportional to the costs   |
| <b>S</b>            |   |  | All notified operators are liable to provide available relevant subscribers' data to any party who requests it for the purpose of providing enquiry services. | Since 1 <sup>st</sup> of June 2002, the Telecommunications Act prescribes cost-oriented pricing.   |
| <b>UK</b>           | N/A   | Yes                                      | N/A   | The overall framework is one of cost-orientation and non-discrimination. The actual detail of the charges is worked out in cross-industry negotiations. Should a formal dispute arise, OfTel would seek to investigate further but does not determine charges at this stage. |

## 7. ITEMISED BILLING AND CALL BARRING

**Table 13: Availability of itemised billing**

| MS | Operator  | Which of the following details are shown in the basic level of itemised billing provided at no extra charge? (Please, specify in every cell for each type of calls <sup>105</sup> ) |                       |              |                    |                       | Are additional details provided at extra charge? (Please specify)      | Have any specific measures been implemented for disabled users and users with special social needs? (Please specify)                                     |
|----|---|---|-----------------------|--------------|--------------------|-----------------------|--|--|
|    |   | Partial/full number called  | Duration of each call | Date of call | Price of each call | Other (specify)       |  |  |
| B  | Incumbent (fixed voice telephony)                       | Yes <sup>106</sup>  | Yes                   | Yes          | Yes                | Yes <sup>106</sup>    | Yes <sup>106</sup>   | Yes <sup>106</sup>   |
|    | Main new entrant <sup>108</sup> (fixed voice telephony) | Yes <sup>106</sup>  | Yes                   | Yes          | Yes                | Yes <sup>106</sup>    | Yes <sup>106</sup>   | Yes <sup>106</sup>   |
|    | Main mobile operator <sup>108</sup>                     | Yes <sup>106</sup>  | Yes                   | Yes          | Yes                | Yes <sup>106</sup>    | Yes <sup>106</sup>   | Yes <sup>106</sup>   |
| DK | Incumbent (fixed voice telephony)                       | No <sup>107</sup>   |                       |              |                    |                       |  | No   |
|    | Main new entrant <sup>108</sup> (fixed voice telephony) | No <sup>107</sup>   |                       |              |                    |                       |  | No   |
|    | Main mobile operator <sup>108</sup>                     | No <sup>107</sup>   |                       |              |                    |                       |  | No   |
| D  | Incumbent (fixed voice telephony)                       | Client option   | Yes                   | Yes          | Yes                | Yes                   | Yes  | No   |
|    | Main new entrant <sup>108</sup> (fixed voice telephony) | Client option   | Not for all tariffs   | Yes          | Yes                | Yes                   | es   | No   |
|    | Main mobile operator <sup>108</sup>                     | Client option   | Yes                   | Yes          | Yes                | Yes                   | Yes  | No   |
| EL | Incumbent (fixed voice telephony)                       | Yes   | Yes                   | Yes          | Yes                | Yes.<br>Starting time | Yes.<br>Further analysis such as total number of calls, total duration | Yes<br>Basic level of itemised billing to blind / visually impaired persons, including called number, date of call, charge of each call <sup>109</sup> . |

<sup>105</sup> I.e. for local, national and international calls, as well as for calls to Internet, to mobile number, to premium rate services and any other relevant category. Please specify if a different level of detail is provided depending on the category of call.

<sup>106</sup> No details have been provided by the Belgian authorities.

<sup>107</sup> Itemised billing is regulated in section 22 of Executive Order No. 1169 of 15 December 2000 (<http://www.itst.dk/wimpdoc.asp?page=tema&objno=95024210>). According to the existing regulation the basic level of itemised billing does not include a specification of each call. All operators have to provide fully itemised billing, and these have to be free of charge when arranged in connection with complaints. However the regulation is currently being revised in order to ensure that the free basic level will include a specification of each call.

<sup>108</sup> In case it is not possible to identify one single operator to be considered as "main" operator in the market, please fill in the table for all the leading operators.

<sup>109</sup> C.f. art. 6 EETT Decision 255/83 14.06.02 on U.S.O content.



| MS               | Operator  | Which of the following details are shown in the basic level of itemised billing provided at no extra charge? (Please, specify in every cell for each type of calls <sup>105</sup> ) |                       |              |                    |   | Are additional details provided at extra charge? (Please specify)                                 | Have any specific measures been implemented for disabled users and users with special social needs? (Please specify) |
|------------------|---|---|-----------------------|--------------|--------------------|---|---|--|
|                  |   | Partial/full number called  | Duration of each call | Date of call | Price of each call | Other (specify)   |   |  |
|                  | Main new entrant <sup>108</sup> (fixed voice telephony) | Yes   | Yes                   | Yes          | Yes                | Yes. Starting time  | Yes. Further analysis such as total number of calls, total duration                               | -  |
|                  | Main mobile operator <sup>108</sup>                     | Full number called. However is not required by law  | Yes                   | Yes          | Yes                | Yes. Starting time  | -   | -  |
| E                | Incumbent (fixed voice telephony)                       | Yes   | Yes                   | Yes          | Yes                | No  | Yes. Average duration of the call//starting time/ending time                                      | Braille bills are provided in the context of US <sup>110</sup>   |
|                  | Main new entrant <sup>108</sup> (fixed voice telephony) | Yes   | Yes                   | Yes          | Yes                | No  | -   | -  |
|                  | Main mobile operator <sup>108</sup>                     | Yes   | Yes                   | Yes          | Yes                | No  | -   | -  |
| F <sup>111</sup> | Incumbent (fixed voice telephony)                       | Yes, being a choice to the subscriber the inclusion of the complete or partial number   | Yes <sup>112</sup>    | Yes          | Yes                | Time of the call/ Destination or category of the communication/ options, reductions or eventual promotions. Type of tariff <sup>113</sup> | No  | No   |
|                  | Main new entrant <sup>108</sup> (fixed voice telephony) | Yes   | Yes                   | Yes          | Yes                | Time of the call/destination or category of the communication/ options, reductions or eventual promotions. Type of tariff <sup>113</sup>  | Itemised billing is not free of charge (date, hour, duration and telephone number) <sup>114</sup> |  |

<sup>110</sup> O.M. 68/1992.

<sup>111</sup> Provisions regarding telephone bills have been approved by « arrêté » of 1 February 2002 (Official Journal of 8 February 2002). Regarding itemised billing, art. 11 of this ordinance provides that the itemised billing must include, among others, the full list of telephone communications and, regarding each of them, the following details : date; beginning time, identified in hours and minutes ; telephone number called, provided that provisions in Act 78-17 of 6 January 1978 have been modified ; destination or category of the communication ; quantity consumed within a certain unit of reference -in case this quantity refers to a duration, the bill must identify the actual duration and the duration to be paid for when both values are different ; (...); options, reductions and promotions, if applicable ; the bill including taxes. The itemised billing is to be provided free of charge on request.

This ordinance is applicable since 1 September 2002 to all operators, either the incumbent, fixed new entrants and mobile operators.

<sup>112</sup> For local calls which duration is less than 1 minute, only the total of calls is to be identified: duration, number of calls and price. For the commandes or calls of particular services for forfaitaires tariffs, only the total number of calls and the global price have to be identified.

<sup>113</sup> To be applied since 1 September 2002, HT and TTC.

<sup>114</sup> The itemised bill of the main new entrant and of Orange will be available for free since 1 September 2002.

| MS  | Operator  | Which of the following details are shown in the basic level of itemised billing provided at no extra charge? (Please, specify in every cell for each type of calls <sup>105</sup> ) |                       |              |                    |   | Are additional details provided at extra charge? (Please specify)  | Have any specific measures been implemented for disabled users and users with special social needs? (Please specify) |
|-----|---|---|-----------------------|--------------|--------------------|---|--|--|
|     |   | Partial/full number called  | Duration of each call | Date of call | Price of each call | Other (specify)   |  |  |
|     | Main mobile operator <sup>108</sup>                     | Yes   | Yes                   | Yes          | Yes                | time of the call/destination or category of the communication/options, reductions or eventual promotions. Type of tariff <sup>113</sup> | Itemised billing is not free of charge (date, hour, duration and telephone number) <sup>113</sup>        |  |
| IRL | Incumbent (fixed voice telephony)                       | Yes <sup>115</sup>  | Yes                   | Yes          | Yes                | No  | -  | Braille bills are available to visually impaired   |
|     | Main new entrant <sup>108</sup> (fixed voice telephony) | Yes   | Yes                   | Yes          | Yes                | No  | No   | -  |
|     | Main mobile operator <sup>108</sup>                     | Yes   | Yes                   | Yes          | Yes                | No  | -  | Braille bills are available to visually impaired   |
| I   | Incumbent (fixed voice telephony)                       | Yes   | Yes                   | Yes          | Yes                | City, Type of Tariff or Discount  | No   | No   |
|     | Main new entrant <sup>108</sup> (fixed voice telephony) | Yes   | Yes                   | Yes          | Yes                | City, Type of Tariff or Discount  | Yes <sup>116</sup>   | No   |
|     | Main mobile operator <sup>108</sup>                     | Yes   | Yes                   | Yes          | Yes                | City, Type of Tariff or Discount  | No   | No   |
| L   | Incumbent (fixed voice telephony)                       | Yes   | Yes                   | Yes          | Yes                |   |  |  |
|     | Main new entrant <sup>108</sup> (fixed voice telephony) | Yes   | Yes                   | Yes          | Yes                |   |  |  |
|     | Main mobile operator                                    |   |                       |              |                    |   |  |  |
| NL  | Incumbent (fixed voice telephony)                       | No  | No                    | No           | No                 | Time of the call, type of tariff charged, country of destination  | Yes <sup>117</sup> . Partial/full number called, duration of each call, date of call, price of each call | No   |
|     | Main new entrant <sup>108</sup> (fixed voice telephony) | - <sup>118</sup>  | -                     | -            | -                  | -   | -  | -  |

<sup>115</sup> With the exception of calls under EUR0.05244 (ex VAT), which are banded together, and freephone numbers, which are not detailed.

<sup>116</sup> No details have been provided by the Italian authorities as regards the details given in this itemised bill at extra charge.

<sup>117</sup> 0,02 Euro are charged per itemised call.

<sup>118</sup> It is not possible to identify one operator as the main new entrant for fixed telephony as there are so many in the market.

| MS  | Operator  | Which of the following details are shown in the basic level of itemised billing provided at no extra charge? (Please, specify in every cell for each type of calls <sup>105</sup> ) |                       |              |                    |                                     | Are additional details provided at extra charge? (Please specify)   | Have any specific measures been implemented for disabled users and users with special social needs? (Please specify) |
|-----|---|---|-----------------------|--------------|--------------------|-------------------------------------|---|--|
|     |   | Partial/full number called  | Duration of each call | Date of call | Price of each call | Other (specify)                     |   |  |
|     | Main mobile operator <sup>108</sup>                     | Yes   | Yes                   | Yes          | Yes                | Differs per operator <sup>119</sup> | Differs per operator  | No   |
| A   | Incumbent (fixed voice telephony)                       | No  | No                    | No           | No                 | No                                  | Subscribers can get itemised billing for all calls or for each type of call on request at extra charge. Itemised billing contains the partial number called, the duration, the date and the price of each call. | No   |
|     | Main new entrant <sup>108</sup> (fixed voice telephony) | Two leading carrier network operators offer itemized billing at no extra charge, while other leading operators do, but only at extra charge.  | partial number called | Yes          | Yes                | Yes                                 | No  | No   |
|     | Main mobile operator <sup>108</sup>                     | No  | No                    | No           | No                 | No                                  | Subscribers can get itemized billing for all calls with the mentioned details (number, duration etc.) including SMS at extra charge.  | No   |
| P   | Incumbent (fixed voice telephony)                       | Yes   | Yes                   | Yes          | Yes                |                                     |   | Yes.<br>Braille bills and mails for blinds   |
|     | Main new entrant <sup>108</sup> (fixed voice telephony) | Yes   | Yes                   | Yes          | Yes                |                                     |   | n.d.   |
|     | Main mobile operator <sup>108</sup>                     |   |                       |              |                    |                                     |   | Yes.<br>Braille bills and mails for blinds   |
| FIN | Incumbent (fixed voice telephony)                       | No <sup>120</sup>   |                       |              |                    |                                     | Yes<br>Partial or full numbers and the date of each individual call can be itemised on request at extra charge.   |  |

<sup>119</sup> We have assumed KPN as the main mobile operator as it is the only operator with SMP designation. This information for KPN is not known by OPTA. However, other operators, notably Vodafone, also have significant markets shares. If more than one operator is to be considered we note that the requested information differs per operator.

<sup>120</sup> Calls are not itemised individually but the basic itemised bill shows the total amount of calls (total minutes and total prices) divided into local, long distance, mobile, international and premium rate calls.

| MS | Operator  | Which of the following details are shown in the basic level of itemised billing provided at no extra charge? (Please, specify in every cell for each type of calls <sup>105</sup> ) |                       |              |                    |                 | Are additional details provided at extra charge? (Please specify)   | Have any specific measures been implemented for disabled users and users with special social needs? (Please specify) |
|----|---|---|-----------------------|--------------|--------------------|-----------------|---|--|
|    |   | Partial/full number called  | Duration of each call | Date of call | Price of each call | Other (specify) |   |  |
|    | Main new entrant <sup>108</sup> (fixed voice telephony)               | No <sup>120</sup>   |                       |              |                    |                 | Yes<br>Partial or full numbers and the date of each individual call can be itemised on request at extra charge. |  |
|    | Main mobile operator <sup>108</sup>                                   | No <sup>120</sup>   |                       |              |                    |                 | Yes<br>Partial or full numbers and the date of each individual call can be itemised on request at extra charge. |  |
| S  | Incumbent (fixed voice telephony)                                     | Yes <sup>121</sup>  | Yes                   | Yes          | Yes                | -               | -   | -  |
|    | Main new entrant <sup>108</sup> (fixed voice telephony)               | No <sup>122</sup>   | No                    | No           | No                 |                 |   |  |
|    | Main mobile operator <sup>108</sup>                                   | No <sup>123</sup>   | No                    | No           | No                 |                 |   |  |
| UK | Incumbent (fixed voice telephony)<br><b>BT Group</b>                  | Yes   | Yes                   | Yes          | Yes                | N/a             | No  | Large print, Braille, computer disk, talking bills, call my bill and light user scheme.                              |
|    | Main new entrant <sup>108</sup> (fixed voice telephony)<br><b>Ntl</b> | No  | No                    | No           | No                 | N/a             | Yes <sup>124</sup>  | No   |
|    | Main mobile operator <sup>108</sup><br><b>Vodafone</b>                | No  | No                    | No           | No                 | N/a             | Yes <sup>125</sup>  | No   |

<sup>121</sup> With the exception of local calls

<sup>122</sup> Itemised billing provided by main new entrant (Tele2) but only at extra charge.

<sup>123</sup> Itemised billing provided by main mobile operator (Telia Mobile) but only at extra charge.

<sup>124</sup> Fully itemised costs £1 per month. No details have been provided by the British authorities as regards the details given in this itemised bill at extra charge.

<sup>125</sup> Itemised available costs vary due to resellers' different tariffs. No details have been provided by the British authorities as regards the details given in this itemised bill at extra charge.

**Table 14: Availability of call barring**

| MS | Operator  | Is selective call barring generally available on request <sup>126</sup> ? | Which of the following call categories can be barred <u>selectively</u> <sup>127</sup> ? |                     |                 |                    |  |
|----|---|---|--|---------------------|-----------------|--------------------|--|
|    |   |   | National calls   | International calls | Calls to mobile | Premium rate calls | Other (specify)  |
| B  | Incumbent (fixed voice telephony)                       | Yes   | Yes  | Yes                 | Yes             | Yes                |  |
|    | Main new entrant <sup>128</sup> (fixed voice telephony) | Yes   | Yes  | Yes                 | Yes             | Yes                |  |
|    | Main mobile operator <sup>128</sup>                     | Yes   | Yes  | Yes                 | Yes             | Yes                |  |
| DK | Incumbent (fixed voice telephony)                       | Yes   |  | Yes <sup>129</sup>  |                 | Yes                | All calls  |
|    | Main new entrant <sup>128</sup> (fixed voice telephony) | Yes   | No   | Yes <sup>129</sup>  | No              | Yes                | All calls  |
|    | Main mobile operator <sup>128</sup>                     | Yes   | No   | Yes <sup>129</sup>  | No              | Yes                | All calls  |
| D  | Incumbent (fixed voice telephony)                       | Yes   | Yes  | Yes                 | Yes             | Yes                | Yes <sup>130</sup>   |
|    | Main new entrant <sup>128</sup> (fixed voice telephony) | Yes   | Yes  | Yes                 | Yes             | Yes                | Yes <sup>130</sup>   |
|    | Main mobile operator <sup>128</sup>                     | Yes   | No   | Yes                 | No              | No                 |  |
| EL | Incumbent (fixed voice telephony)                       | Yes   | No   | Yes                 | Yes             | Yes                | Yes<br>Dial up to internet   |
|    | Main new entrant <sup>128</sup> (fixed voice telephony) | --  | --   | --                  | --              | --                 |  |
|    | Main mobile operator <sup>128</sup>                     | Yes   | No   | Yes                 | No              | No                 | All outgoing calls, incoming calls, outgoing / incoming calls in case of roaming |
| E  | Incumbent (fixed voice telephony)                       | Yes <sup>131</sup>  |  | Yes                 |                 | Yes                |  |
|    | Main new entrant <sup>128</sup> (fixed voice telephony) | Yes   |  | Yes                 |                 | Yes                |  |
|    | Main mobile operator <sup>128</sup>                     | Yes   |  | Yes                 |                 | Yes                |  |
| F  | Incumbent (fixed voice telephony)                       | Yes <sup>132</sup>  | Yes  | Yes                 | Yes             | Yes                | Yes<br>Local calls<br>Calls to mobile  |

<sup>126</sup> I.e. the facility whereby the subscriber can, on request to the telephone service provider, bar outgoing calls of defined types or to defined types of numbers (Annex I, Part 1, Dir. 98/10/EC).

<sup>127</sup> I.e. can the user bar only the outgoing calls of a defined type or to defined types of numbers?.

<sup>128</sup> In case it is not possible to identify one single operator to be considered as "main" operator in the market, please fill in the table for all the leading operators.

<sup>129</sup> Some operators offer barring of calls to specific countries. Calls to these countries are expensive, and the calls are often generated in connection to visits at certain web-pages (auto-dialers).

<sup>130</sup> No specification has been given by the German authorities.

<sup>131</sup> The Ordinance OM 361/2002, of 14 February 2002, provides that at least it must be possible to bar calls to premium rate numbers and international calls, either for the incumbent or for any other operator.

<sup>132</sup> In fix, permanently, while en modulable (au coup par coup)

| MS  | Operator  | Is selective call barring generally available on request <sup>126</sup> ? | Which of the following call categories can be barred <u>selectively</u> <sup>127</sup> ? |                     |                                      |                                   |                            |
|-----|---|---|--|---------------------|--------------------------------------|-----------------------------------|----------------------------|
|     |   |   | National calls   | International calls | Calls to mobile                      | Premium rate calls                | Other (specify)            |
| F   | Main new entrant <sup>128</sup> (fixed voice telephony) | No <sup>133</sup>   | No   | No                  | No                                   | No                                |                            |
|     | Main mobile operator <sup>128</sup>                     | Yes   | Yes  | Yes                 | Yes                                  | Yes                               | All calls <sup>134</sup>   |
| IRL | Incumbent (fixed voice telephony)                       | Yes   | Yes but only with Mobile calls too <sup>135</sup> .                                      | Yes                 | Yes but only with National calls too | Yes                               |                            |
|     | Main new entrant <sup>128</sup> (fixed voice telephony) | No  |  |                     |                                      |                                   |                            |
|     | Main mobile operator <sup>128</sup>                     | Yes   |  | Yes                 |                                      | Yes                               |                            |
| I   | Incumbent (fixed voice telephony)                       | Yes   | Yes  | Yes                 | Yes                                  | Yes                               |                            |
|     | Main new entrant <sup>128</sup> (fixed voice telephony) | Yes   | No   | Yes                 | No                                   | Yes                               |                            |
|     | Main mobile operator <sup>128</sup>                     | No  | -  | -                   | -                                    | -                                 |                            |
| L   | Incumbent (fixed voice telephony)                       | Yes   | Yes  | Yes                 | Yes                                  | Yes                               |                            |
|     | Main new entrant <sup>128</sup> (fixed voice telephony) | Not regulated   | Not regulated  | Not regulated       | Not regulated                        | Not regulated                     |                            |
|     | Main mobile operator <sup>128</sup>                     | Not regulated   | Not regulated  | Not regulated       | Not regulated                        | Not regulated                     |                            |
| NL  | Incumbent (fixed voice telephony)                       | Yes   | No   | Yes                 | No                                   | Yes                               |                            |
|     | Main new entrant <sup>128</sup> (fixed voice telephony) | Yes   | No   | Yes                 | No                                   | Yes                               |                            |
|     | Main mobile operator <sup>128</sup>                     | Yes <sup>136</sup>  | No   | Yes                 | No                                   | Yes                               | Barring all outgoing calls |
| A   | Incumbent (fixed voice telephony)                       | No  | Yes <sup>137</sup>   | Yes <sup>137</sup>  | No                                   | Yes                               |                            |
|     | Main new entrant <sup>128</sup> (fixed voice telephony) | No information  | No information   | No information      | No information                       | No                                | No information             |
|     | Main mobile operator <sup>128</sup>                     | Yes   | No   | No                  | No                                   | Yes <sup>138</sup>                | No information             |
| P   | Incumbent (fixed voice telephony)                       | Yes <sup>139</sup>  | Yes  | Yes                 | Yes                                  | Audiotext services <sup>140</sup> |                            |

<sup>133</sup> Télé 2 et Cegetel.

<sup>134</sup> The option “only on-going calls” is mentioned in the ‘fiche tarifaire’.

<sup>135</sup> Due to conflict with 3 digit local access codes.

<sup>136</sup> The Dutch authorities have assumed KPN as the main mobile operator as it is the only operator with SMP designation. This information for KPN is not known by OPTA. However, other operators, notably Vodafone, also have significant markets shares. If more than one operator is to be considered they note that the requested information differs per operator.

<sup>137</sup> National and international calls can only be barred with other categories.

<sup>138</sup> Except for one mobile operator premium rate calls can be barred.

<sup>139</sup> Selective call barring is available, free of charge, for the calls to other telecommunication services provided to the public and for audiotext services. C.f. art. 13°, n° 1, al. f) of RESFT.

| <b>MS</b> | <b>Operator</b>   | <b>Is selective call barring generally available on request<sup>126</sup>?</b> | <b>Which of the following call categories can be barred <u>selectively</u><sup>127</sup>?</b> |                            |                        |                                   |                        |
|-----------|---|--|---|----------------------------|------------------------|-----------------------------------|------------------------|
|           |   |  | <b>National calls</b>   | <b>International calls</b> | <b>Calls to mobile</b> | <b>Premium rate calls</b>         | <b>Other (specify)</b> |
| P         | Main new entrant <sup>128</sup> (fixed voice telephony) |  |   |                            |                        | Audiotext services <sup>140</sup> |                        |
|           | Main mobile operator <sup>128</sup>                     |  |   |                            |                        | Audiotext services <sup>140</sup> |                        |
| FIN       | Incumbent (fixed voice telephony)                       | Yes  | No <sup>141</sup>   | No <sup>141</sup>          | No <sup>141</sup>      | Yes                               |                        |
|           | Main new entrant <sup>128</sup> (fixed voice telephony) | Yes  | No <sup>141</sup>   | No <sup>141</sup>          | No <sup>141</sup>      | Yes                               |                        |
|           | Main mobile operator <sup>128</sup>                     | Yes  | n.a.  | No <sup>141</sup>          |                        | Yes                               |                        |
| S         | Incumbent (fixed voice telephony)                       | Yes  | Yes   | Yes                        | Yes                    | Yes                               |                        |
|           | Main new entrant (fixed voice telephony)                | Yes  | Yes   | Yes                        | Yes                    |                                   |                        |
|           | Main mobile operator                                    | Yes  | Yes   | Yes                        | Yes                    | Yes                               |                        |
| UK        | Incumbent (fixed voice telephony)                       | Yes  | Yes   | Yes                        | Yes                    | Yes                               | N/A                    |
|           | Main new entrant (fixed voice telephony)                | Yes  | Yes   | Yes                        | Yes                    | Yes                               | Yes                    |
|           | Main mobile operator                                    | No   | N/A   | N/A                        | N/A                    | N/A                               | N/A                    |

<sup>140</sup> Since the Act n° 95/2001, of 20 August, came into force, service providers must ensure that access to audiotext services –except for “tele-voting” services- is barred. This access will only be provided, generally or selectively, following express request by the user.

<sup>141</sup> According to regulation FICORA 35 G/2002 M, the user can have barring to these services only in combination with barring to other (more expensive) services, such as premium rate calls. Operators are free to provide selective barring for these services if they want to, but this is not common.

## 8. DATA PROTECTION

**Table 15: Unsolicited calls, faxes and electronic mails (part I)**

|            | <i>Which approach (opt-in/opt-out/none) has been implemented for the following categories<sup>142</sup>?</i> |                            |   |
|------------|--|----------------------------|---|
|            | <i>Unsolicited phone CALLS</i>   | <i>Unsolicited E-MAILS</i> | <i>Unsolicited FAXES</i>                        |
| <b>B</b>   | None   | None                       | Opt-in <sup>143</sup>                           |
| <b>DK</b>  | Opt-in <sup>144</sup>  | Opt-in <sup>144</sup>      | Opt-in <sup>144</sup>                           |
| <b>D</b>   | Opt-in <sup>145</sup>  | Opt-in <sup>145</sup>      | Opt-in <sup>145</sup>                           |
| <b>EL</b>  | Opt-in for unsolicited calls for advertising purposes  | Opt-in                     | None  |
| <b>E</b>   | Opt-in   | Opt-in                     | Opt-in  |
| <b>F</b>   | Opt-out  | None                       | Opt-in (ordonnances of 2001)                    |
| <b>IRL</b> | Opt-out  | None                       | Opt-out for business and opt-in for individuals |
| <b>I</b>   | Opt-in   | Opt-in                     | Opt-in  |
| <b>L</b>   | None   | None                       | None  |
| <b>NL</b>  | Opt-in   | Opt-out                    | Opt-in  |
| <b>A</b>   | Opt-in <sup>146</sup>  | Opt-in <sup>146</sup>      | Opt-in <sup>146</sup>                           |
| <b>P</b>   | None   | Opt-out <sup>147</sup>     | Opt-in <sup>148</sup>                           |
| <b>FIN</b> | Opt-out  | Opt-in                     | Opt-in  |
| <b>S</b>   | Opt-in <sup>149</sup>  | Opt-in                     | Opt-in <sup>150</sup>                           |
| <b>UK</b>  | Opt-out  | Opt-out <sup>151</sup>     | Opt-in <sup>152</sup>                           |

<sup>142</sup> According to Article 12 (97/66/EC), for the purposes of direct marketing, Member States can choose between an “opt-in” or “opt-out” approach for unsolicited calls and unsolicited e-mails. An “opt-in” approach is required for unsolicited faxes.

<sup>143</sup> In case of distance selling contracts.

<sup>144</sup> Denmark has adopted an opt-in model. The Danish Marketing Practices Act (section 6a, para. 1) requires that the customer, prior to receiving the “call using mail”, has requested the call.

<sup>145</sup> Based on case law under unfair competition law. There is a principle of consent for unsolicited e-mails in case law, but it has not yet been confirmed by the highest court.

<sup>146</sup> Austria has adopted an opt-in model.

<sup>147</sup> However, the called party has the right to refuse, free of charge, the reception of direct marketing unsolicited calls.

<sup>148</sup> Except for direct marketing actions

<sup>149</sup> If traffic data are used as the basis for an operator’s own marketing, consent is required. Otherwise forbidden, section 49 of the Swedish telecommunications Act.

<sup>150</sup> After consent according to section 13a of the Swedish marketing act.

<sup>151</sup> Where e-mail addresses constitute personal data because they incorporate an individual’s name, any processing must be done in accordance with the requirements of the Data Protection Act 1998. Among other things, this means that any company that continues to process an e-mail address that constitutes personal data, in order to send unsolicited marketing communications, after being instructed by the individual concerned to stop, will be in breach of the Act’s fair processing requirements.



**Table 16: Unsolicited calls, faxes and electronic mails (part II)**

|            | <i>Is the “opt-in/opt-out” approach applicable to natural and legal persons<sup>153</sup>?<br/>(only natural/natural and legal)</i> | <i>Requirements for consent<sup>154</sup></i>            | <i>Which institutions manage opt-out lists for e-mails?</i>                            | <i>Is consultation of opt-out lists required prior to sending unsolicited e-mails?</i> |
|------------|---|--|--|--|
| <b>B</b>   | --  | Not regulated  | Not regulated  | Not regulated  |
| <b>DK</b>  | Natural and legal   | Oral or Written (active)                                 | Not relevant <sup>144</sup>  | Not relevant   |
| <b>D</b>   | Natural and legal   | Oral or written (active)                                 | Private associations or other private third parties                                    | No, consultation of opt-out lists is voluntary   |
| <b>EL</b>  | Only natural unless the legal representative of a legal person states that they do not wish to have unsolicited calls (opt-out)     | Written (passive)  | N.A.   | No   |
| <b>E</b>   | Natural and legal   | Unequivocal consent                                      | Federación de Comercio Electrónico y Marketing Directo                                 | No, unsolicited electronic communications are prohibited.                              |
| <b>F</b>   | Natural and legal   | Written (active)   | Not yet determined at this stage   | No   |
| <b>IRL</b> | Opt-out for business and opt-in for individuals   | Simple notification                                      | Irish Direct Marketing Association (IDMA) <sup>155</sup>                               | No   |
| <b>I</b>   | Natural and legal   | Written (active)   | None   | No   |
| <b>L</b>   | --  | --   | --   | --   |
| <b>NL</b>  | Yes, applicable to the « subscriber » in accordance to the definition of Article 2 of the directive/                                | Not regulated  | DMSA Nederlandse Associatie voor Direct Marketing, Distance Selling en Sales Promotion | Self-regulation applies <sup>156</sup>   |
| <b>A</b>   | Natural and legal   | Oral <sup>157</sup> or written (passive <sup>158</sup> ) | RTR-GmbH (but unsolicited e-mails are forbidden)                                       | Unsolicited e-mails are forbidden  |
| <b>P</b>   | Natural and legal   | Written (active)   | Not available  | No <sup>147</sup>  |
| <b>FIN</b> | Natural / natural and legal <sup>159</sup>  | Oral or written <sup>160</sup>                           | Not relevant   | No   |
| <b>S</b>   | Only natural persons  | consent in advance                                       | N/A  | No   |
| <b>UK</b>  | legal persons have opt-out rights in some cases <sup>152</sup>  | Not regulated  | The Direct Marketing Association (e-Mail Preference Service or e-mps)                  | Self refulation – consultation required under industry codes of practice               |

<sup>152</sup> Corporate subscribers are not entitled to register with the Telephone Preference Service although they have the right to opt-out on a case-by-case basis by instructing particular callers not to ring. Corporate subscribers are entitled to opt-out of unsolicited faxes both on a case by case basis or by registering with the Fax Preference Service.

<sup>153</sup> According to the directive, NRA is requested to specify whether the chosen approach is limited to natural persons only or extended to natural and legal persons.

<sup>154</sup> In this column, NRAs are requested to specify if the consent to be obtained from the user is to be *written* or *oral* and, if written, to specify if consent can be *passive* (e.g. the user does not delete a pre-ticked box corresponding to the declaration of consent) or is to be *active* (e.g. the user must tick the box corresponding to the declaration of consent).

<sup>155</sup> Lists managed on their behalf by the DMA based in the US. The IDMA is affiliated to the DMA.

<sup>156</sup> Parties that adhered to the *Stichting Reclame Code* commit themselves to the application of codes of conduct concerning unsolicited mails and SMS.

<sup>157</sup> However, even oral consent must have been provided before the reception of the unsolicited call.

<sup>158</sup> The law does not explicitly require “active” consent, so therefore generally the inclusion of a declaration of consent in a document to be signed by the user (in such a way that the latter would have to delete the passage if he wishes to refuse consent) is accepted.

<sup>159</sup> For natural persons, an “opt-in” regime applies, except for unsolicited phone calls to which an “opt-out” regime applies. The “opt-out” regime also applies to legal persons.

<sup>160</sup> No specific form is prescribed by law for written consensus, which is normally passive.

**Table 17: Storage of data and other provisions of the Data Protection Directive**

| MS  | Maximum period permitted for the storage of data for:                                 |   | Charge for subscribers to be omitted from the directory | Availability and cost of stopping automatic forwarding by a third party | Itemised billing                          |   |
|-----|---|---|---|---|---|---|
|     | Billing   | Other purposes <sup>161</sup>   |   |   | Possibility to receive non-itemised bills | Number of digits from the called number deleted                 |
| B   | To the end of the dispute period  | Min. 1 year (secondary legislation still needed to determine exact period)  | 2,6 € /month  | Free of charge  | Yes                                       | No rules exist  |
| DK  | 5 years <sup>162</sup>  | Max. 1 year (secondary legislation still needed to determine exact period)  | Free of charge  | Free of charge  | Yes                                       | No deletion for private customers, two for business customers   |
| D   | 6 months after sending of bill  | --  | Free of charge  | Free of charge, where technically possible                              | Yes                                       | Three last digits/complete itemisation on request               |
| EL  | the period during which the bill may be lawfully challenged or payment may be pursued | --  | GRD 330/month <sup>163</sup>                            | Free of charge  | Yes                                       | Three last digits upon request                                  |
| E   | 5 years   | Max. 1 year (for information society services, secondary legislation is still needed to determine the exact period) | Free of charge  | Free of charge  | Yes                                       | Defined number <sup>164</sup>                                   |
| F   | 1 year  | 1 year  | Free of charge  | Available <sup>165</sup>  | Yes                                       | Last four   |
| IRL | Currently being looked at <sup>166</sup>  | --  | Free of charge  | Free of charge if available   | Yes                                       | No deletion   |
| I   | 5 years <sup>167</sup>  | --  | Free of charge  | N/A   | Yes                                       | Last three/complete itemisation in certain cases <sup>168</sup> |
| L   | Not specified in the law <sup>169</sup>   | --  | Free of charge  | Not available   | Yes                                       | Incumbent: no deletion; others: not defined                     |
| NL  | Not specified in the law <sup>170</sup>   | Three months for ISPS and pre-paid cards  | Free of charge  | Free of charge  | Yes                                       | No deletion   |

<sup>161</sup> Article 14(1) of Directive 97/66/EC.

<sup>162</sup> The end of the period during which the bill may be lawfully challenged or payment may be pursued.

<sup>163</sup> ETT is entitled to express its opinion on the level of the charge.

<sup>164</sup> To be specified in secondary legislation.

<sup>165</sup> Information given for France Télécom.

<sup>166</sup> Operators are obliged to comply with the requirements of Article 6 of the Directive. The general rules of the statute of limitations in case a bill is challenged is maximum 6 years.

<sup>167</sup> According to Civil Code.

<sup>168</sup> If the subscriber needs to start a legal action.

<sup>169</sup> Current data retention practice is that operators need to store traffic data for 10 years without compensation.

<sup>170</sup> The forthcoming legislation regarding traffic and billing data states that the period for which the billing information may be stored is the period in which the bill can be lawfully challenged or the payment may be pursued.

| MS  | Maximum period permitted for the storage of data for:                                       |  | Charge for subscribers to be omitted from the directory | Availability and cost of stopping automatic forwarding by a third party | Itemised billing                          |   |
|-----|---|--|---|---|---|---|
|     | Billing   | Other purposes <sup>161</sup>                          |   |   | Possibility to receive non-itemised bills | Number of digits from the called number deleted         |
| A   | Company specific <sup>171</sup>   | As long as the data is needed for the relevant purpose | Free of charge  | Free of charge <sup>172</sup>   | Yes                                       | Company specific <sup>173</sup>                         |
| P   | 6 months  | --   | Free of charge  | Free of charge  | Yes                                       | Four  |
| FIN | Min. 3 months after maturity date of the bill; max 3 years after bill has been paid in full | --   | Free of charge  | Free of charge  | Yes                                       | Three last digits/complete itemisation in certain cases |
| S   | 3 years <sup>174</sup> (also payment of interconnection fees)                               | --   | SEK 60 annual charge                                    | Free of charge  | Yes                                       | No deletion   |
| UK  | 6 years <sup>175</sup>  | Under discussion (between 6-12 months)                 | Free of charge  | Free of charge  | Yes                                       | No deletion   |

<sup>171</sup> According to the conditions stipulated in the contracts with the operators, but a maximum of 3 years is fixed by law.

<sup>172</sup> Information given for Telekom Austria

<sup>173</sup> Legislation does not set the precise number of digits to be deleted, which could be two or more. Many companies, including Telekom Austria, delete the last three digits.

<sup>174</sup> Period within which the bill must be paid, or else it will be time-barred.

<sup>175</sup> Limitation period for contractual disputes.

**Table 18: Calling line identification (CLI)**

|            | Availability and cost   |  | Availability and cost for the called subscriber to:                                 |  |  | Availability to and cost for the organisation dealing with emergency calls of overriding the elimination of the presentation of the CLI |
|------------|---|--|---|--|--|---|
|            | For the calling user to eliminate the presentation of the CLI on a per-call basis | For the subscriber to request the service provider to (temporarily) override the elimination of the presentation of the CLI <sup>176</sup> | Eliminate the presentation of the connected line identification to the calling user | Prevent the presentation of the CLI of incoming calls      | To reject incoming calls where the presentation of the CLI has been eliminated by the calling user |   |
| <b>B</b>   | Free of charge  | Available  | Free of charge  | Free of charge for a reasonable use                        | Available  | Free of charge  |
| <b>DK</b>  | Free of charge  | Not available  | Free of charge  | Free of charge   | Free of charge   | Free of charge  |
| <b>D</b>   | Free of charge  | Available, cost not regulated  | Free of charge  | Free of charge   | Free of charge, (in mobile telephony based on terminal equipment)                                  | Free of charge  |
| <b>EL</b>  | Free of charge  | Available for limited time period and for specific reasons, costs not yet regulated <sup>177</sup>   | Free of charge  | Available with simple means, free of charge <sup>177</sup> | Available with simple means <sup>177</sup>   | Free of charge  |
| <b>E</b>   | Free of charge  | Free of charge   | Free of charge  | Free of charge   | Free of charge   | Free of charge  |
| <b>F</b>   | Free of charge  | Not available <sup>178</sup>   | No connected line identification offered  | Available by default <sup>179</sup>                        | Not available  | Free of charge  |
| <b>IRL</b> | Free of charge  | Not available  | Free of charge  | Free of charge   | Not available  | Free of charge  |
| <b>I</b>   | Free of charge  | Available (€ 77.46 for 1-5 days, € 103.29 for 6-10 days, € 129.11 for 11-15 days, excluding tax)   | Free of charge  | Available by default <sup>180</sup>                        | Not available  | Free of charge  |
| <b>L</b>   | Free of charge  | Not regulated  | Free of charge  | Not available  | Not available  | Free of charge  |
| <b>NL</b>  | Available, free of charge   | Not available  | Available for ISDN only (part of CLI service)                                       | Free of charge   | Not available  | Available<br>No standard tariff applies   |
| <b>A</b>   | Free of charge  | Available (€ 6.54 + € 0.73 per day+€1.45 per identification)   | Available: €6.54 (single payment)   | Free of charge   | Free of charge <sup>181</sup>  | Available: €4.36 (single payment)   |
| <b>P</b>   | Free of charge  | Available <sup>182</sup>   | Free of charge  | Free of charge   | Not available  | Available   |

<sup>176</sup> For tracing malicious or nuisance calls.

<sup>177</sup> Facility mandated by the law, but not yet implemented.

<sup>178</sup> Regarding malicious and/or nuisance calls, France Télécom provides a service to its subscribers that allows them either to block so-called “secret calls” (i.e. calls for which the calling line identification is not presented) or to block calls marked with an “R” (i.e. calls from lines that are on a list established by the subscriber).

<sup>179</sup> France Télécom only offers CLI upon subscription.

<sup>180</sup> Telecom Italia only offers CLI upon subscription

<sup>181</sup> Available since 1<sup>st</sup> quarter of 2001.

<sup>182</sup> Although this facility is foreseen by the law, there is no information on its actual availability.

|            | Availability and cost   |  | Availability and cost for the called subscriber to:                                 |   |   | Availability to and cost for the organisation dealing with emergency calls of overriding the elimination of the presentation of the CLI |
|------------|---|--|---|---|---|---|
|            | For the calling user to eliminate the presentation of the CLI on a per-call basis | For the subscriber to request the service provider to (temporarily) override the elimination of the presentation of the CLI <sup>176</sup> | Eliminate the presentation of the connected line identification to the calling user | Prevent the presentation of the CLI of incoming calls | To reject incoming calls where the presentation of the CLI has been eliminated by the calling user                          |   |
| <b>FIN</b> | Free of charge  | Free of charge <sup>183</sup>  | Free of charge  | Free of charge  | Available   | Available <sup>184</sup>  |
| <b>S</b>   | Free of charge  | SEK 500+SEK 50 per tracing <sup>185</sup>  | Free of charge  | Free of charge  | Not available   | Available <sup>186</sup>  |
| <b>UK</b>  | Free of charge  | Available free of charge when calls are subject to formal investigation <sup>183</sup>   | Provided free of charge on ISDN networks  | Available <sup>187</sup> , free of charge             | Available on analogue services (BT charges £ 9.99 a quarter, some other operators provide it free of charge) <sup>188</sup> | Free of charge  |

<sup>183</sup> Calling line identification available to law enforcement authorities.

<sup>184</sup> Override category available, but organisation pays installation costs.

<sup>185</sup> Malicious call identification is ordered for two weeks at a charge of SEK 500 including 5 successful tracings. Extra tracings: SEK 50 each.

<sup>186</sup> The charge is included in the general charge to the organisation dealing with emergency calls to receive information about subscribers from the operators.

<sup>187</sup> If specifically requested from service provider.

<sup>188</sup> Not available on digital services (GSM, ISDN) because there is perceived to be a legal ambiguity as to whether this facility must be provided as a network service as opposed to being delivered through a terminal equipment solution.

## 9. NATIONAL REGULATORY AUTHORITIES

**Table 19: National Regulatory Authorities: Legal status and mechanism of appointment**

| MS | Present <sup>189</sup> Legal status of the NRA  | Decision making body <sup>190</sup> within the independent NRA                        |  |  | Length of term of Head and of Members of College of NRA  | Appeal process  |
|----|---|---|--|--|--|---|
|    |   | Composition   | Appointment of its Head  | Appointment of its Members of College  |  |   |
| B  | - Minister of Telecommunications<br>- IBPT/ BIPT, a semi-autonomous governmental body, funded through licence and spectrum fees <sup>191</sup>  | Administrator-General, Director General and 4 Administrators                          | By the Minister  |  | The General Administrator and the Director General for six years.<br>4 administrators for life | Chamber (for interconnection, LLU, leased lines and shared use);,Courts;<br>Conseil d'Etat for appeals against new laws |
| DK | - Ministry of Science Technology and Innovation<br>- National IT and Telecom Agency   | Director General  | By the Minister of Research & Information Technology   |  | Unlimited  | Telecommunications Complaints Board and the Telecommunications User Board   |
| D  | - "Regulierungsbehörde für Post und Telekommunikation" (RegTP), an independent agency within the scope of business of the Federal Ministry of Economics and Technology.<br>- Beirat an advisory council consisting of nine members of the Federal Parliament (Bundestag) and nine members of the Federal Council (Bundesrat). In certain cases, the Beirat participates in taking decisions and advises the RegTP.. | RegTP: President and 2 Vice Presidents, 5 Ruling Chambers.<br><br>Beirat: 18 members. | President and Vice-President of RegTP proposed by Beirat and nominated by the federal government.            | Beirat: By federal government upon proposal of Bundestag or the Bundesrat, as the case may be. | Public law contract, not publicly available  | Administrative courts   |
| EL | - Ministry of Transport and Communications<br>- EETT, an independent body funded by fees  | President, Vice-President and another 5 members                                       | President and Vice President: Committee of the Chairmen of the Parliament with a 4/5 majority of its members | Committee of the Chairmen of the Parliament with a 4/5 majority of its members                 | 5 years for the Head and the Members of College renewable only for a second term               | High Administrative court (Conseil d'Etat)  |
| E  | -Secretariat of State for Telecommunications and the  | President. Vice-  | President and the Vice-  | Government. proposal by the  | Head: Six years  | 1)internal appeal process   |

<sup>189</sup> Please indicate if a change in the status of the NRA is envisaged

<sup>190</sup> For example a Committee or a Director General etc.

<sup>191</sup> Review of the statute to reinforce independence

| MS  | Present <sup>189</sup> Legal status of the NRA  | Decision making body <sup>190</sup> within the independent NRA   |   |   | Length of term of Head and of Members of College of NRA   | Appeal process   |
|-----|---|--|---|---|---|--|
|     |   | Composition  | Appointment of its Head   | Appointment of its Members of College   |   |  |
|     | Information Society (SETSI) in the Ministry of Science and Technology (MCYT)-<br>- CMT, an independent governmental agency  | President and 7 Members  | President: by the Government, after the Parliament has been informed.   | Minister of Economics and Minister of Science and Technology  |   | 2)administrative courts  |
| F   | - The Direction Générale de l'Industrie, des Technologies de l'information et des Postes, a part of the Ministry of Economic Affairs, Finance and Industry<br>- ART, an independent administrative authority, reporting to the government and the National Assembly   | President and 4 members  | President of the Republic   | 2 Members by President of the Republic,<br>1 member by President of the Assembly,<br>1 member by the President of the Senate  | Head: Six years renewable   | 1)internal appeal process<br>2)Cour d'Appel de Paris or Conseil d'Etat   |
| IRL | - Ministry for Public Enterprise<br>- Office of the Director of Telecommunications Regulation (ODTR), an independent body   | Director of Telecommunications Regulation  | Minister for Public Enterprise with the consent of the Minister for Finance   | Appointed by the Minister with the consent of the Minister of Finance   | Head: Six years renewable   | Courts   |
| I   | - Ministry of Communications<br>- AGCOM(Autorità per la Garanzie nelle Comunicazioni), an independent body  | President and 8 Members  | Following submission to competent parliamentary committees, Head is appointed by the President of the Republic on proposal by the Prime Minister in agreement with the Ministry of Communications.    | By the Parliament (each Chamber appoint 4 members)  | Seven years for Head and Members of College, not renewable and with 4 years incompatibility clause following end of mandate   | Regional Administrative Court of Lazio (TAR), then Council of State  |
| L   | - Ministry of Communications<br>- Institut Luxembourgeois des Télécommunications (ILR), an autonomous governmental body under the control of the Ministry of Communications   | Head (Director) and 5 Members (Board of Administration)  | Grand-Duc on proposal by the government.  | Five members of the Council by the government en conseil (three members are proposed by the Ministry, one is an operator's representative and one is a users' s representative) | Head: six years.<br>Members of the College: three years   | Administrative courts  |
| NL  | - The Ministry of Transport<br>- OPTA, an independent governmental body   | Chairman of the board and 2 members  | By the Minister of Transport  | By the Minister of Transport  | Head: Four years renewable, no limitation on the number of renewals   | Appeals can be filed first with OPTA or Ministry depending who made the decision and then with the Court of Rotterdam which has special jurisdiction |
| A   | - Federal Ministry for Transport, Innovation and Technology.<br>- Telecom-Control Commission: independent authority with the status of a tribunal.<br>- Broadcasting and Telecommunications Regulating GmbH: separate private company, 100% state owned (reasoned instructions can be given, in writing only, to the executive manager in charge with telecommunications by the Minister for Transport. | Telecom-Control Commission: 3 members<br>Broadcasting and Telecommunications Regulating GmbH: an Executive | Telecom-Control Commission: the Chairman (to be a judge) on a proposal by the President of the Supreme Court.<br>The Executive manager of Broadcasting and Telecommunications Regulating GmbH: by the | 3 members by the Federal Government<br>2 members on proposal of the Minister.<br>Executive manager: by the Minister   | Telecom-Control Commission: 5 years;<br>Broadcasting and Telecommunications Regulating GmbH: not specified by law (current executive manager for telecommunications is appointed for 15 months) | Both the Administrative Court and the Constitutional Court   |

| MS  | Present <sup>189</sup> Legal status of the NRA  | Decision making body <sup>190</sup> within the independent NRA |   |  | Length of term of Head and of Members of College of NRA      | Appeal process  |
|-----|---|--|---|--|--|---|
|     |   | Composition  | Appointment of its Head   | Appointment of its Members of College                                    |  |   |
|     | Innovation and Technology)  | Manager  | Minister  |  |  |   |
| P   | - ANACOM (Autoridade Nacional de Comunicações, a public institute endowed with legal personality, with administrative and financial autonomy  | Chairman of the Board and 2 members                            | By government, on proposal of the Minister for Social Equipment | By government on proposal of the Minister responsible for Communications | All members of Board are appointed for five years, renewable | Courts  |
| FIN | - Finnish Ministry of Transport and Communications (MINTC)<br>-Finnish Communications Regulatory Authority (FICORA) an independent agency of the State, funded by fees  | Director General   | By the Council of State   |  | Not determined   | Decisions of the Ministry: Supreme Administrative Court.<br>FICORA's decisions: administrative courts   |
| S   | - Ministry of Industry, Employment and Communications<br>-National Post and Telecommunications Agency (PTS) an independent body reporting to the Ministry of Industry, Employment and Communications financed by licence and frequency fees | Director General and 6 Members of the Board                    | By the Government   | By the Government  | Six years renewable  | Administrative courts   |
| UK  | - Department of Trade and Industry (DTI)<br>- OFTEL, independent non-ministerial governmental body  | Director General   | By the Secretary of State                                       | N/A  | 5 years, renewable   | Certain OFTEL's decisions are subject to a appeals to the Competition Commission then courts and House of Lords. Others to administrative courts , others to the High Court. There are two types of appeals:<br>- appeals of OfTel decisions (to High Court)<br>appeals of Court Decisions (which go up the court chain - High Court, Court of Appeal, House of Lords). |



**Table 20:**

| <i>MS</i>  | <i>Licensing</i>            | <i>Numbering</i>  | <i>Broadcasting</i>   | <i>Rights of way</i>  | <i>Price controls (end user tariffs)</i>          | <i>Monitoring USO</i> | <i>Access and interconnection</i> | <i>Dispute resolution</i>   | <i>Application of competition law</i>   | <i>Market monitoring and enforcing compliance with regulations</i> | <i>Frequency allocation and spectrum management</i>   |
|------------|-----------------------------|---|---|---|---|-----------------------|-----------------------------------|---|---|--|---|
| <b>B</b>   | BIPT                        | BIPT  | Communities   | Communities   | BIPT  | BIPT, Government      | BIPT                              | BIPT  | Conseil de la Concurrence   | BIPT   | <b>Allocation:</b> BIPT<br><b>Assignment:</b> BIPT  |
| <b>DK</b>  | Ministry, NITA              | NITA  | NITA, Ministry of Culture   | NITA, Local authorities   | NITA  | NITA, Ministry        | NITA                              | NITA  | NCA   | NITA   | <b>Allocation:</b> Ministry, NITA<br><b>Assignment :</b> NITA   |
| <b>D</b>   | RegTP                       | RegTP   | RegTP,  | RegTP   | RegTP   | RegTP                 | RegTP                             | RegTP   | RegTP: sector specific rules in the telecommunications sector<br>Bundeskartellamt (national competition authority): competition law | RegTP  | <b>Allocation:</b> Federal Government::Table of frequency allocations indicating the frequency bands to be allocated to individual radio services and other electromagnetic wave applications.<br><b>Assignment:</b> RegTP ( further allocation of the frequency bands to individual frequency uses and determinations on such uses).<br><b>Assignment:</b> RegTP |
| <b>EL</b>  | EETT                        | EETT  | EETT, Ministry (of Transport and of Press)  | Local and other authorities <sup>192</sup>  | EETT  | EETT                  | EETT                              | EETT  | EETT  | EETT   | <b>Allocation:</b> Ministry<br><b>Assignment:</b> EETT  |
| <b>E</b>   | MCYT/SETSI and CMT          | MCYT/SETSI: Administration (NOTE 1)<br><br>CMT: Management (NOTE 2) | MCYT/SETSI: Regulation<br>CMT: Competition safeguard on conditional access services | MCYT/SETSI, Regulation<br>CMT: Dispute resolution between operators on shared use of infrastructures.<br><br>NOTE 3 | MCYT/SETSI, Ministry of Economy, consultation CMT | MCYT/SETSI and CMT    | CMT and MCYT/SETSI                | CMT: Disputes between operators<br>MCYT/SETSI: Disputes between users and operators | CMT, Competition Authority  | CMT  | MCYT/SETSI  |
| <b>F</b>   | Ministry on proposal of ART | ART   | CSA and Ministry of Culture   | Local authorities   | Ministry on basis of Avis of ART                  | ART                   | ART                               | ART   | Conseil de la Concurrence   | ART  | <b>Allocation:</b> ANFR <sup>193</sup><br><b>Assignment::</b> ART   |
| <b>IRL</b> | ODTR                        | ODTR  | ODTR, Minister of Arts, Heritage, Gaeltacht and the Islands                         | Local authorities   | ODTR  | ODTR                  | ODTR                              | ODTR  | ODTR, NCA   | ODTR   | <b>Allocation:</b> ODTR and Ministry<br><b>Assignment:</b> ODTR and Ministry  |
| <b>I</b>   | Ministry                    | AGCOM   | AGCOM   | Local authorities   | AGCOM   | AGCOM                 | AGCOM                             | AGCOM   | NCA   | AGCOM  | <b>Allocation:</b> Ministry<br><b>Assignment:</b> Ministry, AGCOM   |

<sup>192</sup> Office of Town and Country Planning, Office for Nuclear Energy

<sup>193</sup> Agence National Francaise pour Radiofrequence

| <b>MS</b>  | <b>Licensing</b>           | <b>Numbering</b>                   | <b>Broadcasting</b>  | <b>Rights of way</b>     | <b>Price controls (end user tariffs)</b> | <b>Monitoring USO</b> | <b>Access and interconnection</b> | <b>Dispute resolution</b> | <b>Application of competition law</b>        | <b>Market monitoring and enforcing compliance with regulations</b> | <b>Frequency allocation and spectrum management</b>              |
|------------|----------------------------|------------------------------------|--|--------------------------|--|-----------------------|-----------------------------------|---------------------------|--|--|--|
| <b>L</b>   | Ministry of Communications | ILR                                |  | ILR                      | ILR                                      | ILR                   | ILR                               | ILR                       | ILR  | ILR  | <b>Allocation:</b> Ministry<br><b>Assignment:</b> ILR            |
| <b>NL</b>  | OPTA (registration)        | OPTA, Ministry                     | Two Ministries (DGTP <sup>194</sup> , Education and Culture), OPTA, Broadcasting Authority | Ministry (DGTP)          | OPTA                                     | Ministry (DGTP)       | OPTA                              | OPTA                      | National Competition Authority (NMA)         | OPTA   | <b>Allocation:</b> DGTP<br><b>Assignment:</b> DGTP               |
| <b>A</b>   | TKK                        | Allocation: RTR, Management: BMVIT | Komm Austria   | TKK                      | TKK                                      | TKK                   | TKK                               | TKK                       | Competition Authorities, TKK                 | TKK  | <b>Allocation:</b> TKK<br><b>Assignment:</b> BMVIT               |
| <b>P</b>   | ANACOM                     | ANACOM                             | ANACOM   | Local authorities        | ANACOM                                   | ANACOM                | ANACOM                            | ANACOM                    | Direcção-Geral do Comércio e da Concorrência | ANACOM   | <b>Allocation:</b> ANACOM<br><b>Assignment:</b> ANACOM           |
| <b>FIN</b> | MINTC                      | FICORA                             | MINTC and FICORA   | MINTC and FICORA         | FICORA                                   |                       | FICORA                            | FICORA                    | Competition Authority                        | MINTC and FICORA   | <b>Allocation:</b> MINTC and FICORA<br><b>Assignment:</b> FICORA |
| <b>S</b>   | PTS                        | PTS                                | Radio and TV Agency  | PTS                      | Government, PTS                          | PTS                   | PTS                               | PTS                       | Competition Authority                        | PTS  | <b>Allocation:</b> PTS<br><b>Assignment:</b> PTS                 |
| <b>UK</b>  | DTI                        | OFTEL                              | ITC and OFTEL  | Secretary of State (DTI) | OFTEL                                    | OFTEL                 | OFTEL                             | OFTEL                     | OFTEL and OFT                                | OFTEL  | <b>Allocation:</b> RA<br><b>Assignment:</b> RA                   |

NOTE 1: Administration of the national numbering plan, as the establishment and change of: The national numbering plan; Types of usage for designated number ranges; Rules for administration of the national numbering plan; Rules for management of the national numbering plan

NOTE 2: Management of the national numbering plan as the whole of: assignment of numbers for designated ranges; surveillance of usage of assigned ranges; withdrawal of assigned numbers

NOTE 3: The NRA issuing the license is also the authority granting the associated rights of way (i.e. the MCYT/SETSI in case of licenses including rights to use radio frequencies, and the CMT for the general case)

<sup>194</sup> Director General for Telecommunications and Post in the Ministry of Transport

**Table 21: Financing and staff of the national regulatory authorities for telecommunications services**

|            | Operational budget for 2001 (€ million) | Operational budget for 2002 (€ million) | Main sources for financing of the NRA's budget for the year 2001 (%)  | Number of full-time staff (*) (occupied posts) |                    |                      |                    |
|------------|---|---|---|--|--------------------|----------------------|--------------------|
|            |   |   |   | August 2001                                    | Projected for 2002 | Actual for 2002      | Projected for 2003 |
| <b>B</b>   | 29.59                                   | 36,25                                   | <b>2001:</b> 100% financed by the fees/charges paid by all licensed (fixed and mobile) operators. 30% of the overall budget is paid by the incumbent/SMP operators (including fees from private radio licences).  | 34   | 42                 | 39                   | 42                 |
| <b>DK</b>  | 31 <sup>195</sup>                       | 29,8                                    | <b>2001:</b> 36% of the budget financed by frequency fees, 27% by number fees, 43% by 3G UMTS auction and –6% by state budget. (e.g. return of budget funds due to predisposal of state budget funds in 2001 to cover one-off administrative costs for the UMTS tendering process.)   | 159  | 162 <sup>196</sup> | 236                  | 236                |
| <b>D</b>   | 144,5                                   | 139,9                                   | <b>2001:</b> All RegTP expenses are financed by the State budget  | 1899   | Not applicable     | <sup>197</sup> 1,859 | Less               |
| <b>EL</b>  | 16                                      | 16,45                                   | <b>2001:</b> financed by the fees/charges paid by all licensed (fixed/mobile) operators, of which 90% from the incumbent/SMP operators; 2% of the budget comes from fines   | 50   | 141                | 61                   | 103                |
| <b>E</b>   | 13,46                                   | 19,14                                   | <b>2001:</b> 96,6% financed by the fees paid by licensed operators. The distribution per category is the following: 36,81% by fees for services "portadores finales", 39,87% by fees for value added services, 22,91% by fees paid for general authorisations and individual licences, 0,40% by fees for cable telecommunications services and 0,01% by fees and charges. | 93   | 100                | 114                  | 150                |
| <b>F</b>   | 15,4                                    | 16,08                                   | <b>2001:</b> 100% financed by the State budget  | 149  | 149                | 149                  | 151                |
| <b>IRL</b> | 23.58                                   |   | <b>2001:</b> 63.3% financed by the fees/charges paid by all licensed (fixed/mobile) operators (41.2% from the incumbent/SMP operators); 6.3% financed by spectrum income; the remainder by radio licensing (7.4%); cable and MMDS licensing (15%) and bank interest (8%)  | 84   | 95                 | 102                  | 116                |
| <b>I</b>   | 41.8                                    | 44,45                                   | <b>2001:</b> 69% financed by the state budget; 17 % by fees/charges paid by incumbent/SMP operators; 10% by fees/charges paid by all other licensed operators (including fees from audio-visual and publishing sectors); 4% by other sources  | 216  | 260                | 225                  | 260                |
| <b>L</b>   | 3,5 pour l'exercice 2001                |   | <b>2001:</b> 4% financed by fees/charges paid by all (fixed and mobile) licensed operators (20% by incumbent/SMP operators), 58% financed by spectrum usage fees  | 30   | N/A                |                      |                    |
| <b>NL</b>  | 13.3                                    |   | <b>2001:</b> 85,7% financed by the fees/charges paid by all licensed operators and 14,3% by State.  | 107  | 125                |                      |                    |
| <b>A</b>   | 7.6                                     | 7,872                                   | <b>2001:</b> : 100% financed by the fees/charges paid by all licensed (fixed/mobile) operators, of which 38,03% from the incumbent/SMP operators  | 58   | 62                 | 60                   | 63                 |
| <b>P</b>   | 64,6                                    | 78,6                                    | <b>2001:</b> 93,5% financed by fees/charges paid by all licensed (fixed, mobile) operators of which 63,8% correspond to those received from SMP operators. The remaining 6,5% come from approvals, homologations, laboratory tests and financial gains.   | 402<br>2001:409                                | 405                | 396 <sup>198</sup>   | 400                |
| <b>FIN</b> | 25                                      | 28                                      | <b>2001:</b> 33 % financed by fees/charges paid by all licensed (fixed/mobile) operators, including frequencies fees; 39 % by TV licence fees; 18 % from radio equipment licences; 3 % from postal entities, 7% other (non operator) licence fees.  | 227  | 241                | 249                  | 260                |

<sup>195</sup> About 40% of this figure is represented by an extraordinary item related to the costs of organising the auction of UMTS frequencies (e.g. consultant fees).

<sup>196</sup> The difference between the projected and actual number of full-time staff for 2002 is due to the merger of National Telecom Agency and Danish State Information Service to National IT and Telecom Agency 1<sup>st</sup> April 2002.

<sup>197</sup> The costs related to personnel of RegTP covers all human resources used in the telecommunications sector of the authority, that is, not only employees dealing with liberalisation and deregulation matters under the TKG but also technical regulation.

<sup>198</sup> Maio de 2002Di

|           | Operational budget for 2001 (€ million) | Operational budget for 2002 (€ million) | Main sources for financing of the NRA's budget for the year 2001 (%)  | Number of full-time staff (*) (occupied posts) |                    |                 |                    |
|-----------|---|---|---|--|--------------------|-----------------|--------------------|
|           |   |   |   | August 2001                                    | Projected for 2002 | Actual for 2002 | Projected for 2003 |
| <b>S</b>  | 21.2                                    | 23,9*                                   | <b>2001:</b> 92,8% financed by fees/charges paid by all licensed (fixed/mobile) operators (23,3% from the incumbent/SMP operators). The remainder 7,2% is state funded.           | 195  | 210                | 204             | 220                |
| <b>UK</b> | 10.2                                    | 27.9                                    | <b>2001:</b> 91% financed by fees/charges paid by all licensed operators (72% from incumbent/SMP operators); 8% by state budget and 1% by sales of publications and VAT received. | 233  | 240                | 236             | 239                |

(\*) Numbers in *italics* also include staff working on other matters than telecommunications (i.e. audio-visual, publishing, etc.).

## 10. QUALITY OF SERVICE

**Table 22: Quality of service**

| Member State | Does the NRA set QoS performance targets for: |                        | Do SMP/US operators measure QoS pursuant to the following standards? (yes/no) |                    |                    | Have measurements of QoS for year 2001 been published by |          | Date of latest publication and reference in the national Official Journal or other         | Which measures are taken in case of persistent failure to meet performance targets? (Article 12.3, Dir. 98/10/EC)              | Are independent audits of performance data carried out? (Article 12.4, Dir. 98/10/EC) |
|--------------|---|------------------------|---|--------------------|--------------------|--|----------|--|--|---|
|              | SMP/US <sup>199</sup> operators?              | Other fixed operators? | ETSI ETR 138  | ETSI EG 201        | Other              | SMP/US operator?   | the NRA? |  |  |   |
| B            | Yes   | No                     | Yes   | be studied         | N/A                | No   | Yes      | Report on the Universal Service July 2002 ( <a href="http://www.ibpt.be">www.ibpt.be</a> ) | Compensation: max. 1% of the annual turnover concerning the universal service (art. 17 of annex of act of 21/03/1991)          | No  |
| DK           | Yes   | No                     | Yes   | Yes <sup>200</sup> | No                 | No.  | No.      | None   | Sanctions according to Section 22-23 of Act on Competitive Conditions and Consumer Interests in the Telecommunications Market. | No, but possible according to Section 15 (6) of Executive Order on USO.               |
| D            | Yes <sup>201</sup>                            | No                     | No  | Yes <sup>202</sup> | Yes <sup>203</sup> | No   | No       | Official publication of the Reg TP Nr. 13 of 10.07.2002, Notification Nr. 332              | See footnote <sup>204</sup>  | No  |

<sup>199</sup> Operators having significant market power in the provision of fixed telephone networks and/or voice telephony services or having been designated in accordance with Article 5 of Directive 98/10/EC.

<sup>200</sup> The requirements of the Terms of reference for the provider of universal service obligations are being revised in conformity with ETSI EG 201.

<sup>201</sup> According to Paragraph 2 of the USO Ordinance, quality of the voice telephony services within US is based on the standards achieved by 31 December 1997. There is no description or characterisation of this standard.

<sup>202</sup> RegTP's ordinance 169/1999 provides for the adaptation of ETSI EG 201 769 to the special conditions of services and networks of the nation-wide telephone service providers.

<sup>203</sup> New parameters in Annex III of the Voice telephony Directive 98/10/EC will be measured on the basis of the definitions provided in ordinance 9/1999.

<sup>204</sup> In order to apply Art. 12. (1) and (3) of Directive 98/10/EC, the Federal Government have fixed provision targets for the provision of voice telephony as universal service obligations in § 1 Nr. 1 of the USO Ordinance (TUDLV). These provisions can be adjusted by modifying the ordinance due to a change in the conditions. When these provisions targets are not met, the NRA can open a procedure in application of §§ 18 of the Telecommunications Act in order to ensure the fulfilment of USO. A provider is designated to provide USO.

| Member State | Does the NRA set QoS performance targets for: |                        | Do SMP/US operators measure QoS pursuant to the following standards? (yes/no) |                    |                     | Have measurements of QoS for year 2001 been published by |          | Date of latest publication and reference in the national Official Journal or other                               | Which measures are taken in case of persistent failure to meet performance targets? (Article 12.3, Dir. 98/10/EC)  | Are independent audits of performance data carried out? (Article 12.4, Dir. 98/10/EC)  |
|--------------|---|------------------------|---|--------------------|---------------------|--|----------|--|--|--|
|              | SMP/US <sup>199</sup> operators?              | Other fixed operators? | ETSI ETR 138  | ETSI EG 201        | Other               | SMP/US operator?   | the NRA? |  |  |  |
| EL           | Yes   | Yes                    | N/A   | Yes <sup>205</sup> | N/A                 | -  | -        | None   |  |  |
| E            | Yes   | No                     | Yes   | Yes <sup>219</sup> | No                  | -  | -        | None   |  |  |
| F            | Yes   | Yes                    | n.d.  | n.d.               | n.d.                | -  | -        | n.d.   |  |  |
| IRL          | No  | No                     | Partially <sup>206</sup>  | N/A                | MLOP <sup>220</sup> | No   | Yes      | 12 <sup>th</sup> July, 2002<br><a href="http://odtr-web/docs/odtr0266.pdf">http://odtr-web/docs/odtr0266.pdf</a> | No performance targets are set, however, where an operator fails to comply with the MLOP QoS definitions then this addressed with the individual operator with a view to ensuring compliance | Yes<br>Each operator submits their QoS data to an independent accuracy auditor who is appointed to by the operator.<br><br>On completion of the accuracy audit, data is then submitted to MLOP forum comparability auditor who assesses the comparability of operator returns. |
| I            | Yes   | Yes                    | Yes   | Yes                | N/A                 |  |          | Published by SMP operator in its semestral report  |  |  |
| NL           | Yes   | Yes                    | Yes <sup>207</sup>  | Yes <sup>221</sup> | No                  | No   | No       | None   | None   | No   |

<sup>205</sup> In the course of implementation.

<sup>206</sup> The Measuring Licence Operator programme establishes a framework for measuring the quality of service provided by fixed line telecommunications operators to their customers. ODTR's MLOP programme has set parameters which are partially based upon ETR 138.

<sup>207</sup> ETSI ETR 138 was implemented by end of 2000. ETSI EG 201 has been used since the beginning of 2001.

| Member State | Does the NRA set QoS performance targets for: |                        | Do SMP/US operators measure QoS pursuant to the following standards? (yes/no) |                    |                    | Have measurements of QoS for year 2001 been published by |          | Date of latest publication and reference in the national Official Journal or other | Which measures are taken in case of persistent failure to meet performance targets? (Article 12.3, Dir. 98/10/EC)  | Are independent audits of performance data carried out? (Article 12.4, Dir. 98/10/EC) |
|--------------|---|------------------------|---|--------------------|--------------------|--|----------|--|--|---|
|              | SMP/US <sup>199</sup> operators?              | Other fixed operators? | ETSI ETR 138  | ETSI EG 201        | Other              | SMP/US operator?   | the NRA? |  |  |   |
| A            | Yes <sup>208</sup>                            | No                     | Yes   | Yes                | Yes <sup>222</sup> | No   | Yes      | www.rtr.at   | According to § 83 3 TKG, the regulatory authority can make arrangements to perform their rights and obligations arising from international regulations and this Law. These arrangements must be followed.  | No  |
| P            | Yes   | No <sup>209</sup>      | Yes <sup>210</sup>  | n.d.               | n.d.               | No   |          | Not available  | O incumprimento dos objectivos de desempenho constitui contra-ordenação punível com coima.<br><br>Por outro lado, ao constituir o incumprimento de uma condição/moço aplicável a entidades licenciadas a respectiva licença ou registo pode ser suspensa, até ao prazo máximo de 2 anos, ou revogada, total ou parcialmente – processo do art. 32º do DL 381-A/97, de 30/12. | Yes   |
| FIN          | No  | No                     | Yes <sup>221</sup>  | Yes <sup>221</sup> | N/A                | Available on request                                     | No       | A summary is available: Telecommunications statistics (Aug. 2002)                  |  |   |
| S            | No <sup>211</sup>                             | No                     | No  | Yes                | No                 | No   | Yes      | None   | None   | None  |

<sup>208</sup> Ordinances on Universal Service: BGBl.II N. 192/1999 and BGBl. II N. 173/2000.

<sup>209</sup> According to Art. 5º of “Decreto.Lei” 474/99, of 8 November 1999, ANACOM can define QoS parameters, but no provision targets.

<sup>210</sup> Nowadays, PTC sends QoS information following ETR 138 standard. In the future, PTC and other operators will have to make this information available following EG 201 standard.

<sup>211</sup> No QoS targets are specified in legislation or licence conditions. However, the SMP-operator's measurements of QoS are carried out pursuant to the ETSI EG 201 standard.

| Member State | Does the NRA set QoS performance targets for: |                        | Do SMP/US operators measure QoS pursuant to the following standards? (yes/no) |                    |                    | Have measurements of QoS for year 2001 been published by |  | Date of latest publication and reference in the national Official Journal or other   | Which measures are taken in case of persistent failure to meet performance targets? (Article 12.3, Dir. 98/10/EC) | Are independent audits of performance data carried out? (Article 12.4, Dir. 98/10/EC) |
|--------------|---|------------------------|---|--------------------|--------------------|--|--|--|---|---|
|              | SMP/US <sup>199</sup> operators?              | Other fixed operators? | ETSI ETR 138  | ETSI EG 201        | Other              | SMP/US operator?   | the NRA?                                       |  |   |   |
| UK           | No  | No                     | Partially <sup>226</sup>  | Yes <sup>212</sup> | Yes <sup>226</sup> | Yes, via the Telecommunications Industry Forum           | Yes, via the Telecommunications Industry Forum | SMP operators' indicators are available at <a href="http://www.Groupbt.com">www.Groupbt.com</a> . Latest publication is for period Oct.00 – Mar. 02<br>CPIs are available at <a href="http://www.cpi.org.uk">www.cpi.org.uk</a> . Latest publication is for period Jul.-Dec.01 | No pressing need to take action   | Yes   |

**Table 23: Quality of service for public fixed voice telephony**

| Member State | Does the NRA set QoS performance targets for: |                        | Do SMP/US operators measure QoS pursuant to the following standards? (yes/no) |                    |       | Have measurements of QoS for year 2001 been published by |          | Date of latest publication and reference in the national Official Journal or other         | Which measures are taken in case of persistent failure to meet performance targets? (Article 12.3, Dir. 98/10/EC)              | Are independent audits of performance data carried out? (Article 12.4, Dir. 98/10/EC) |
|--------------|---|------------------------|---|--------------------|-------|--|----------|--|--|---|
|              | SMP/US <sup>213</sup> operators?              | Other fixed operators? | ETSI ETR 138  | ETSI EG 201        | Other | SMP/US operator?   | the NRA? |  |  |   |
| B            | Yes   | No                     | Yes   | be studied         | N/A   | No   | Yes      | Report on the Universal Service July 2002 ( <a href="http://www.ibpt.be">www.ibpt.be</a> ) | Compensation: max. 1% of the annual turnover concerning the universal service (art. 17 of annex of act of 21/03/1991)          | No  |
| DK           | Yes   | No                     | Yes   | Yes <sup>214</sup> | No    | No.  | No.      | None   | Sanctions according to Section 22-23 of Act on Competitive Conditions and Consumer Interests in the Telecommunications Market. | No, but possible according to Section 15 (6) of Executive Order on USO.               |

<sup>212</sup> Comparable Performance Indicators used ETR138 as a starting point. However, the parameters are tailored to reflect the demands of UK users on quality of service. Any deviation from ETR138/EG202 is a result of evidence based decision making in the interest of consumers and business users.

<sup>213</sup> Operators having significant market power in the provision of fixed telephone networks and/or voice telephony services or having been designated in accordance with Article 5 of Directive 98/10/EC.

<sup>214</sup> The requirements of the Terms of reference for the provider of universal service obligations are being revised in conformity with ETSI EG 201.



| Member State | Does the NRA set QoS performance targets for: |                        | Do SMP/US operators measure QoS pursuant to the following standards? (yes/no) |                    |                     | Have measurements of QoS for year 2001 been published by |          | Date of latest publication and reference in the national Official Journal or other                               | Which measures are taken in case of persistent failure to meet performance targets? (Article 12.3, Dir. 98/10/EC)  | Are independent audits of performance data carried out? (Article 12.4, Dir. 98/10/EC)  |
|--------------|---|------------------------|---|--------------------|---------------------|--|----------|--|--|--|
|              | SMP/US <sup>213</sup> operators?              | Other fixed operators? | ETSI ETR 138  | ETSI EG 201        | Other               | SMP/US operator?   | the NRA? |  |  |  |
| D            | Yes <sup>215</sup>                            | No                     | No  | Yes <sup>216</sup> | Yes <sup>217</sup>  | No   | No       | Official publication of the Reg TP Nr. 13 of 10.07.2002, Notification Nr. 332                                    | Siehe Fußnote <sup>218</sup>   | No   |
| EL           | Yes   | Yes                    | N/A   | Yes <sup>219</sup> | N/A                 | -  | -        | None   |  |  |
| E            | Yes   | No                     | Yes   | Yes <sup>219</sup> | No                  | -  | -        | None   |  |  |
| F            | Yes   | Yes                    | n.d.  | n.d.               | n.d.                | -  | -        | n.d.   |  |  |
| IRL          | No  | No                     | Partially <sup>220</sup>  | N/A                | MLOP <sup>220</sup> | No   | Yes      | 12 <sup>th</sup> July, 2002<br><a href="http://odtr-web/docs/odtr0266.pdf">http://odtr-web/docs/odtr0266.pdf</a> | No performance targets are set, however, where an operator fails to comply with the MLOP QoS definitions then this addressed with the individual operator with a view to ensuring compliance | Yes<br>Each operator submits their QoS data to an independent accuracy auditor who is appointed to by the operator.<br>On completion of the accuracy audit, data is then submitted to MLOP forum comparability auditor who assesses the comparability of operator returns. |

<sup>215</sup> According to Paragraph 2 of the USO Ordinance, quality of the voice telephony services within US is based on the standards achieved by 31 December 1997. There is no description or characterisation of this standard.

<sup>216</sup> RegTP's ordinance 169/1999 provides for the adaptation of ETSI EG 201 769 to the special conditions of services and networks of the nation-wide telephone service providers.

<sup>217</sup> New parameters in Annex III of the Voice telephony Directive 98/10/EC will be measured on the basis of the definitions provided in ordinance 9/1999.

<sup>218</sup> In order to apply Art. 12. (1) and (3) of Directive 98/10/EC, the Federal Government have fixed provision targets for the provision of voice telephony as universal service obligations in § 1 Nr. 1 of the USO Ordinance (TUDLV). These provisions can be adjusted by modifying the ordinance due to a change in the conditions. When these provisions targets are not met, the NRA can open a procedure in application of §§ 18 of the Telecommunications Act in order to ensure the fulfilment of USO. A provider is designated to provide USO.

<sup>219</sup> In the course of implementation.

<sup>220</sup> The Measuring Licence Operator programme establishes a framework for measuring the quality of service provided by fixed line telecommunications operators to their customers. ODTR's MLOP programme has set parameters which are partially based upon ETR 138.

| Member State | Does the NRA set QoS performance targets for: |                        | Do SMP/US operators measure QoS pursuant to the following standards? (yes/no) |                    |                    | Have measurements of QoS for year 2001 been published by |          | Date of latest publication and reference in the national Official Journal or other | Which measures are taken in case of persistent failure to meet performance targets? (Article 12.3, Dir. 98/10/EC)  | Are independent audits of performance data carried out? (Article 12.4, Dir. 98/10/EC) |
|--------------|---|------------------------|---|--------------------|--------------------|--|----------|--|--|---|
|              | SMP/US <sup>213</sup> operators?              | Other fixed operators? | ETSI ETR 138  | ETSI EG 201        | Other              | SMP/US operator?   | the NRA? |  |  |   |
| I            | Yes   | Yes                    | Yes   | Yes                | N/A                |  |          | Published by SMP operator in its semestrial report                                 |  |   |
| NL           | Yes   | Yes                    | Yes <sup>221</sup>  | Yes <sup>221</sup> | No                 | No   | No       | None   | None   | No  |
| A            | Yes <sup>222</sup>                            | No                     | Yes   | Yes                | Yes <sup>222</sup> | No   | Yes      | www.rtr.at   | According to § 83 3 TKG, the regulatory authority can make arrangements to perform their rights and obligations arising from international regulations and this Law. These arrangements must be followed.  | No  |
| P            | Yes   | No <sup>223</sup>      | Yes <sup>224</sup>  | n.d.               | n.d.               | No   |          | Not available  | O incumprimento dos objectivos de desempenho constitui contra-ordenação punível com coima.<br>Por outro lado, ao constituir o incumprimento de uma condição/modo aplicável a entidades licenciadas a respectiva licença ou registo pode ser suspensa, até ao prazo máximo de 2 anos, ou revogada, total ou parcialmente – processo do art. 32º do DL 381-A/97, de 30/12. | Yes   |
| FIN          | No  | No                     | Yes <sup>221</sup>  | Yes <sup>221</sup> | N/A                | Available on request                                     | No       | A summary is available: Telecommunications statistics (Aug. 2002)                  |  |   |
| S            | No <sup>225</sup>                             | No                     | No  | Yes                | No                 | No   | Yes      | None   | None   | None  |

<sup>221</sup> ETSI ETR 138 was implemented by end of 2000. ETSI EG 201 has been used since the beginning of 2001.

<sup>222</sup> Ordinances on Universal Service: BGBl. II N. 192/1999 and BGBl. II N. 173/2000.

<sup>223</sup> According to Art. 5º of “Decreto-Lei” 474/99, of 8 November 1999, ANACOM can define QoS parameters, but no provision targets.

<sup>224</sup> Nowadays, PTC sends QoS information following ETR 138 standard. In the future, PTC and other operators will have to make this information available following EG 201 standard.

| Member State | Does the NRA set QoS performance targets for: |                        | Do SMP/US operators measure QoS pursuant to the following standards? (yes/no) |                    |                    | Have measurements of QoS for year 2001 been published by |  | Date of latest publication and reference in the national Official Journal or other  | Which measures are taken in case of persistent failure to meet performance targets? (Article 12.3, Dir. 98/10/EC) | Are independent audits of performance data carried out? (Article 12.4, Dir. 98/10/EC) |
|--------------|---|------------------------|---|--------------------|--------------------|--|--|---|---|---|
|              | SMP/US <sup>213</sup> operators?              | Other fixed operators? | ETSI ETR 138  | ETSI EG 201        | Other              | SMP/US operator?   | the NRA?                                       |   |   |   |
| UK           | No  | No                     | Partially <sup>226</sup>  | Yes <sup>226</sup> | Yes <sup>226</sup> | Yes, via the Telecommunications Industry Forum           | Yes, via the Telecommunications Industry Forum | SMP operators' indicators are available at <a href="http://www.Groupbt.com">www. Groupbt.com</a> . Latest publication is for period Oct.00 – Mar. 02<br>CPIs are available at <a href="http://www.cpi.org.uk">www.cpi.org.uk</a> . Latest publication is for period Jul.-Dec.01 | No pressing need to take action   | Yes   |

<sup>225</sup> No QoS targets are specified in legislation or licence conditions. However, the SMP-operator's measurements of QoS are carried out pursuant to the ETSI EG 201 standard.

<sup>226</sup> Comparable Performance Indicators used ETR138 as a starting point. However, the parameters are tailored to reflect the demands of UK users on quality of service. Any deviation from ETR138/EG202 is a result of evidence based decision making in the interest of consumers and business users.

## 11. DIGITAL TELEVISION

This chapter provides information on the EU market for digital television. This type of information was included in last year's *implementation report* (7<sup>th</sup> edition) for the first time, notably:

- A review of the transposition of Directive 95/47/EC on the use of standards for the transmission of television signals. <sup>227</sup>
- Market data.

This year's TV chapter is slightly different. First, it does not cover transposition aspects which, according to Directive 95/47/EC, should be reviewed only every other year. Secondly, market indicators retained are different, and so is the methodology for collecting data. This year the following areas are covered:

- Market penetration.
- Interactive TV services.
- Equipment and technology.
- Operators and legal aspects.

Unlike last year, the services of the European Commission sent a questionnaire to Member States requesting relevant information. The quality of the replies received vary, for instance, whereas two MS did not reply, others provided detailed information.<sup>228</sup> In addition, information from different MS is not always consistent, so that data provided in reply to one particular question may reflect different assumptions and timing. It was therefore difficult to present data received in reply to the questionnaire in a standard format that would facilitate comparison between MS. Finally, some errors and inaccuracies in the data received were identified and addressed.

As a result of these statistical shortcomings, the EC services decided to prepare certain tables and charts on the basis of data from another source.<sup>229</sup> In addition, data received from MS, which in some cases diverge from those in the tables and charts, are reported in footnotes.

Whereas official figures in principle reflect only declared users and equipment, the impact of piracy is considered to be widespread in the area of pay-TV<sup>230</sup> and, as a consequence, also in digital TV, since most digital TV today is pay-TV rather than free-to-air TV. If pirate equipment were taken into account, digital TV market penetration would be higher.

As a result of the above statistical limitations, not all data in this chapter will reflect market reality with total accuracy but nonetheless it should provide a fair approximation.

---

<sup>227</sup> OJ No L 281, 23. 11. 1995, p. 51.

<sup>228</sup> As far as Belgium is concerned, the French speaking Community and the Flemish Community, who are responsible for television regulation, supplied data specific to those territories. Consolidated figures for the whole of Belgium are shown in the tables and charts.

<sup>229</sup> Namely data from a report by independent consultant *Strategy Analytics: "European Digital TV Set-Top Box Market Forecast, January 2002"*. Whereas 2002 figures provided by MS reflect the market status when those data were collected, 2002 figures by *Strategy Analytics* are an estimation for the whole year. In addition, some information from *Strategy Analytics* does not cover Luxembourg and covers Norway and Switzerland.

<sup>230</sup> For instance, in reply to the questionnaire, the Italian authorities estimate that the number of pirate satellite pay-TV users at 1.5 million, as opposed to 2.1 declared subscribers.

The following abbreviations are used for terms most frequently used in this chapter: digital television (DTV), European Commission (EC), free-to-air (FTA) or “free-to-view” (FTV)<sup>231</sup>, households (HH), integrated digital television (IDTV), interactive television (iTV), Member States (MS), set-top-box (STB).

## 1. EU television market penetration

### General considerations

As indicated in the general introduction, it was not possible to obtain certain information requested in the questionnaire sent to MS, notably on “secondary TV reception”, that is, TV services received through TV sets other than the “main TV set in the home”.<sup>232</sup> As a result, market penetration data presented here correspond only to viewership through the main TV set in the home.<sup>233</sup> Some sources claim that the majority of secondary TV sets in the EU receive terrestrial broadcasts.

Likewise, no consistent information was obtained as to the market share of premium digital pay TV, received against payment of a subscription fee, and FTA DTV. Consequently, market penetration data presented here cover both pay and FTV services, and comments are provided where additional information is available. In general, it can be assumed that pay-TV operators still account for most of EU DTV penetration.<sup>234</sup> This being said, some MS provided data on the share between pay and FTA TV for the different analogue and digital delivery networks. For details see footnote.<sup>235</sup>

In addition, some MS provided data on the number of households within TV networks coverage. For details see footnote.<sup>236</sup>

---

<sup>231</sup> Whereas the two concepts FTA/FTV are used here interchangeably, that is not always the case in other contexts, where they are understood as follows: free-to-view services are normally on satellite and encrypted for rights purposes, but there is no subscription payment, only a once-off payment for the card. Free-to-air services are normally terrestrial, non-encrypted, non-pay.

<sup>232</sup> In the questionnaire EC services sent to MS the “main TV set in the home” is defined as the TV set watched by the whole family. It is normally the newest and more expensive TV set in the home.

<sup>233</sup> According to *Strategy Analytics* (“*European Digital TV Set-Top Box Market Forecast, January 2002*”) in 2002 the average TV set ownership in the EU would be approximately 1.6 set per HH and there would be around 93 million secondary sets.

<sup>234</sup> It was indicated in the 7<sup>th</sup> *implementation report* that consultancy firm ‘IDATE’ estimated that in 2000 only 5% of DTV households received exclusively FTA services. However, in many cases, DTV subscribers receive certain FTA channels in addition to pay channels

<sup>235</sup> Additional abbreviations used here are: analogue cable TV (ACTV), analogue satellite TV (ASTV), analogue terrestrial TV (ATTV), digital cable TV (DCTV), digital satellite TV (DSTV), digital terrestrial TV (DTTV). Figures are given in millions of HH.

**Austria:** FTV ACTV (1,219), Pay-TV ACTV (0,007), FTV ASTV (1,6), FTV ATTV (2,75), FTV DCTV (0,03), Pay-TV DCTV (0,13), FTV DSTV (0,2).

**Germany:** FTV ACTV (20,2), FTV ASTV (12,0), FTV ATTV (2,9), FTV DSTV (0,5), Pay-TV DSTV (0,5).

**Ireland:** FTV ACTV (0,58), Pay-TV ACTV (0,091), FTV ATTV (0,4), FTV DCTV (0,043), Pay-TV DCTV (0,021), FTV DSTV (0,25).

**Italy:** FTV ASTV (0,26), FTV ATTV (20,94), Pay-TV ATTV (0,24), Pay-TV DCTV (0,13), FTV DSTV (2,1), Pay-TV DSTV (2,1).

**Luxembourg:** FTV ACTV (0,15), FTV ASTV (0,023), FTV ATTV (0,003), Pay-TV DCTV (0,002), FTV DSTV (0,007).

**Netherlands:** FTV ACTV (6,2), Pay-TV ACTV (0,09), FTV ATTV (0,1), FTV DSTV (0,3).

**Portugal:** FTV ACTV (1,12), FTV DSTV (0,24).

**Spain:** Pay-TV ATTV (0,79), Pay-TV DCTV (0,59), Pay-TV DSTV (2,04), Pay-TV DTTV (0,13).

**Sweden:** FTV ATTV (1,2).

**UK:** Pay-TV ACTV (1,4), FTV ATTV (24,55), Pay-TV DCTV (2,03), FTV DSTV (0,4), Pay-TV DSTV (6,1), FTV DTTV (1,2).

<sup>236</sup> Figures are given in millions of HH.

**Austria:** ASTV (3,29), ATTV (3,2), DSTV (3,29).

**Belgium:** ACTV (4,0), ATTV (4,3).

**Denmark:** ACTV (1,8), ASTV (2,4), ATTV (2,4), DCTV (1,8), DSTV (2,4).

**Finland:** ACTV (1,0), ASTV (2,4), ATTV (2,4), DCTV (0,85), DSTV (2,4), DTTV (1,7).

**Germany:** Total coverage 32,1.

**Ireland:** ACTV (1,02), ATTV (1,24), DCTV (0,65), DSTV (1,27).

**Italy:** ACTV (1,09), ATTV (20,94); DCTV (1,09).

**Netherlands:** ACTV (6,7), ATTV (6,8), DSTV (6,0).

Unless otherwise specified, percentages of DTV HH are expressed as a percentage of total HH, not of 'TV HH'. However, these two magnitudes are very close in all EU Member States, where almost every HH receives TV services (analogue, digital or both).<sup>237</sup>

Market penetration data are broken down by TV delivery mechanism (cable, satellite, terrestrial). There should be no overlaps in the market data if the statistics provided correspond to one single TV set (the main TV set in the home). However, this approach may not always have been respected so that there may be some overlapping corresponding to those HH which receive services from different TV networks..

## Market data

**Table 24: TV households (analogue and digital) in 2002**

| (in millions and in percentage of national households) |               |             |              |              |              |                                 |              |
|--|---------------|-------------|--------------|--------------|--------------|---------------------------------|--------------|
|  | Total HH      | Cable TV    |              | Satellite TV |              | Terrestrial TV - only and no TV |              |
|  |               | TV HH       | %            | TV HH        | %            | TV HH                           | %            |
| Austria  | 3,3           | 1,40        | 42,4%        | 1,55         | 46,9%        | 0,35                            | 10,7%        |
| Belgium  | 4,3           | 4,02        | 93,6%        | 0,08         | 2,0%         | 0,19                            | 4,5%         |
| Denmark  | 2,4           | 1,46        | 62,0%        | 0,59         | 25,0%        | 0,31                            | 13,0%        |
| Finland  | 2,3           | 1,37        | 59,0%        | 0,34         | 14,6%        | 0,61                            | 26,4%        |
| France   | 25,1          | 3,77        | 15,0%        | 3,51         | 14,0%        | 17,85                           | 71,0%        |
| Germany  | 37,9          | 20,08       | 53,0%        | 11,00        | 29,0%        | 6,81                            | 18,0%        |
| Greece   | 3,6           | 0,00        | 0,0%         | 0,22         | 6,0%         | 3,39                            | 94,0%        |
| Ireland  | 1,3           | 0,50        | 38,4%        | 0,20         | 15,4%        | 0,60                            | 46,2%        |
| Italy  | 20,1          | 0,05        | 0,3%         | 3,42         | 17,0%        | 16,66                           | 82,7%        |
| Luxembourg   | 0,2           | 0,16        | 91,7%        | 0,01         | 5,8%         | 0,00                            | 2,4%         |
| Netherlands  | 7,1           | 6,14        | 87,0%        | 0,42         | 6,0%         | 0,49                            | 7,0%         |
| Portugal   | 3,6           | 1,25        | 35,0%        | 1,04         | 29,0%        | 1,29                            | 36,0%        |
| Spain  | 12,8          | 1,50        | 11,8%        | 2,70         | 21,2%        | 8,56                            | 67,1%        |
| Sweden   | 4,6           | 2,28        | 50,0%        | 0,89         | 19,5%        | 1,39                            | 30,5%        |
| UK   | 26,3          | 4,99        | 19,0%        | 7,62         | 29,0%        | 13,66                           | 52,0%        |
| <b>TOTAL EU</b>  | <b>154,73</b> | <b>49,0</b> | <b>31,7%</b> | <b>33,6</b>  | <b>21,7%</b> | <b>72,2</b>                     | <b>46,6%</b> |

Figures in this table come from *Strategy Analytics: "European Digital TV Set-Top Box Market Forecast, January 2002"*, except for Luxembourg, where figures provided by national authorities were used. Figures provided by other national authorities are indicated in footnote.<sup>238</sup>

**Portugal:** ACTV (3,11).

**Spain:** ASTV (13,1), ATTV (12,71), DCTV (3,97), DSTV (13,1), DTTV (10,5).

**Sweden:** ACTV (2,0), ASTV (4,0), ATTV (4,0), DCTV (2,0), DSTV (4,0), DTTV (3,6).

**UK:** ACTV (13,8), ATTV (24,7), DCTV (13,8), DSTV (24,6), DTTV (19,8).

<sup>237</sup> According to Eurostat, in 1998, on average, 97% of EU households had at least one TV set, and in no Member State this figure was lower than 90%. See Eurostat, "Statistics in focus, theme 4 – 3/2001"

<sup>238</sup> Figures are given in millions of HH. Data on terrestrial HH are not indicated here as they cover different realities from one MS to the other (e.g. some MS reported HH receiving terrestrial TV only, other MS reported HH receiving terrestrial TV but not only), so that data are not comparable.

**Austria:** HH (3,3), CTV (1,27), STV (1,8).

**Belgium:** HH (4,3).

**Denmark:** HH (2,4).

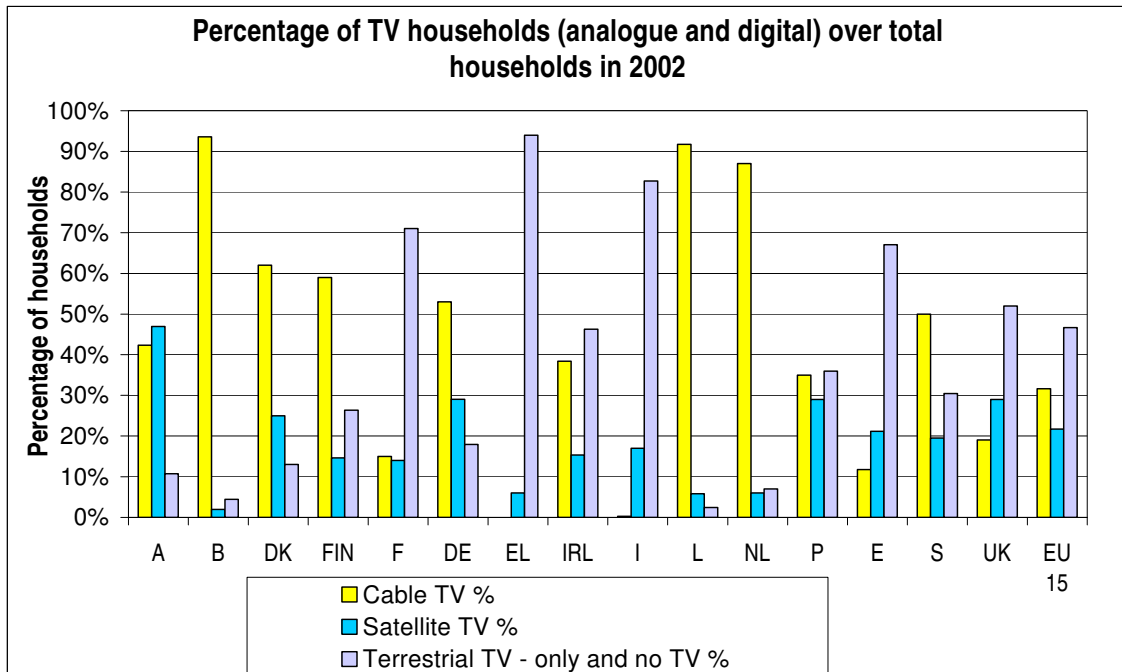
**Finland:** HH (2,4).

**Germany:** HH (38,7), CTV (22,14), STV (13).

**Ireland:** HH (1,3), CTV (0,73), STV (0,25).

No reliable data were available for HH with only terrestrial TV reception. This has been estimated as follows: total country HH minus satellite and cable HH. Consequently, the column on terrestrial TV also includes HH with no TV but that should represent a marginal amount since almost 100% of HH have a TV in all MS.

**Chart 3**



**Italy:** HH (22,2), STV (2,1).

**Luxembourg:** HH (0,2), CTV (0,16), STV (0,03).

**Netherlands:** HH (7,1), CTV (6,29), STV (0,3).

**Portugal:** CTV (1,16), STV (0,24).

**Sweden:** HH (2,13), CTV (1,27), STV (0,86).

**UK:** HH (24,8), CTV (3,43), STV (6,5).

**Table 25: Digital TV households in 2002**

| (in millions and in percentage of national households) |               |                     |              |            |             |               |              |                 |             |
|--|---------------|---------------------|--------------|------------|-------------|---------------|--------------|-----------------|-------------|
|  | Total HH      | Total Digital TV HH |              | Cable DTV  |             | Satellite DTV |              | Terrestrial DTV |             |
|  |               | TV HH               | %            | TV HH      | %           | TV HH         | %            | TV HH           | %           |
| Austria  | 3,3           | 0,36                | 10,7%        | 0,07       | 2,1%        | 0,29          | 8,7%         | 0,00            | 0,0%        |
| Belgium  | 4,3           | 0,23                | 5,2%         | 0,22       | 5,0%        | 0,01          | 0,2%         | 0,00            | 0,0%        |
| Denmark  | 2,4           | 0,92                | 38,9%        | 0,55       | 23,6%       | 0,36          | 15,3%        | 0,00            | 0,0%        |
| Finland  | 2,3           | 0,22                | 9,4%         | 0,04       | 1,6%        | 0,17          | 7,3%         | 0,01            | 0,5%        |
| France   | 25,1          | 4,97                | 19,8%        | 0,95       | 3,8%        | 4,02          | 16,0%        | 0,01            | 0,0%        |
| Germany  | 37,9          | 4,14                | 10,9%        | 1,94       | 5,1%        | 2,21          | 5,8%         | 0,00            | 0,0%        |
| Greece   | 3,6           | 0,22                | 6,0%         | 0,00       | 0,0%        | 0,22          | 6,0%         | 0,00            | 0,0%        |
| Ireland  | 1,3           | 0,32                | 24,4%        | 0,06       | 4,4%        | 0,26          | 20,0%        | 0,00            | 0,0%        |
| Italy  | 20,1          | 3,13                | 15,6%        | 0,02       | 0,1%        | 3,11          | 15,4%        | 0,00            | 0,0%        |
| Luxembourg   | 0,2           | 0,01                | 5,3%         | 0,00       | 1,0%        | 0,01          | 4,2%         | 0,00            | 0,0%        |
| Netherlands  | 7,1           | 1,16                | 16,5%        | 0,45       | 6,4%        | 0,69          | 9,8%         | 0,02            | 0,3%        |
| Portugal   | 3,6           | 0,34                | 9,6%         | 0,04       | 1,1%        | 0,29          | 8,0%         | 0,02            | 0,5%        |
| Spain  | 12,8          | 3,21                | 25,1%        | 0,05       | 0,4%        | 2,78          | 21,8%        | 0,38            | 3,0%        |
| Sweden   | 4,6           | 1,44                | 31,6%        | 0,46       | 10,0%       | 0,84          | 18,4%        | 0,15            | 3,2%        |
| UK   | 26,3          | 11,51               | 43,8%        | 3,23       | 12,3%       | 6,22          | 23,7%        | 2,06            | 7,8%        |
| <b>TOTAL EU</b>  | <b>154,73</b> | <b>32,2</b>         | <b>20,8%</b> | <b>8,1</b> | <b>5,2%</b> | <b>21,5</b>   | <b>13,9%</b> | <b>2,6</b>      | <b>1,7%</b> |

Figures in this table come from *Strategy Analytics: "European Digital TV Set-Top Box Market Forecast, January 2002"*, except for Luxembourg, where figures provided by national authorities were used. Figures provided by other national authorities are indicated in footnote.<sup>239</sup>

<sup>239</sup> Figures are given in million HH.

**Austria:** DCTV (0,04), DSTV (0,2), DTTV (0).

**Germany:** DSTV (1), DTTV (0).

**Ireland:** DCTV (0,06), DSTV (0,25), DTTV (0).

**Italy:** DSTV (2,1), DTTV (0).

**Luxembourg:** DCTV (0), DSTV (0,01), DTTV (0).

**Netherlands:** DCTV (0), DSTV (0,3), DTTV (0)

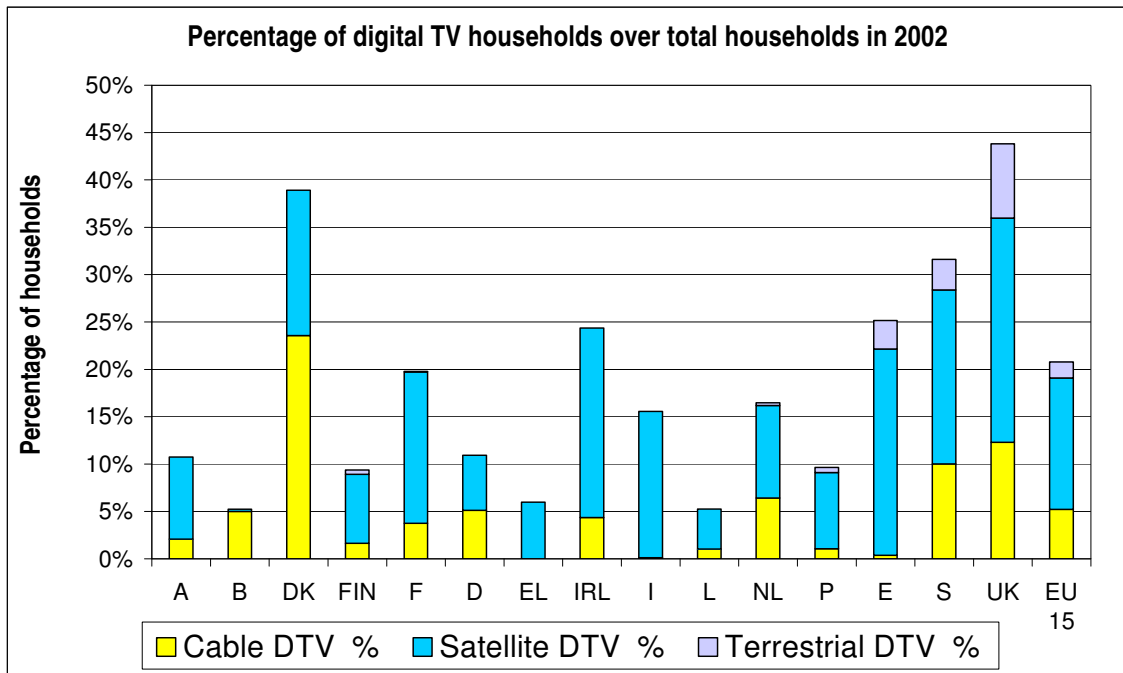
**Portugal:** DCTV (0), DSTV (0,24), DTTV (0)

**Sweden:** DCTV (0,13), DSTV (0,48), DTTV (0,1).

**UK:** DCTV (2,03), DSTV (6,5), DTTV (1,2).

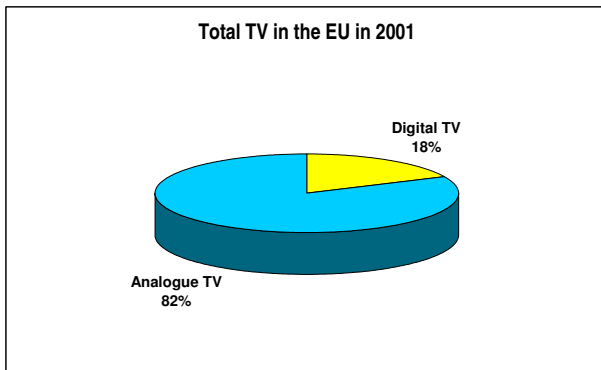


**Chart 4**

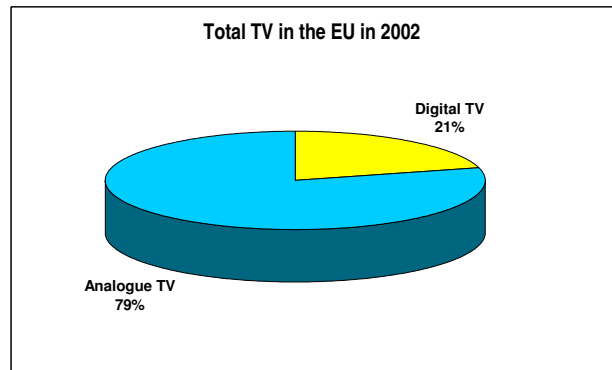


**Charts 5 to 12: Percentage of EU digital TV households over total EU TV households in 2001 and 2002 for total TV, cable TV, satellite TV and terrestrial TV**

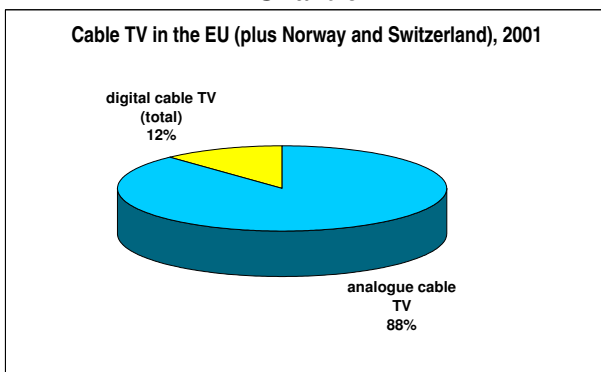
**Chart 5**



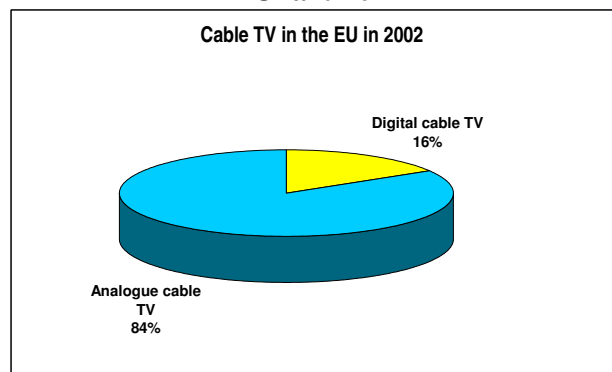
**Chart 9**



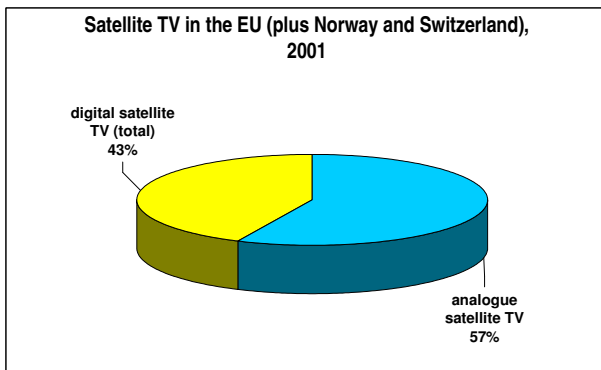
**Chart 6**



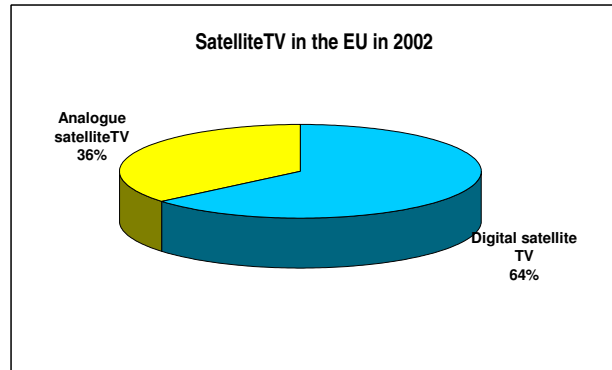
**Chart 10**



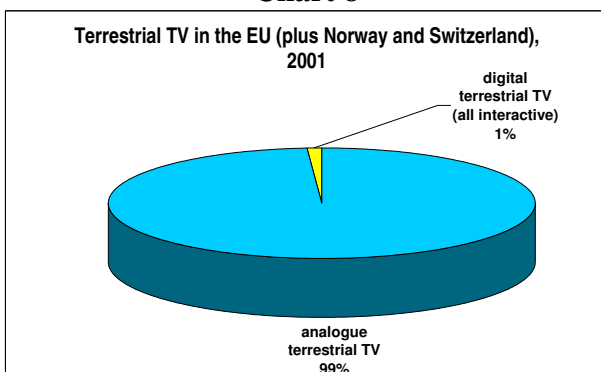
**Chart 7**



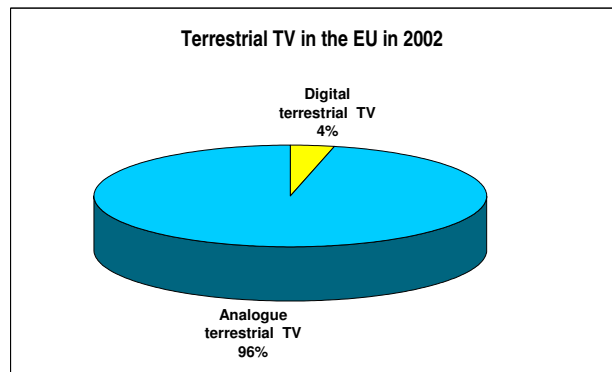
**Chart 11**



**Chart 8**



**Chart 12**



2002 charts were calculated with data from tables 1 and 2. 2001 charts were copied from the 7<sup>th</sup> implementation report.

**Table 26: Evolution of digital TV households from 2001 to 2002**

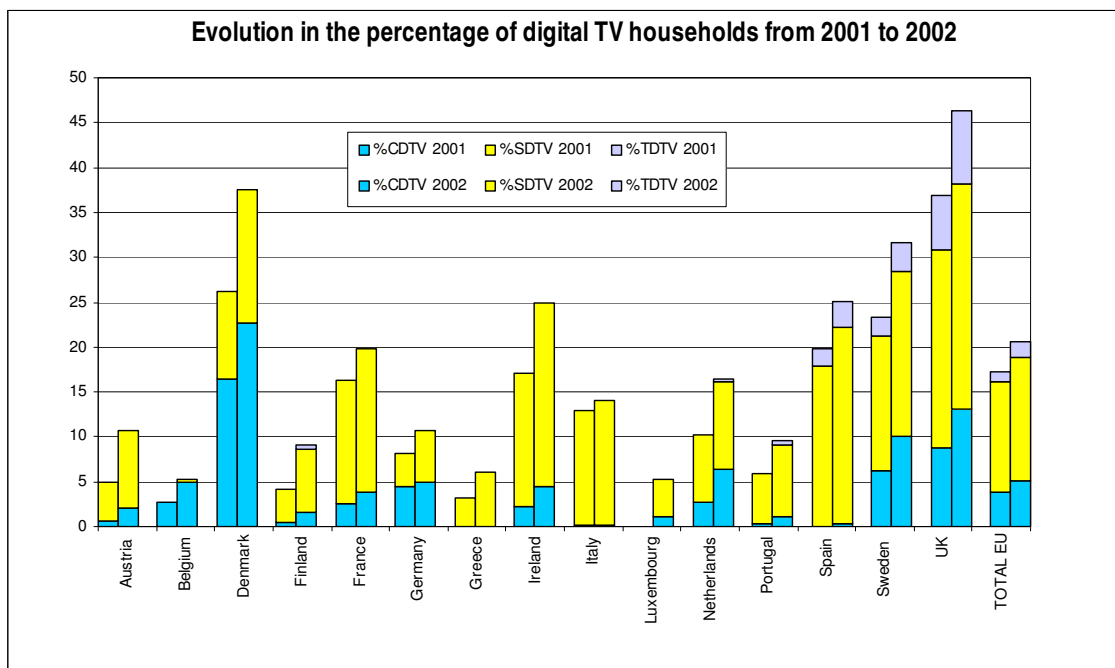
| (in millions and in percentage of national HH) |                     |               |              |              |              |              |               |             |             |             |                 |              |              |              |             |             |             |             |
|--|---------------------|---------------|--------------|--------------|--------------|--------------|---------------|-------------|-------------|-------------|-----------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|
|  | Total Digital TV HH |               | Cable DTV    |              |              |              | Satellite DTV |             |             |             | Terrestrial DTV |              |              |              |             |             |             |             |
|  | Total HH            |               | TV HH        |              | %            |              | TV HH         |             | %           |             | TV HH           |              | %            |              | TV HH       |             | %           |             |
|  | 2001                | 2002          | 2001         | 2002         | 2001         | 2002         | 2001          | 2002        | 2001        | 2002        | 2001            | 2002         | 2001         | 2002         | 2001        | 2002        | 2001        | 2002        |
| Austria  | 3,28                | 3,30          | 0,16         | 0,36         | 5,3%         | 10,7%        | 0,02          | 0,07        | 0,6%        | 2,1%        | 0,14            | 0,29         | 4,4%         | 8,7%         | 0,00        | 0,00        | 0,0%        | 0,0%        |
| Belgium  | 4,27                | 4,30          | 0,11         | 0,23         | 3,0%         | 5,2%         | 0,11          | 0,22        | 2,7%        | 5,0%        | 0,00            | 0,01         | 0,0%         | 0,2%         | 0,00        | 0,00        | 0,0%        | 0,0%        |
| Denmark  | 2,35                | 2,36          | 0,62         | 0,92         | 25,3%        | 38,9%        | 0,39          | 0,55        | 16,5%       | 23,6%       | 0,23            | 0,36         | 9,7%         | 15,3%        | 0,00        | 0,00        | 0,0%        | 0,0%        |
| Finland  | 2,30                | 2,33          | 0,10         | 0,22         | 3,7%         | 9,4%         | 0,01          | 0,04        | 0,4%        | 1,6%        | 0,08            | 0,17         | 3,7%         | 7,3%         | 0,00        | 0,01        | 0,0%        | 0,5%        |
| France   | 24,85               | 25,14         | 4,04         | 4,97         | 17,6%        | 19,8%        | 0,65          | 0,95        | 2,6%        | 3,8%        | 3,39            | 4,02         | 13,6%        | 16,0%        | 0,00        | 0,01        | 0,0%        | 0,0%        |
| Germany  | 37,68               | 37,88         | 3,08         | 4,14         | 11,8%        | 10,9%        | 1,67          | 1,94        | 4,4%        | 5,1%        | 1,42            | 2,21         | 3,8%         | 5,8%         | 0,00        | 0,00        | 0,0%        | 0,0%        |
| Greece   | 3,58                | 3,61          | 0,11         | 0,22         | 3,9%         | 6,0%         | 0,00          | 0,00        | 0,0%        | 0,0%        | 0,11            | 0,22         | 3,2%         | 6,0%         | 0,00        | 0,00        | 0,0%        | 0,0%        |
| Ireland  | 1,28                | 1,30          | 0,22         | 0,32         | 11,9%        | 24,4%        | 0,03          | 0,06        | 2,3%        | 4,4%        | 0,19            | 0,26         | 14,8%        | 20,0%        | 0,00        | 0,00        | 0,0%        | 0,0%        |
| Italy  | 20,14               | 20,13         | 2,60         | 3,13         | 12,5%        | 15,6%        | 0,03          | 0,02        | 0,1%        | 0,1%        | 2,57            | 3,11         | 12,8%        | 15,4%        | 0,00        | 0,00        | 0,0%        | 0,0%        |
| Luxembourg                                     | n.a                 | 0,17          | n.a          | 0,01         | n.a          | 5,3%         | n.a           | 0,00        | n.a         | 1,0%        | n.a             | 0,01         | n.a          | 4,2%         | n.a         | 0,00        | n.a         | 0,0%        |
| Netherlands                                    | 6,97                | 7,06          | 0,71         | 1,16         | 10,4%        | 16,5%        | 0,19          | 0,45        | 2,7%        | 6,4%        | 0,52            | 0,69         | 7,5%         | 9,8%         | 0,00        | 0,02        | 0,0%        | 0,3%        |
| Portugal                                       | 3,51                | 3,57          | 0,20         | 0,34         | 6,1%         | 9,6%         | 0,01          | 0,04        | 0,3%        | 1,1%        | 0,20            | 0,29         | 5,6%         | 8,0%         | 0,00        | 0,02        | 0,0%        | 0,5%        |
| Spain  | 12,66               | 12,76         | 2,51         | 3,21         | 22,5%        | 25,1%        | 0,00          | 0,05        | 0,0%        | 0,4%        | 2,26            | 2,78         | 17,9%        | 21,8%        | 0,25        | 0,38        | 1,9%        | 3,0%        |
| Sweden   | 4,42                | 4,56          | 1,03         | 1,44         | 22,0%        | 31,6%        | 0,28          | 0,46        | 6,3%        | 10,0%       | 0,66            | 0,84         | 15,0%        | 18,4%        | 0,09        | 0,15        | 2,1%        | 3,2%        |
| UK   | 26,00               | 26,27         | 9,60         | 11,51        | 40,1%        | 43,8%        | 2,29          | 3,23        | 8,8%        | 12,3%       | 5,74            | 6,22         | 22,1%        | 23,7%        | 1,56        | 2,06        | 6,0%        | 7,8%        |
| <b>TOTAL EU</b>                                | <b>153,29</b>       | <b>154,73</b> | <b>26,56</b> | <b>32,16</b> | <b>18,0%</b> | <b>20,8%</b> | <b>5,97</b>   | <b>8,07</b> | <b>3,9%</b> | <b>5,2%</b> | <b>18,7</b>     | <b>21,45</b> | <b>12,2%</b> | <b>13,9%</b> | <b>1,89</b> | <b>2,65</b> | <b>1,2%</b> | <b>1,7%</b> |

Figures in this table come from *Strategy Analytics: “European Digital TV Set-Top Box Market Forecast, January 2002”*, except for Luxembourg, where figures provided by national authorities were used. In some cases data from both sources differ. However, it has to be remembered that the period covered by both sets of data is different.<sup>240</sup>

In addition, it appears that data in tables 2 and 3 do not take into account 2002 bankruptcies of terrestrial digital pay-TV operators in the UK and Spain, as a result, the number of DTTV households may be an over-estimate as they show an increase in this sector, when a decrease has actually taken place since 2001. This being said, some STB supplied by bankrupt DTTV operators to their subscriber have not been recuperated and may still be used for receiving DTTV FTA services only.

Considering the mentioned limitations to the statistical reliability of the data used, the EC services estimate the margin of error may be in the range of 2 to 3% of total HH. In particular, the average total DTV EU penetration, for the whole of 2002, seems to be broadly comparable to the 2001 figure, with no significant increase or decrease being taken place.

**Chart 13**



On the bar chart, the left column corresponds to 2001 and the right column to 2002.

<sup>240</sup> Whereas *Strategy Analytics* made estimations for the whole year 2002, MS provided the most up-to-date data available when replying to the questionnaire, i.e. in some cases some months before august 2002. It is therefore normal that the former are bigger than the latter.

## 2. Interactive TV services

**Table 27: Households able to receive interactive digital TV services in 2002**

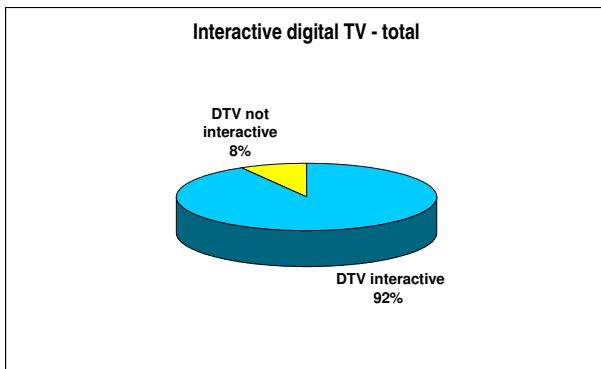
| (in millions households, in percentage of national households and, in percentage of digital TV households) |              |                     |                 |              |                   |            |                 |             |                   |             |                 |              |                   |             |                 |             |                   |
|--|--------------|---------------------|-----------------|--------------|-------------------|------------|-----------------|-------------|-------------------|-------------|-----------------|--------------|-------------------|-------------|-----------------|-------------|-------------------|
|  | Total HH     | Total Digital TV HH |                 |              |                   | Cable      |                 |             |                   | Satellite   |                 |              |                   | Terrestrial |                 |             |                   |
|  |              | DTV HH              | %iTV/<br>DTV HH | iTV HH       | %iTV/<br>total HH | DTV HH     | %iTV/<br>DTV HH | iTV HH      | %iTV/<br>total HH | DTV HH      | %iTV/<br>DTV HH | iTV HH       | %iTV/<br>total HH | DTV HH      | %iTV/<br>DTV HH | iTV HH      | %iTV/<br>total HH |
| Austria  | 3,3          | 0,36                | 60%             | 0,21         | 6,4%              | 0,07       | 100%            | 0,07        | 2,1%              | 0,29        | 50%             | 0,14         | 4,3%              | 0,00        | 0%              | 0,00        | 0,0%              |
| Belgium  | 4,3          | 0,23                | 96%             | 0,22         | 5,0%              | 0,22       | 100%            | 0,22        | 5,0%              | 0,01        | 0%              | 0,00         | 0,0%              | 0,00        | 100%            | 0,00        | 0,0%              |
| Denmark  | 2,4          | 0,92                | 100%            | 0,92         | 38,9%             | 0,55       | 100%            | 0,55        | 23,6%             | 0,36        | 100%            | 0,36         | 15,3%             | 0,00        | 100%            | 0,00        | 0,0%              |
| Finland  | 2,3          | 0,22                | 100%            | 0,22         | 9,4%              | 0,04       | 100%            | 0,04        | 1,6%              | 0,17        | 100%            | 0,17         | 7,3%              | 0,01        | 100%            | 0,01        | 0,5%              |
| France   | 25,1         | 4,97                | 100%            | 4,96         | 19,7%             | 0,95       | 100%            | 0,95        | 3,8%              | 4,02        | 100%            | 4,02         | 16,0%             | 0,01        | 0%              | 0,00        | 0,0%              |
| Germany  | 37,9         | 4,14                | 41%             | 1,68         | 4,4%              | 1,94       | 30%             | 0,58        | 1,5%              | 2,21        | 50%             | 1,10         | 2,9%              | 0,00        | 100%            | 0,00        | 0,0%              |
| Greece   | 3,6          | 0,22                | 100%            | 0,22         | 6,0%              | 0,00       | 0%              | 0,00        | 0,0%              | 0,22        | 100%            | 0,22         | 6,0%              | 0,00        | 0%              | 0,00        | 0,0%              |
| Ireland  | 1,3          | 0,32                | 100%            | 0,32         | 24,4%             | 0,06       | 100%            | 0,06        | 4,4%              | 0,26        | 100%            | 0,26         | 20,0%             | 0,00        | 100%            | 0,00        | 0,0%              |
| Italy  | 20,1         | 3,13                | 99%             | 3,11         | 15,4%             | 0,02       | 0%              | 0,00        | 0,0%              | 3,11        | 100%            | 3,11         | 15,4%             | 0,00        | 100%            | 0,00        | 0,0%              |
| Luxembourg   | 0,2          | 0,01                |                 |              | 0,0%              | 0,00       |                 |             | 0,0%              | 0,01        |                 |              | 0,0%              | 0,00        |                 |             | 0,0%              |
| Netherlands  | 7,1          | 1,16                | 100%            | 1,16         | 16,5%             | 0,45       | 100%            | 0,45        | 6,4%              | 0,69        | 100%            | 0,69         | 9,8%              | 0,02        | 100%            | 0,02        | 0,3%              |
| Portugal   | 3,6          | 0,34                | 100%            | 0,34         | 9,6%              | 0,04       | 100%            | 0,04        | 1,1%              | 0,29        | 100%            | 0,29         | 8,0%              | 0,02        | 100%            | 0,02        | 0,5%              |
| Spain  | 12,8         | 3,21                | 100%            | 3,21         | 25,1%             | 0,05       | 100%            | 0,05        | 0,4%              | 2,78        | 100%            | 2,78         | 21,8%             | 0,38        | 100%            | 0,38        | 3,0%              |
| Sweden   | 4,6          | 1,44                | 100%            | 1,44         | 31,6%             | 0,46       | 100%            | 0,46        | 10,0%             | 0,84        | 100%            | 0,84         | 18,4%             | 0,15        | 100%            | 0,15        | 3,2%              |
| UK   | 26,3         | 11,51               | 100%            | 11,51        | 43,8%             | 3,23       | 100%            | 3,23        | 12,3%             | 6,22        | 100%            | 6,22         | 23,7%             | 2,06        | 100%            | 2,06        | 7,8%              |
| <b>TOTAL EU</b>  | <b>154,7</b> | <b>32,2</b>         | <b>92%</b>      | <b>29,51</b> | <b>19,1%</b>      | <b>8,1</b> | <b>83%</b>      | <b>6,69</b> | <b>4,3%</b>       | <b>21,5</b> | <b>94%</b>      | <b>20,19</b> | <b>13,0%</b>      | <b>2,6</b>  | <b>100%</b>     | <b>2,64</b> | <b>1,7%</b>       |

Figures in this table come from *Strategy Analytics*<sup>241</sup> or have been calculated using other data in the table. “% iTV/ DTV HH” figures come from *Strategy Analytics*, where interactive DTV HH are defined as those “owning at least one set-top box or integrated DTV receiver with middleware capable of supporting at least one of the following: online shopping, interactive ads, information services, banking, games or Internet (email, web access)”.<sup>242</sup> “iTV HH” (cable, satellite and terrestrial) have been calculated by multiplying “% iTV/ DTV HH” by “DTV HH”. “% iTV/ total HH” has been calculated by dividing “iTV HH” by “total HH”. “iTV HH” (total) are calculated by adding “iTV HH” (cable, satellite and terrestrial).

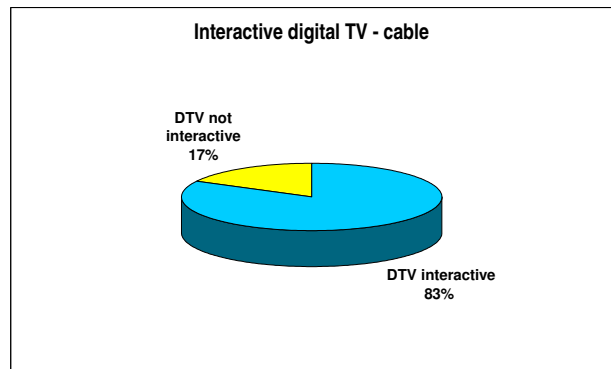
Moreover, some MS provided details on iTV HH. For details see footnote.<sup>243</sup>

**Charts 14 to 17: Digital TV households able to receive interactive services in 2002**

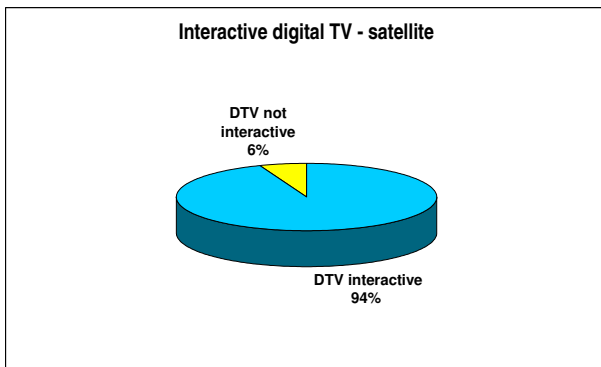
**Chart 14**



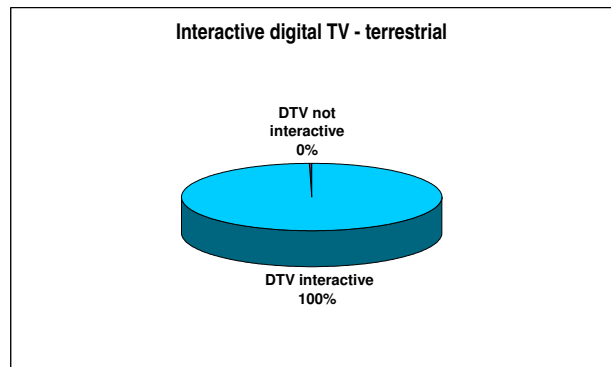
**Chart 16**



**Chart 15**



**Chart 17**



<sup>241</sup> “European Digital TV Set-Top Box Market Forecast, January 2002”. No data are available on Luxembourg.

<sup>242</sup> According to Strategy Analytics, no interactive DTV services were available through IDTVs in 2002.

<sup>243</sup> Figures are in HH.

**French speaking Belgium** (Wallonia plus Brussels): cable iTV: 48.537 (FTV TV); **Ireland**: satellite iTV: 245.000 (FTA TV); **Italy**: cable iTV: 130.000 (Pay-TV), satellite iTV: 2.100.000 (Pay-TV); **Netherlands**: cable iTV: 100.000 (FTA TV); **Spain**: cable iTV: 587.829 (Pay-TV), satellite iTV: 2.036.417 (Pay-TV), terrestrial iTV: 133.113 (Pay-TV); **Sweden**: iTV available on all digital platforms; **UK**: cable iTV: 2.030.000 (Pay-TV), satellite iTV: 400.000 (FTV TV), 6.100.000 (Pay-TV), terrestrial iTV: 1.200.000 (FTV TV).



**Table 28: Enhanced and interactive television services**

| <i>Number of HH which used the service at least once before 1st July 2002</i> |                          |                        |  |  |                                 |                                    |   |                    |
|---|--------------------------|------------------------|--|--|---------------------------------|------------------------------------|---|--------------------|
|   | <i>Pay-per-view</i>      | <i>Video-on-demand</i> | <i>Programme-related enhancements</i> <sup>244</sup> | <i>Stand-alone information services</i> <sup>245</sup> | <i>Online games and betting</i> | <i>"T-commerce"</i> <sup>246</sup> | <i>Internet and communications</i> <sup>247</sup> | <i>others</i>      |
| Belgium   | n/a                      | n/a                    | 4,200 <sup>248</sup>                                 | n/a  | n/a                             | n/a                                | 48,537 a)   | n/a                |
| Finland   | Available                | 0                      | 0  | 0  | 0                               | 0                                  | 0   | n/a                |
| Netherlands   | n/a                      | n/a                    | <sup>249</sup>                                       | n/a  | n/a                             | n/a                                | > 500,000 <sup>250</sup>                          | n/a                |
| Portugal  | n/a                      | n/a                    | n/a  | n/a  | n/a                             | n/a                                | 117,652 <sup>251</sup>                            | n/a                |
| Spain   | 2,575,000 <sup>252</sup> | n/a                    | n/a  | n/a  | n/a                             | n/a                                | n/a   | n/a                |
| Sweden  | 180,000                  | n/a                    | 100,000  | 57,000   | 144,000                         | available                          | 14,000  | n/a                |
| UK  | Available                | available              | Av. <sup>253</sup>                                   | Av. <sup>254</sup>                                     | Av. <sup>255</sup>              | Av. <sup>256</sup>                 | Av. <sup>257</sup>                                | Av. <sup>258</sup> |

This table contains information provided by certain MS in reply to the questionnaire sent by the EC services, which included a working definition of iTV.<sup>259</sup>

<sup>244</sup> E.g. change of camera angle, additional information on TV programme, etc.

<sup>245</sup> Not linked to the TV programme, e.g. e-government services, weather forecasts, etc.

<sup>246</sup> Online purchasing, excluding pay-per-view and video-on-demand.

<sup>247</sup> E.g. web-surfing, e-mail, chat.

<sup>248</sup> Walloon region.

<sup>249</sup> Dutch Public Broadcasting is experimenting with interactive TV-programmes, exact numbers of users not yet known.

<sup>250</sup> Via cable.

<sup>251</sup> Till 31.02.02.

<sup>252</sup> Number of subscribers of digital decoders – exact number of PPV users not known.

<sup>253</sup> According to NTL Home in June 02, successes included the BBC's "Walking with Beasts" series with 74,029 red button pushes in seven days on NTL.

<sup>254</sup> BSKyB: Digital text, UK Online - Government services portal, NTL recently introduced a new DTV service allowing customers to send text messages from their TV to any mobile phone. The service costs 10p per message sent, and generated over 70,000 registrations and over 120,000 messages; Telewest: UK Online - Govt services portal carried. Living Health service has been launched as a pilot in the Birmingham area to give digital cable subscribers access to healthcare information.

<sup>255</sup> BSKyB: Tetris attracted 1 million plays @25p per play during the 2 weeks following its launch on SkyDigital. Again according to Murphy, BSKyB's "Playjam" games channel consistently ranks in top 10 most popular channels among 16-34 year olds, and registers an average of 83m game plays per week. Playjam users spend an average of 7 minutes on each game session, and 31 minutes per week on the channel.

<sup>256</sup> BSKyB: In 2001 BSKyB reported that of Domino's Pizza interactive sales 75% came from interactive DTV and 25% via the web. Ticket value is 35% greater than over the telephone. 21% of the customers were entirely new to Domino's - the interactive TV advertising led to a 27% increase in sales.

<sup>257</sup> BSKyB: SkyNewsChat added in August 2002, offering viewers the opportunity to chat in a moderated online environment about news issues of the day -12am to 11pm daily; NTL: According to NTL Home in June 02, NTL had 650,000 registered email users sending an average 1.4 mails and reading 1.7 mails each week.

<sup>258</sup> BSKyB: SkyNewsChat added in August 2002, offering viewers the opportunity to chat in a moderated online environment about news issues of the day -12am to 11pm daily; NTL: According to NTL Home in June 02 - Usage figures showed that 90% of NTL digital households use interactive services every month, with 59% using them at least once a week, and 21% every day. The average usage session per household was 50 minutes a week. They reported that the weekly reach of NTL's interactive services was 1.6m; Telewest: Telewest broadband launched its enhanced TV platform with "red button" functionality during the last quarter. This allows their digital customers to interact with eTV enabled programming. 50% of their digital customers accessed the World Cup service, 43% accessing the Wimbledon service and 850,000 Big Brother votes being registered.

<sup>259</sup> "Interactive TV: it is considered, for the purposes of the present questionnaire, as a sub-category of digital TV. For the purposes of the present questionnaire, interactive television refers to services and contents other than traditional linear broadcasting programmes, delivered either within or outside the main video/audio stream, upon selection or request by the viewer, and available through television equipment. These can be online games, enhancements to TV programmes, transactional services, internet services such as web access and e-mail, etc. Pay-per-view and video-on-demand are not considered here as interactive TV services. **The above definitions are indicative and carry no**



### 3. Equipment and technology

**Table 29: DTV equipment in 2002**

| <i>(in millions of units and millions of dollars)</i> |                           |             |              |                         |             |              |                                  |            |                |
|---|---------------------------|-------------|--------------|-------------------------|-------------|--------------|----------------------------------|------------|----------------|
|   | <i>Installed base (M)</i> |             |              | <i>Annual sales (M)</i> |             |              | <i>Retail market value (\$M)</i> |            |                |
|   | STB                       | iDTV        | Total        | STB                     | iDTV        | Total        | STB                              | iDTV       | Total          |
| Austria   | 0,54                      | 0,00        | 0,54         | 0,28                    | 0,00        | 0,28         | 70,00                            | 0,00       | 70,00          |
| Belgium   | 0,22                      | 0,00        | 0,22         | 0,11                    | 0,00        | 0,11         | 27,50                            | 0,00       | 27,50          |
| Denmark   | 0,97                      | 0,00        | 0,97         | 0,31                    | 0,00        | 0,31         | 81,25                            | 0,00       | 81,25          |
| Finland   | 0,19                      | 0,00        | 0,19         | 0,10                    | 0,00        | 0,10         | 30,00                            | 0,00       | 30,00          |
| France  | 6,42                      | 0,00        | 6,42         | 1,90                    | 0,00        | 1,90         | 439,00                           | 0,00       | 439,00         |
| Germany   | 7,95                      | 0,00        | 7,95         | 3,70                    | 0,00        | 3,70         | 990,00                           | 0,00       | 990,00         |
| Greece  | 0,27                      | 0,00        | 0,27         | 0,12                    | 0,00        | 0,12         | 36,00                            | 0,00       | 36,00          |
| Ireland   | 0,21                      | 0,00        | 0,21         | 0,09                    | 0,00        | 0,09         | 25,00                            | 0,00       | 25,00          |
| Italy   | 4,59                      | 0,00        | 4,59         | 1,40                    | 0,00        | 1,40         | 410,00                           | 0,00       | 410,00         |
| Luxembourg  | n/a                       | n/a         | n/a          | n/a                     | n/a         | n/a          | n/a                              | n/a        | n/a            |
| Netherlands   | 1,27                      | 0,00        | 1,27         | 0,54                    | 0,00        | 0,54         | 146,00                           | 0,00       | 146,00         |
| Portugal  | 0,44                      | 0,00        | 0,44         | 0,21                    | 0,00        | 0,21         | 58,50                            | 0,00       | 58,50          |
| Spain   | 4,30                      | 0,00        | 4,30         | 1,35                    | 0,00        | 1,35         | 382,50                           | 0,00       | 382,50         |
| Sweden  | 1,48                      | 0,00        | 1,48         | 0,58                    | 0,00        | 0,58         | 160,00                           | 0,00       | 160,00         |
| UK  | 13,13                     | 0,45        | 13,58        | 3,48                    | 0,20        | 3,68         | 1044,00                          | 160,00     | 1204,00        |
| <b>TOTAL EU</b>                                       | <b>41,98</b>              | <b>0,45</b> | <b>42,43</b> | <b>14,17</b>            | <b>0,20</b> | <b>14,37</b> | <b>3899,75</b>                   | <b>160</b> | <b>4059,75</b> |

All Figures in this table come from *Strategy Analytics*.<sup>260</sup>

Moreover, some MS provided details on DTV equipment installed in HH. For details see footnote.<sup>261</sup>

**legal value whatsoever. In particular, they do not prejudice in any way the approach of the Commission regarding TV markets segmentation.”**

<sup>260</sup> “*European Digital TV Set-Top Box Market Forecast, January 2002*”. No data are available on Luxembourg.

<sup>261</sup> Figures are given in units.

**French speaking Belgium** (Walloonia plus Brussels region): STB (supplied by TV operator) cable: 170.000, satellite: between 200.000 – and 400.000; **Denmark**: STB (Acquired by consumer) cable: 50.000, satellite: 273.000; **Germany**: STB – total (acquired by consumer in 2001): 490.000; **Luxembourg**: STB (acquired by consumer) satellite: 7230; **Netherlands**: STB (supplied by TV operator) cable: 100.000, satellite: 400.000; **Spain** STB (supplied by TV operator) cable: 587.829, satellite: 2.036.417, terrestrial: 133.113;

**Sweden**: STB (supplied by TV operator) cable: 140.000, satellite: 550.000, terrestrial: 100.000;

**UK**: STB (acquired by consumer) satellite: 6.250.000, terrestrial: 200.000 (this is an estimate. Terrestrial set-top boxes in the UK supplied after late 2000 remain in the ownership of the network operator, before this terrestrial boxes became consumer’s property); STB (supplied by TV operator) cable: 2.000.000 (cable set-top boxes in the UK remain in the ownership of the network operator. BskyB boxes however all become consumer’s property), terrestrial: 300.000;

STB – number of units sold in 2001: (to final consumer): satellite: 1.250.000, (to TV operators): cable: 1.100.000, terrestrial: 300.000 (this figure represents units delivered to customers – around 200.000 further units were in stock with ITV Digital at the time of its bankruptcy); STB – turnover from sales in 2001: cable: 250.000.000 euro, satellite: 250.000.000 euro; Integrated digital TV sets (iDTV): (acquired by consumer): 300.000; number of units sold in 2001: 112.000; turnover from sales in 2001: 200.000.000 euro.

Charts 18 to 20: Digital TV equipment in 2002

Chart 18

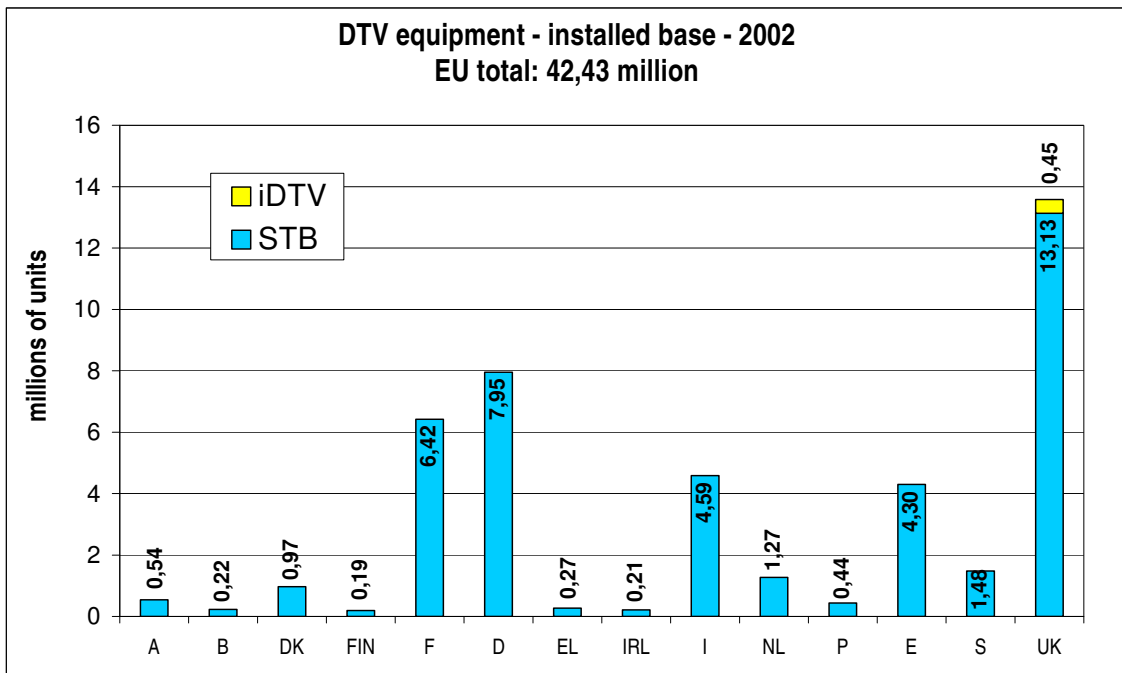
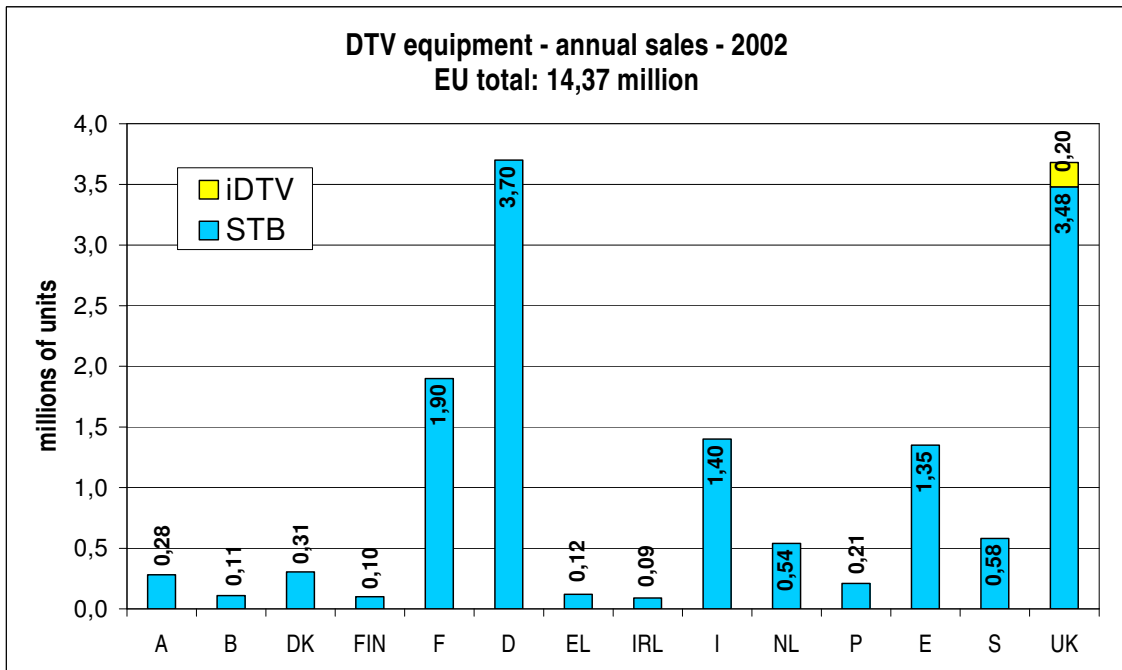
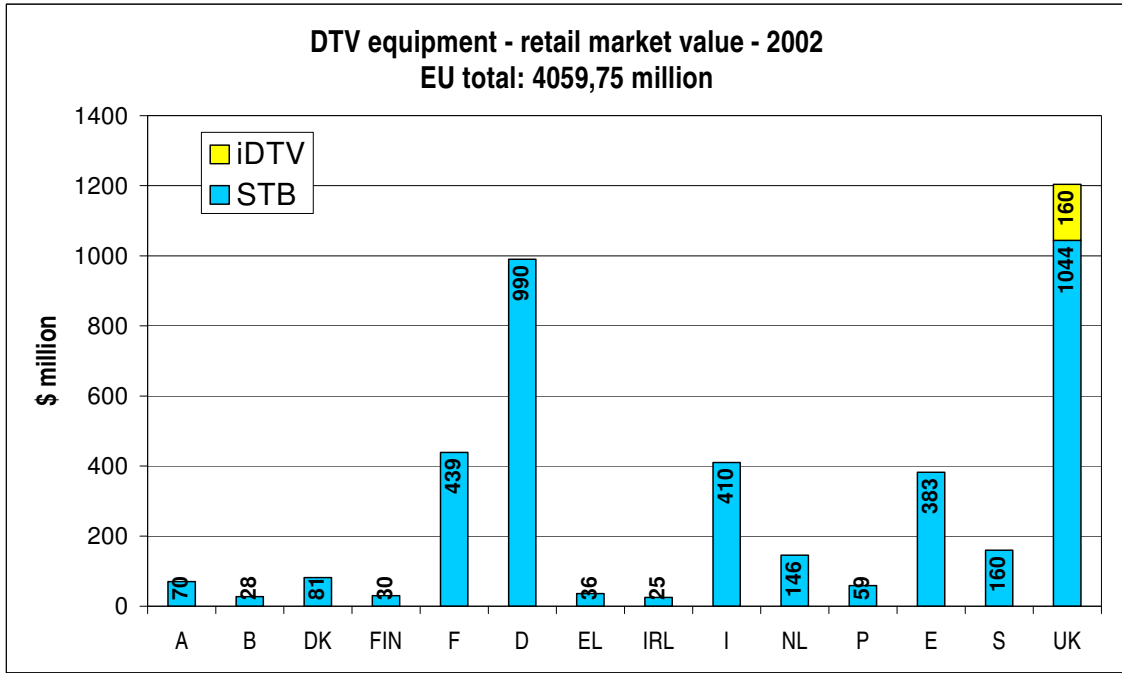


Chart 19



**Chart 20**

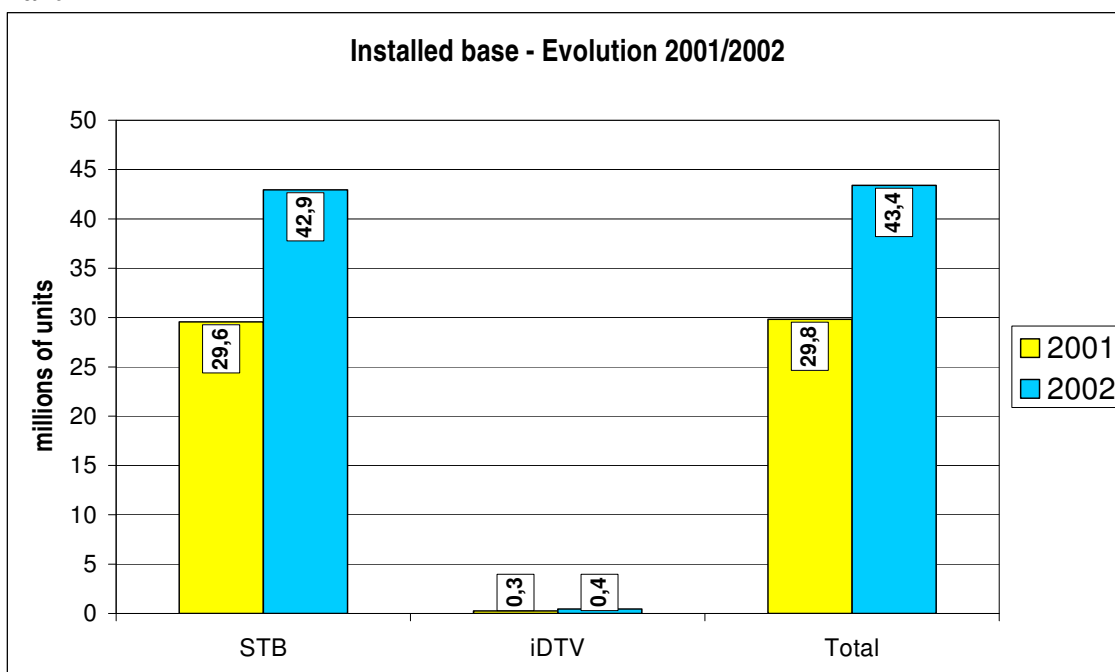


**Table 30: DTV equipment (STB + iDTV)- evolution 2001/2002**

| (in millions of units and millions of dollars) |                |      |                  |      |                           |        |                |      |                  |      |                           |        |
|--|----------------|------|------------------|------|---------------------------|--------|----------------|------|------------------|------|---------------------------|--------|
|  | 2001           |      |                  |      |                           |        | 2002           |      |                  |      |                           |        |
|  | Installed base |      | Annual sales (M) |      | Retail market value (\$M) |        | Installed base |      | Annual sales (M) |      | Retail market value (\$M) |        |
|  | STB            | iDVT | STB              | iDVT | STB                       | iDVT   | STB            | iDVT | STB              | iDVT | STB                       | iDVT   |
|  |                | 29,6 | 0,3              | 10,7 | 0,1                       | 3534,5 | 126,0          | 42,9 | 0,4              | 14,6 | 0,2                       | 4011,3 |
| <b>Total</b>                                   | <b>29,81</b>   |      | <b>10,89</b>     |      | <b>3660,5</b>             |        | <b>43,39</b>   |      | <b>14,76</b>     |      | <b>4171,25</b>            |        |

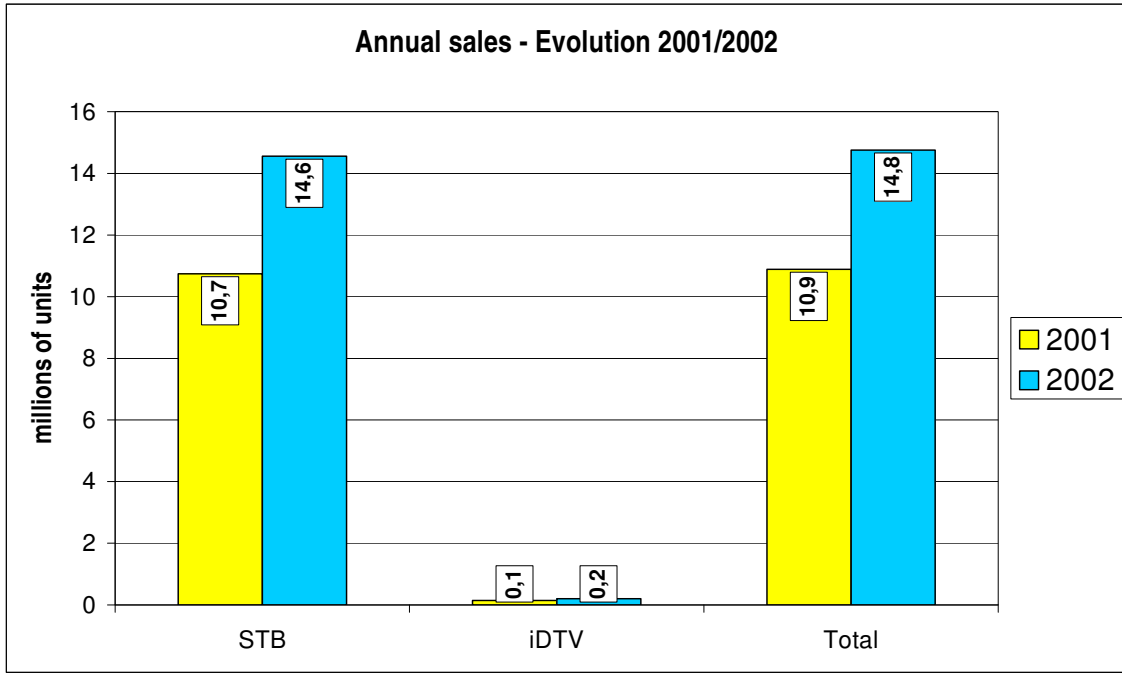
All Figures in this table come from *Strategy Analytics*.<sup>262</sup> Totals are for 16 countries, this is, all EU MS minus Luxembourg plus Norway and Switzerland.

**Chart 21**

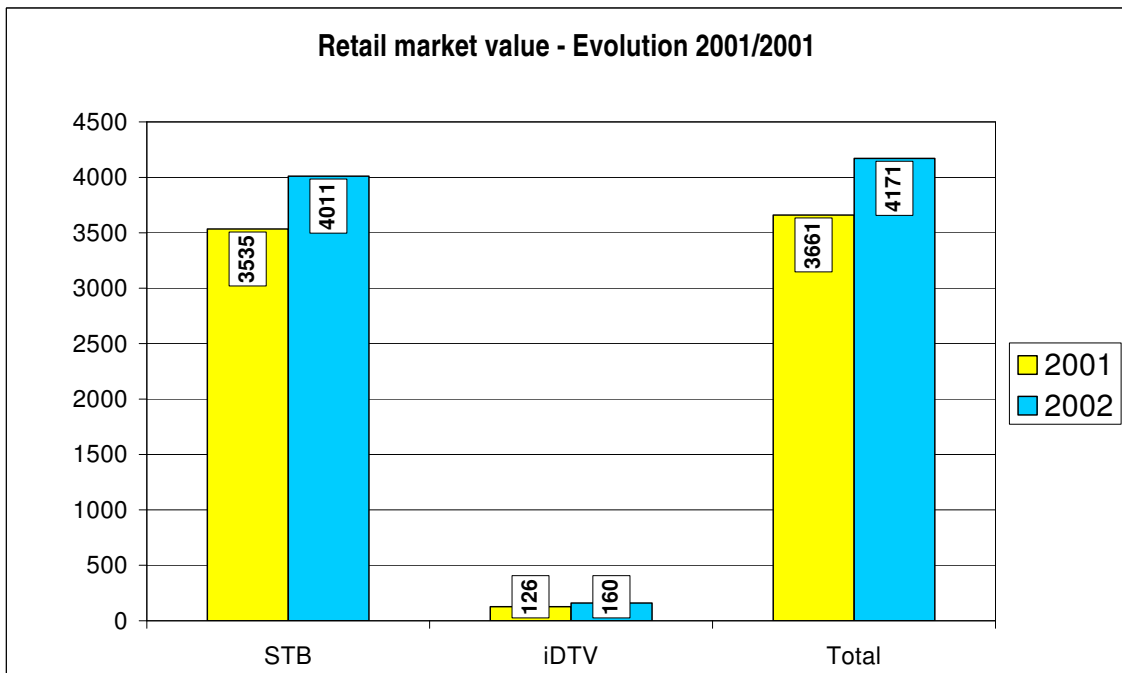


<sup>262</sup> “European Digital TV Set-Top Box Market Forecast, January 2002”.

**Chart 22**



**Chart 23**



**Table 31: DTV technology in the EU**

| (CAS and APIs, number of operators using them) |               |                 |        |          |          |       |              |              |
|--|---------------|-----------------|--------|----------|----------|-------|--------------|--------------|
| CAS (conditional access systems)               |               |                 |        |          |          |       |              |              |
|  | Media-Guard   | NDS Video-guard | Irdeto | Conax    | Viaccess | Nagra | Nagra-vision | Crypto-works |
| Belgium  | 1             |                 |        |          |          |       |              |              |
| Denmark  |               |                 |        | 1        | 2        |       |              |              |
| Finland  |               |                 |        |          |          |       |              |              |
| Ireland  |               |                 |        |          |          | 2     |              |              |
| Italy  | 2             |                 |        |          |          |       |              |              |
| Netherlands                                    |               |                 |        |          | 6        |       |              | 1            |
| Spain  | 1             | 1               |        |          |          | 3     | 1            |              |
| Sweden   | 1             |                 |        | 1        | 2        |       |              |              |
| UK   |               | 1               |        |          |          |       | 2            |              |
| APIs (application programme interfaces)        |               |                 |        |          |          |       |              |              |
|  | Media-Highway | Open TV         | MHP    | Liberate | MHEG-5   |       |              |              |
| Belgium  | 1             |                 |        |          |          |       |              |              |
| Denmark  | 1             | 2               |        |          |          |       |              |              |
| Finland  |               |                 | 6      |          |          |       |              |              |
| Ireland  |               | 1               |        | 1        |          |       |              |              |
| Italy  | 2             |                 |        |          |          |       |              |              |
| Netherlands                                    |               | 6               |        | 1        |          |       |              |              |
| Spain  | 1             | 2               |        |          |          |       |              |              |
| Sweden   | 1             | 3               |        | 1        |          |       |              |              |
| UK   |               | 1               |        | 2        | 5        |       |              |              |

This table contains information provided by certain MS in reply to the questionnaire sent by the EC services. Additional information is provided in footnote.<sup>263</sup>

<sup>263</sup> **Belgium:** The operator using mentioned systems is Canal+ Belgique. The WG "cable TV interactive" within the federation of the technology industry AGORIA tries to define the specifications for a set-top boxes common to all the cable operators in Belgium. TITAN – a NPO associating public authorities and representatives of the industry – has led some actions to promote the use of the MHP in the French part of Belgium.

**Denmark:** The Companies are co-operating within the NorDig to develop mutual open standards for distribution of digital television within the Nordic countries. The members have committed themselves to deliver smart cards (card containing a microchip for decoding the encrypted signals of the TV programs) to all decoders and CA-modules and only to market open decoders following the mutual standard MHP.

**Italy:** There is an agreement between pay-TV operators in Italy based on Delibera no. 216/00/CONS "Determination of standard for decoders and norms for the reception of TV programs with conditional access (CA)"

**Netherlands:** Data supplied by cable companies. A migration towards MHP is not foreseen. The public broadcasters do not use a CA system or API because this is controlled by their service and network providers: cable networks (Casema, UPC, Essent), terrestrial network provider (Digitenne) and satellite service provider (Canal Digitaal).

**Spain:** The operators using mentioned systems are: Nagra: Via Digital, Euskaltel, Quiero TV; Mediaguard: Canal Satellite Digital; NDS Videoguard: Madritel; Nagra-vision: Canal Plus; MediaHighway: Canal Satellite Digital.

#### 4. Operators and legal aspects

All data in this section were provided by MS in reply to the questionnaire sent by the EC services

**Table 32: Number of TV operators and additional information including legal aspects**

|                                   | Cable TV          |                  | Satellite TV        |                  | Terrestrial TV   |                  |
|-----------------------------------|-------------------|------------------|---------------------|------------------|------------------|------------------|
|                                   | Analogue          | Digital          | analogue            | digital          | analogue         | digital          |
| Austria <sup>264</sup>            | Around 50         | 0                | 10                  |                  | 2                | 0                |
| Belgium (Flanders) <sup>265</sup> | 17                | 1 <sup>266</sup> | 0                   | 0                | 1                | 0                |
| Belgium (French) <sup>267</sup>   | 15 <sup>268</sup> | 1 <sup>269</sup> | 0                   | 1 <sup>270</sup> | 2 <sup>271</sup> | 0                |
| Finland <sup>272</sup>            | 50 <sup>273</sup> |                  | some <sup>274</sup> |                  | 6 <sup>275</sup> | 6 <sup>276</sup> |
| Germany                           | 470               |                  | n/a                 | 1 <sup>277</sup> | n/a              | n/a              |
| Ireland <sup>278</sup>            | 9 <sup>279</sup>  | 3 <sup>280</sup> | 0                   | 1 <sup>281</sup> | 3 <sup>282</sup> | 0                |

<sup>264</sup> Satellite operators (analogue and digital): IRO & Partners Management- und Marketing-Beratungsgesellschaft m.b.H., SAT.1 Privatrundfunk und Programmgesellschaft m.b.H., X-Gate Multimedia Broadcasting GmbH, K-TV Fernseh GmbH & Co KG, Sport Management International GmbH & Co KG, LFT Lokalfernsehen Tirol GmbH & Co KG, KANAL 1 Fernsehbetriebsgesellschaft m.b.H., Fashion TV Programmgesellschaft mbH. Other operators: Österreichischer Rundfunk, ATV Privatfernseh-GmbH

<sup>265</sup> The names of the private broadcasting companies for the whole of the Flemish Community are: VMM, Event TV, Belgium Business Television, Media ad Infinitum and VT4. There are ten regional broadcasters with a limited coverage area.

<sup>266</sup> Canal+ (pay-TV)

<sup>267</sup> Additional information on analogue cable TV: Turnover from TV activities in 2001: FTV TV - 412.292.320 euro; pay-TV – 67.631.004 euro; Earnings from TV activities in 2001: pay-TV – 13.355.378 euro; Investment in TV activities in 2001: 25.321.782 euro;

Agreements between TV operators: “le bouquet” – Cable+ Belgique with Walloon cable TV operators allowing access to cable network. Two disputes submitted to the Competition Council concerning access by the Canal+ Belgique to the cable network of UPC and CODITEL (no decision as for June 2002).

<sup>268</sup> RTBF (2), RTL-TVI and 12 local TV operators; Canal+ (pay-TV)

<sup>269</sup> Canal+ (pay-TV)

<sup>270</sup> RTBF sat

<sup>271</sup> RTBF (2), 1 local

<sup>272</sup> Agreements between TV operators: 1 joint agreement between operators on the use of the multiplex. According to the new legislation (into force 1 July, 2002) there are separate licenses for the network operating and for program operating. The process for granting new licences according to the new legislation is ongoing. After licences will be granted the joint agreement will no longer be necessary.

<sup>273</sup> estimation, service and network operators, most of the operators provide pay-TV-services and digital-TV-channels

<sup>274</sup> there are some service operators (DTH 2, SMATV >2) providing foreign satellite channels both analogue and digital

<sup>275</sup> 3 channels with national coverage: Yleisradio Oy, MTV Oy, Oy Ruutunelonen Ab + 3 local channels: TV Tampere Oy, KRS-TV rf, När-TV rf. The terrestrial network is operated (ie. the signal distributed technically) by one company (Digita Oy)

<sup>276</sup> Yleisradio Oy, MTV Oy, Oy Ruutunelonen Ab, Subtv Oy, Urheilutelevisio Oy, Wellnet Oy. The terrestrial network is operated (ie. the signal distributed technically) by one company (Digita Oy)

<sup>277</sup> Premiere.

<sup>278</sup> Additional information on analogue cable TV: Turnover from TV activities in 2001: FTV TV – 24.752.000 euro; pay-TV – 5.991.000 euro.

Agreements between TV operators: RTE/BskyB – on conditional access systems. important DTV legal measures: Broadcasting Act 2001, SI 73 of 1999 - SI 73 of 1999 allowed for the licensing and regulation of digital cable and digital MMDS, Broadcasting Act 2001 allowed for the establishment of National DTT

<sup>279</sup> Chorus, ntl and Casey, Bagenalstown Community Television Society, Berney Crossan & Sons Limited, Clane Cable Systems Limited, Emmet Electrical Limited, Orlynn Park Amenities Limited and Smyths Audio/Video Systems Limited

|                            | Cable TV          |                   | Satellite TV     |                   | Terrestrial TV     |                  |
|----------------------------|-------------------|-------------------|------------------|-------------------|--------------------|------------------|
|                            | Analogue          | Digital           | analogue         | digital           | analogue           | digital          |
| Italy <sup>283</sup>       | 0                 | 2 <sup>284</sup>  | 1 <sup>285</sup> | 50 <sup>286</sup> | 611 <sup>287</sup> | 0                |
| Luxembourg                 | 4                 | 1                 | 0                | 7                 | 1                  | 0                |
| Netherlands <sup>288</sup> | 46 <sup>289</sup> | 1                 | 0                | 1                 | 1                  | 0 <sup>290</sup> |
| Portugal                   | 17 <sup>291</sup> | 9 <sup>292</sup>  | 0                | 9 <sup>293</sup>  | 3 <sup>294</sup>   | 1 <sup>295</sup> |
| Spain <sup>296</sup>       | - <sup>297</sup>  | 15 <sup>298</sup> | 1 <sup>299</sup> | 2 <sup>300</sup>  | 12 <sup>301</sup>  | 6 <sup>302</sup> |
| Sweden <sup>303</sup>      | 4 <sup>304</sup>  | 2 <sup>305</sup>  | 2 <sup>306</sup> | 2 <sup>307</sup>  | 1 <sup>308</sup>   | 1 <sup>309</sup> |

<sup>280</sup> Chorus, ntl, Casey

<sup>281</sup> BskyB

<sup>282</sup> RTE, TG4, TV3

<sup>283</sup> Agreements between TV operators: Tele+ and Stream – on single decoder (negotiated).

Important DTV legal measures: Delibera n. 435/01 focal points: Separation between network operator, content provider and service provider. Distinguishes the obligations, restrictions between the content and service provider which in the analogue world were assigned to the only existing "concessionario", Network provider need licence, service and content provider need authorisation, Definition of the rules for the start up DTT phase which will last until 2004.

<sup>284</sup> Steam (pay-TV), Fastweb (pay-TV)

<sup>285</sup> RAI

<sup>286</sup> estimated, among others: RAI, RTI, Steam (pay-TV), Tele+ (pay-TV)

<sup>287</sup> 3 concessioni to public broadcaster (RAI), 8 national "concessioni" to private national broadcasters + 2 national authorizations + 600 local TV. Analogue terrestrial TV operators: Rai 1, Rai 2, Rai 3 (RAI), Canale 5, Italia 1 (RTI SpA), Tele + Bianco, La 7, Tmc2 (Tv Internazionale SpA), Europa 7, Telemarket Elefante Tv; Rete 4(RTI SpA) and Tele+ Nero have a temporary authorization.

<sup>288</sup> Agreements between TV operators: There is one agreement concerning access between satellite operators and one between terrestrial operators. One more - between cable operators - is negotiated.

<sup>289</sup> In the Netherlands there are about 46 different cable operators who are monopolists in their own territories

<sup>290</sup> Digitenne will start (partial) roll out early 2003

<sup>291</sup> Bragatel, Cabovisão, Pluricanal Gondomar, Pluricanal Leiria, Pluricanal Santerém, Grupo Tv Cabo (Cabo TV Açoreana, Cabo TV Madeirense, TV Cabo Douro, TV Cabo Guadiana, TV Cabo Lisboa, TV Cabo Mondego, TV Cabo Porto, TV Cabo Sado, TV Cabo Tejo), TVTELGrande Porto, Univertel e Associação de Moradores de Almancil. Out of which 16 operators are pay-TV operators as well.

<sup>292</sup> Grupo TV Cabo (Cabo TV Açoreana, Cabo TV Madeirense, TV Cabo Douro, TV Cabo Guadiana, TV Cabo Lisboa, TV Cabo Mondego, TV Cabo Porto, TV Cabo Sado, TV Cabo Tejo) Out of which pay-TV: TV Cabo Lisboa, TV Cabo Sado, TV Cabo Tejo.

<sup>293</sup> Grupo TV Cabo (Cabo TV Açoreana, Cabo TV Madeirense, TV Cabo Douro, TV Cabo Guadiana, TV Cabo Lisboa, TV Cabo Mondego, TV Cabo Porto, TV Cabo Sado, TV Cabo Tejo)

<sup>294</sup> RTP, SIC e TVI

<sup>295</sup> PTDP

<sup>296</sup> Additional information on the turnover from TV activities in 2001: analogue terrestrial TV: FTV – 2.851.813.000 euro, pay-TV – 699.371.000 euro; digital cable pay-TV – 83.756.000 euro; digital satellite pay-TV – 884.114.900 euro; digital terrestrial TV: FTV – 806.000 euro, pay-TV – 27.200.000 euro

<sup>297</sup> There is a number (about 750) of local TV operators (cable and terrestrial).

<sup>298</sup> All pay-TV - ONO, Auna Cable, AOC group

<sup>299</sup> Eutelsat

<sup>300</sup> All pay-TV - Vía Digital and Canal Satélite Digital

<sup>301</sup> TVE, Antena 3, Tele 5, Canal +, and 8 local televisions

<sup>302</sup> Quiero TV (till June 2002), Net TV, Veo TV and 3 regional TV operators – Onda 6, COPE TV, RIOJA TV

<sup>303</sup> All operators except for terrestrial analogue are pay-TV operators.

Agreements between TV operators: There is one agreement concerning access between TV operators, one agreement on conditional access systems and two further agreements concerning other matters. All licensees in terrestrial DTV have agreed on who should handle the multiplexing, choosing CA-system and handling the EPG. The NorDig agreement includes undertaking for operators and broadcasters to migrate to DVB-MHP by 2005.

<sup>304</sup> com hem ab, UPC Sverige AB, Kabelvision AB, Telenor Vision AB (+ a number of smaller local cable-networks)

<sup>305</sup> com hem ab, UPC Sverige AB

<sup>306</sup> Viasat AB, Canal Digital AB

<sup>307</sup> Viasat AB, Canal Digital AB

<sup>308</sup> Teracom AB (operating network for broadcasters Sveriges Television AB and TV4 AB)



|                   | Cable TV         |                  | Satellite TV |                  | Terrestrial TV   |                  |
|-------------------|------------------|------------------|--------------|------------------|------------------|------------------|
|                   | Analogue         | Digital          | analogue     | digital          | analogue         | digital          |
| UK <sup>310</sup> | 2 <sup>311</sup> | 2 <sup>312</sup> | 0            | 1 <sup>313</sup> | 5 <sup>314</sup> | 5 <sup>315</sup> |

<sup>309</sup> Teracom AB/Senda AB (operating network for broadcasters)

<sup>310</sup> Agreements between TV operators:

concerning access to the network: Network Infrastructure: three types of digital television: cable, direct to home satellite (DTH) and terrestrial. Only DTH operates conditional access, as cable providers would not be subject to regulation until such time as it offered access to the network to content suppliers independently of the packages supplied by the cable operators. Digital terrestrial (operated as 'Freeview') is unlikely to offer conditional access either as it is a fully free-to-air proposition. Disputes: one complaint is presently with Oftel regarding conditional access pricing. No judgement has yet been made on this case. Legal measures: The Advanced Television Standards Regulations may be accessed at [http://www.dti.gov.uk/cii/regulatory/telecomms/telecommslicences/class\\_licence\\_conditional\\_service\\_statutory.shtml](http://www.dti.gov.uk/cii/regulatory/telecomms/telecommslicences/class_licence_conditional_service_statutory.shtml).

Concerning conditional access systems: about 180

Additional information on the turnover from TV activities in 2001: analogue terrestrial: FTV TV - £4,256m (The figure for analogue terrestrial turnover comprises BBC licence fee revenue spent on TV (from BBC Annual Report, year to 31 March 2002); plus qualifying revenue 2001 for ITV, Channel 4, S4C and Channel5.); digital cable: pay-TV - £3,569m, digital satellite: pay-TV - £2,540m (It is not possible to separate the operators' turnover into analogue and digital. For the cable operators, the figures also include their revenue from telephony and internet as this is not listed separately)

<sup>311</sup> pay-TV: NTL; Telewest

<sup>312</sup> pay-TV: NTL; Telewest

<sup>313</sup> pay-TV: BSkyB

<sup>314</sup> BBC (2 channels - BBC1 & BBC2); ITV; Channel 4; Channel 5; S4C (Wales only)

<sup>315</sup> BBC (2 channels - BBC1 & BBC2); ITV; Channel 4; Channel 5; S4C

## **Annex 3**

### **Overview of implementation in the Member States**

# TABLE OF CONTENTS

## ANNEX 3 overview of implementation in the Members States

|      |                       |     |
|------|-----------------------|-----|
| 3.1  | BELGIUM.....          | 3   |
| 3.2  | DENMARK .....         | 12  |
| 3.3  | GERMANY .....         | 23  |
| 3.4  | GREECE.....           | 38  |
| 3.5  | SPAIN .....           | 49  |
| 3.6  | FRANCE.....           | 66  |
| 3.7  | IRELAND .....         | 79  |
| 3.8  | ITALY .....           | 90  |
| 3.9  | LUXEMBOURG.....       | 104 |
| 3.10 | THE NETHERLANDS ..... | 114 |
| 3.11 | AUSTRIA .....         | 127 |
| 3.12 | PORTUGAL.....         | 138 |
| 3.13 | FINLAND .....         | 147 |
| 3.14 | SWEDEN.....           | 163 |
| 3.15 | UNITED KINGDOM.....   | 175 |

## 3.1 BELGIUM

### 1. REGULATORY FRAMEWORK

#### 1.1 National regulatory authority

The seventh report referred to the letter to the industry circulated by the Minister in March 2001 stating that he would not use his powers as formal head of the IBPT/BIPT (*Institut belge des services postaux et des télécommunications/Belgisch Instituut voor Postdiensten en Telecommunicatie*) to amend formal positions submitted by the IBPT/BIPT in conformity with the legislation. The letter was sent to allay fears that the Minister may have conflicting responsibilities since, at the moment, the Minister is in charge of telecommunications, responsible for the State's majority shareholding in the incumbent operator and also in charge of the privatisation of that operator. A statutory bill aimed at setting up an independent NRA with more resources was also announced.<sup>1</sup> This legislation on the 'reform of the NRA' was approved by the National Council of Ministers on 5 July 2002 and discussions in Parliament started at the beginning of October. The legislation is expected to be approved by the end of 2002. The bill restructures the NRA's tasks, and in addition to ensuring the independence of the IBPT/BIPT, which will in future deal purely with regulatory tasks, it sets up a ministerial department which will be in charge of the legislative tasks. Although new entrants operators are pleased that the structural separation between regulatory and ownership functions will be enshrined in legislation, the draft legislation fails to include a number of issues urgently requested by them, such as extending IBPT/BIPT's powers to include control of retail tariffs, the right of appeal against decisions of the Interconnections Tribunal (*Interconnectiekamer*) and the contractual rights for which the Interconnections Tribunal is not competent. However, due to the statutory nature of the bill it has been decided not to take account of these issues in this legislation. They will be considered in the draft legislation for the transposition of the new European regulatory framework.

The new Ministry will have a staff of about twenty persons, who will be responsible for the drafting of postal and telecommunications legislation, international representation and related administrative tasks. Some of them might be transferred from the IBPT/BIPT. According to the Minister's private office, there will be a sufficient number of staff left at IBPT/BIPT. Out of a total of two hundred people working at IBPT/BIPT, only twenty currently deal with telecommunications at an academic level, making the NRA clearly understaffed according to new entrants. In order to fulfil all the tasks demanded of it, the IBPT/BIPT has a system for consulting market players on all topics, which is warmly welcomed by the market. However, new entrants point out that IBPT/BIPT has attributed delays in performing its regulatory tasks to lack of staff on several occasions.

IBPT/BIPT has exercised its powers under national law to issue warnings to companies, threatening them with an administrative fine if they did not comply. Eventually, there was compliance so no administrative fine had to be imposed. New entrants regret that IBPT/BIPT does not have the power to impose periodic penalty payments, but under Belgian law only courts can impose the non-administrative fines, such as orders for interim relief and injunctions.

---

<sup>1</sup> *Wetsontwerp met betrekking tot het statuut van de regulator van de Belgische post- en telecommunicatie-sector / Projet de Loi relatif au statut du régulateur des secteurs des postes et des télécommunications belges* (DOC 50 1937/001) – see [www.dekamer.be/documents/1937/1.pdf](http://www.dekamer.be/documents/1937/1.pdf)

The new legislation transposing the new regulatory framework, which is currently being drafted, will provide for a review of the appeals system. A magistrate will be included in the decision-making 'panel' in an appeals procedure because, according to Belgian constitutional law, an administrative institution like the IBPT/BIPT would not be competent to decide on cases dealing with civil rights (e.g. cases which have contractual effects). This constitutional law requirement has made the life of the Interconnections Tribunal difficult and the Royal Decree laying down the current appeals procedure is itself the subject of appeal by the incumbent operator before the Council of State. A decision is not expected soon. Appeals against IBPT/BIPT decisions are limited to judicial review only.

## **1.2 Management of numbers**

Numbers (in blocks) are assigned to operators by IBPT/BIPT [on the basis of a Royal Decree and an accompanying explanatory notice]. There have not been any complaints about management or the assignment of numbers, but there are some problems between operators about the way the numbers are subsequently used.

## **1.3 Frequency management**

No problems have arisen regarding frequency management, a task for which IBPT/BIPT is responsible.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1 BRIO**

The reference interconnection offer (called "BRIO") is quite extensive. Detailed discussions about problems arising from BRIO or its lack of content are a thing of the past BRIO is well adapted to market needs. Discussions continue on some issues, such as transit services, which new entrants believe should be included in the offer.

#### *2.1.1 Interconnection charges*

In order to recuperate costs, a cable operator's interconnection charges have increased by more than 400%, and retail tariffs to their network have also increased. IBPT/BIPT has approved this increase as being reasonable to cover costs and subsequently decided that the incumbent operator must respond to a reasonable request from the cable operator. Following this decision, market players, including the operator itself, have attempted to develop alternatives, e.g. through CPS. IBPT/BIPT has clearly indicated that it will monitor the market very closely to prevent such practices. IBPT/BIPT emphasises that reasonableness was assessed on the basis of the current situation, but in future the assessment may lead to a different outcome. IBPT/BIPT issued a communication on this in October 2002, stating that if the cable operator did not apply the new termination tariffs to certain traffic, for which it uses the incumbent operator's network (CPS/CSC calls to non-geographical numbers and CPS/CSC calls to the operator's geographical numbers), it must conclude that the increased termination tariffs are no longer necessary and the request for interconnection may no longer be reasonable. A case regarding the increase in termination tariffs is still pending before the commercial court in Mechelen.

### *2.1.2 Fixed-to-mobile call termination*

For two years, the largest mobile operator has been designated as an operator with significant market power (SMP) on the national interconnections market. The principle of cost orientation applies to the largest mobile operator accordingly. IBPT/BIPT did not force the operator concerned to move towards cost orientation immediately, but proposed a gradual decrease in the termination tariffs, arguing that a one-off decrease towards a cost-oriented tariff could have detrimental effects. This argument is not supported by some new (fixed) entrants. On 17 December 2001, IBPT/BIPT called for a decrease of 52% (allowing for inflation) by 2004 in comparison with 2001 (steps in July 2002, July 2003 and July 2004). The largest mobile operator decreased its terminating tariffs by 7 % in August 2002. In practice, this means that although the principle of cost orientation applies, real cost orientation does not apply. In its final opinion, IBPT/BIPT specifies a tariff range within which the termination tariffs of the largest mobile operator would be cost-oriented. Cost orientation of tariffs is not determined solely by reference to the largest mobile operator's cost model, but also by considering the situation with regard to other mobile operators and in other EU countries.

The other two mobile operators failed to reduce terminating tariffs shortly after the obligation was imposed on the largest mobile operator, creating imbalances in the amounts due from this market player to the other two mobile operators and a cash outflow from the largest mobile operator to its competitors. The second mobile operator did reduce its mobile termination charges on 1 October 2002.

### *2.1.3 SMP designation*

Besides having SMP on the national market for interconnection, the largest mobile operator also has SMP on the mobile market and, accordingly, the non-discrimination principle applies. In February 2002, Mobistar was designated as having SMP on the mobile market as well. IBPT/BIPT decided that, in the light of the main criterion (market share), Mobistar was close to the 25% threshold, which meant its position has to be assessed with reference to the other relevant criteria provided for in the legislation. On the basis of the non-discrimination principle, IBPT/BIPT has asked the second mobile operator to align the not-on-net tariffs with the on-net tariffs. However, this operator challenged its SMP designation before the Council of State, claiming that the criteria used by IBPT/BIPT to determine its SMP status were different from those used to designate the largest mobile operator as having SMP on the same market.

### *2.1.4 FRIACO*

The demand for flat rate internet access call origination ("FRIACO") from internet service providers is new. One of the reasons for this demand can be found in the history of costing models for internet dial-up access. A collecting model has been available since October 2001, but the courts have not yet ruled which model should apply or which tariffs should be charged to new entrant operators for the different models. New entrants want a collecting model, provided that it is economically viable for all operators in the value chain. In these circumstances, there appears to be limited interest in the subject at the moment. This explains the call for FRIACO as an alternative. Discussions on FRIACO are right at the beginning at the moment. Regarding internet dial-up in general, IBPT/BIPT's three phase consultation has not yet been concluded.

## **2.2 Interconnecting leased lines/partial circuits**

There has been a long debate on the definition of interconnecting leased lines (or “half links” as they are called in Belgium). IBPT/BIPT has asked the incumbent operator to withdraw the limitations on the use of the “half links” which were applicable on the basis of BRIO 2002. The incumbent operator restricted the use of half links by operators in the sense that they could only use half links in order to compete on the retail leased lines market and not for other usages. The incumbent operator has now suggested an addendum to the BRIO 2002, which was accepted by IBPT/BIPT at the end of July 2002.

For the moment, the tariff is ‘retail minus’ and so has not been approved on a cost oriented basis, and the service level agreement for leased lines is also applicable to ‘half links’. The study examining the costs of leased lines also includes ‘half links’ (see below).

Operators are not allowed to take a backhaul line when they order a ‘half link’; however, it appears that most operators do request bundling of the two.

The total number of ‘half links’ has increased significantly compared to last year’s numbers, although the total number is still limited as it does not exceed 4 digits.

## **2.3 Unbundling**

As of 1 October 2002, the number of fully unbundled lines has been about 1553, and the number of shared lines 1039. These lines are for professional users (mainly GhDSL). 72 sites were available for collocation in June 2002, accessing more than 2.9 million lines. Even though the number of fully unbundled and shared lines is progressing, there is still not a strong uptake and LLU does not appear to be a huge success, probably due to the poor economic situation of the market players.

IBPT/BIPT has put much effort into providing a stable framework for unbundling, an effort which has been acknowledged by the market. The reference offer (BRUO) was finally approved in 2002, after two years of negotiations, interventions and decisions. At the moment, work is still taking place on certain problems, mostly operational, which still occur (e.g. migration from ADSL to ULL), as well as on an improved service level agreement. Shared access is of less interest for alternative operators at the moment, as this service is more interesting for the residential market, and most operators are first focusing on the business market. Subloops have been on offer since 2002. Co-mingling has been very successful and is now the rule regarding collocation.

## **2.4 Bitstream access**

Regarding ADSL, the incumbent operator started rolling out ADSL a couple of years ago and now has a large number of customers (about 400 000 at the end of August 2002). Other operators offering ADSL mainly resell the incumbent operator’s product (mainly the basic “GO” product. Much work has been done in the past year on the bit stream access offer (BROBA), although some issues still need to be resolved. However, new entrants claim the incumbent’s price setting makes it very difficult to enter the market and effectively compete. The problems regarding an alleged price squeeze, especially due to the low retail tariffs of the incumbent operator for ADSL, have been acknowledged by IBPT/BIPT. However, an official complaint has not been lodged because IBPT/BIPT’s powers to tackle retail tariffs are limited and in any case IBPT/BIPT has ruled that these retail tariffs were part of a commercial and not a regulated offer.

Besides the low retail tariffs, another reason for the extensive take-up of ADSL is because the tariffs for intensive internet use via dial-up are high in comparison and also because of the competition from cable operators.

Negotiations on the inclusion of SDSL in the reference offer (BROBA 2) will be finalised in 2002 (ongoing discussions involve tariffs and SLAs), but the incumbent's SDSL retail product is already on the market, even though it is said they are not the only operator with an SDSL product.

Regarding the issue of internet access through ADSL to schools, which was mentioned in the 7<sup>th</sup> report, there have been few developments. Due to contractual circumstances between the incumbent operator and the Government, this service of general interest, which is to be subsidised by the Belgian Government, was going to be limited to the incumbent as an infrastructure provider and any of its ADSL wholesale competitors. New entrants wanted to have equal access to such an opportunity. To provide for this, a Royal Decree is needed. It was announced in February 2002, but is still awaited pending a financial decision based on the future Government budget.

## **2.5 Situation of the (broadband) local access market**

There are a large number of broadband customers, mostly using cable or ADSL. Most of the ADSL infrastructure belongs to Belgacom, but several ISPs provide ADSL as a wholesale product to their own customers. Broadband local access is also available through cable networks, which are not regulated. On 1 October 2002, there was a total of 440 314 copper wire DSL lines and over 300 000 cable modem access lines.

There are no developments in the wireless local loop (WLL), since there has been no rollout whatsoever, so this cannot be considered as an alternative.

According to ISPA data as of March 2002, around 32% of the residential lines have an internet connection and 35% of the customers of ISPs have a broadband connection (over 450 000 residential connections). Over 36% of all businesses have a connection and more than 64% of these connections are broadband (about 127 000 connections).

## **2.6 Leased lines**

There is a study on the costing model for leased lines, but IBPT/BIPT has not seen it yet. The study also includes 'half links' and backhaul lines. Another market survey has also been launched regarding the leased lines market and possible operators with significant market power. These two studies have not yet been concluded, so for the moment it is not clear whether the leased line tariffs and the 'half link' tariffs are cost-oriented. IBPT/BIPT has studied the incumbent operator tariffs applied over the last few years, which differ according to geographical area, and concluded that they were justified given that there are certain geographical differences. The incumbent operator uses the same costing model as for interconnection (see below)

There have been no formal complaints reported regarding the delivery of leased lines.

## **2.7 Numbering**

The number of ported numbers is growing steadily and was approaching 400 000 by mid-2002. A new development is that customers are also transferring their number to the incumbent operator, while customers moved away from the incumbent during the first few



years. There have been no complaints to IBPT/BIPT in this respect, and there is a very strict SLA which includes penalties.

Mobile number portability was introduced on 1 October 2002, including a mandatory signal to ensure that end-users are informed when they call off-net. To enable all operators (fixed and mobile) to be included in one database, the fixed operators will transfer to a new central reference database by the end of 2002. Costs are still being discussed.

Regarding carrier pre-selection (CPS), IBPT/BIPT has dealt with a series of complaints concerning the interpretation of the CPS legislation. It also monitored the sector to try to check whether the conditions governing operators are fully respected. Three operators were infringing their obligations. The BRIO also contains a service level agreement on CPS.

There has been exponential growth in the use of CPS, reaching the 500 000 mark in March 2002.

## **2.8 Cost accounting/separation of accounts**

For the first time, the interconnection costing model for 2003 (to verify the 2002 interconnection tariffs) will be using elements of a bottom-up model based on long-term incremental costs (LRIC) developed by IBPT/BIPT. In accordance with EC recommendations, IBPT/BIPT aims to set interconnection tariffs on the basis of an approach combining the top-down and bottom-up models. As the bottom-up model will not have been finalised when the 2003 tariffs are set, those tariffs will not yet reflect the combined approach.

The top-down costing model currently used, which was developed by the incumbent operator, is based on the historical costs of operational expenses and current costs for capital expenditures. Forward-looking assessments of the current costs are being carried out, and the costs are fully allocated to the products according to the FDC standard. The WACC for the interconnection products is determined by IBPT/BIPT. Belgacom will not make its model available to IBPT/BIPT, which has therefore developed its own top-down, fully distributed costing model aimed at modelling the traffic-related charges for interconnection. However, the relevant EC Directive refers to verification of the model used by the incumbent operator, and this is not happening in Belgium. Regarding the verification of compliance with the cost-accounting system laid down in Article 7(5) of the Interconnection Directive, the European Court of Justice ruled on 19 September 2002 (Case C-221/01) that Belgium has failed to adopt the necessary laws, regulations and administrative provisions to comply with the Article.

With regard to whether the incumbent's voice telephony tariffs are cost-oriented, a letter of compliance with the 1998 tariffs with separate accounts was published on the IBPT/BIPT website in August 2002. Before the end of this year, the data for 1999 will be verified. The data for 2000 will not be verified before April 2003, as the new IBPT/BIPT guidelines regarding the headings for the separate accounts have led to delays in the verification procedure. Starting with the year 2000, IBPT/BIPT has asked the incumbent to present its data and describe its model in more detail, explaining the requirements for and the format of the model for the separate accounts. The incumbent operator is said to use the same costing model for voice telephony as that described earlier regarding interconnection and leased lines. At the moment, two infringement procedures regarding cost accounting are still in progress.

The audit procedure, starting with the data for the year 2000 (for voice telephony, but also for interconnection and leased lines), will involve an auditor appointed by the incumbent and

approved by IBPT/BIPT auditing the model and then reporting to IBPT/BIPT, which will analyse the report together with its own consultant.

For ULL, neither the incumbent operator nor IBPT/BIPT has developed a specific cost accounting model. The cost standard used for LLU is 'retail minus' and historic costs are used as a base.

### **3. AUTHORISATIONS**

Licences are granted within 42 days by the Minister on the advice of IBPT/BIPT. Licences are transferred in a similar way. Adaptation of a licence is done within 28 days upon recommendation of the IBPT/BIPT.

Due to the fall in prices across the spectrum, which were reportedly quite high, the licence charges will go up in order to guarantee the funding of IBPT/BIPT.

As regards Wireless local loop (WLL), the legislation is in place, but there is no real interest. Of the five licences awarded, two operators are no longer in business. Four base stations are operational at the moment.

On rights of way issues, there have been some developments in Belgium, specifically in Flanders, where the bottleneck is even greater than it was at the time of the 6<sup>th</sup> and 7<sup>th</sup> implementation reports. The Flemish Region has now indeed adopted a decree introducing a rights of way permit, with applicable fees, for use of the public domain. The conflict between the federal and the regional legislation has not been resolved, however. While federal law still outlaws fees for rights of way, the Flemish Region invoice an annual fee per meter of cable in the ground. The legislation also applies to masts, base stations and antennas, and is therefore not limited to fixed operators. The Office of the Minister for Telecommunications has brought an action before the Council of State for annulment of the Decree. Through this action, operators and the federal government hope to prevent the initiative from being taken over by the other two regions, Brussels and the Walloon region, and the municipalities. As a result of the liberalisation of the energy sector, the municipalities will lose their income from electricity taxes. In order to compensate for this loss, they now plan to introduce a new tax on the use of the public domain as of 1 January 2003. Given that almost 90% of roads in the Flemish Region are owned by the municipalities, operators are afraid this may have an enormous impact on their financial situation.

### **4. UNIVERSAL SERVICE / CONSUMERS**

#### **4.1 Tariffs**

IBPT/BIPT does not have extensive powers to control retail tariffs under the current legislation (a price cap is in place) and is therefore not always able to deal with price squeeze issues. This problem is expected to be overcome once the new regulatory framework has been transposed, as it will address it. Until then, it will not be possible for NRA to tackle some of the price squeeze issues satisfactorily. An example of these tariffs are the so-called 'excellence' tariffs for the incumbent's business users, which are very low compared to the interconnection tariffs charged to new entrants. IBPT/BIPT is aware of these tariffs, but has not received any formal complaints in view of its limited powers of retail tariff control. New entrants claim these 'excellence' tariffs are lower than the interconnection tariffs charged to

them and they would prefer IBPT/BIPT to have the power to apply a price squeeze control mechanism.

Tariff rebalancing has not been completed in Belgium.

## **4.2 Universal Service Fund**

In January 2002, the incumbent operator and universal service provider requested activation of the universal service fund. IBPT/BIPT has started an official consultation procedure and launched a study on the costing methodology, while working closely with the incumbent to ensure relevant input based on its internal costing models. Results regarding all components of the universal service are currently being studied before anything can be decided. In their assessment, which has therefore not yet been finalised, IBPT/BIPT will take account of the long period of delivery of the service, substitutability, as well as the benefits that the incumbent operator has enjoyed under its obligation as a universal service provider. These benefits will have to be deducted from the universal service costs.

Under Belgian law, a Royal Decree and a decision by the Council of Ministers are needed to activate the fund.

## **4.3 Universal directories, itemised billing, quality of service**

Finally, there is agreement among operators regarding the provision of their customers' numbers and publication of the relevant data in a universal directory, except where customers have indicated that they do not wish to be included in the directory (cost €2.6 per month). The system works. The price asked for each number (and accompanying data) is €0.15. The paper version is still not yet available.

No problems have been reported regarding itemised billing and quality of service. Bills itemised call by call are provided free of charge on request.

# **5. DATA PROTECTION**

## **5.1 Traffic data retention**

For interconnection payment purposes, traffic data may be retained until the end of the period during which the bill can be challenged. This period is not specifically laid down in civil law, but a bill may be contested within a reasonable period as determined by the courts.

The computer crime bill refers to a minimum retention period of 12 months in order to allow for criminal investigations. The final period will be laid down in greater detail in secondary legislation, which has not yet been finalised.

## **5.2 Tapping or data interception**

A Royal Decree is in the process of being finalised. It does not stipulate a minimum retention period, but does provide for compensation to be paid to telecom operators and ISPs.

## **5.3 Unsolicited calls and e-mails**

The prescribed opt-in approach for unsolicited faxes has been implemented in Belgium. For unsolicited calls, no rules have been laid down in Belgium, though the data protection guidelines do provide for appropriate measures to be taken to prohibit free, unsolicited calls

for the purposes of direct marketing. The choice is free between an opt-in or an opt-out system. Unsolicited e-mails will be covered by the new regulatory framework, but at the moment Belgium has no measures in place to regulate them.

## **6. MOBILE ISSUES**

### **6.1 Barriers to rollout of 2G, 3G**

In March 2002, a Royal Decree announced that, because of “force majeure”, as described in the Royal Decree of 18 January 2001, all three mobile operators were granted a one-year delay. Rollout is now due to take place as from 15 September 2003. Reasons for postponement include problems with the availability of terminal equipment as well as the necessary building permits. For environmental and health reasons, regional and local governments do raise objections to requests from mobile operators trying to meet their rollout obligations. The 2G operators, who also hold the 3G licences, are co-operating with the aim of site sharing through the setting up of a common site database and consulting each other before new sites are constructed.

As described under the heading ‘Rights of Way’, the Flemish Government has legislation in place on the basis of which antennas, masts and base stations will be taxed if they are located in a public place. Other regions and municipalities in other parts of Belgium have introduced tax rules for operators with antennas and masts.

## **7. PREPARATION FOR TRANSPOSITION OF THE NEW FRAMEWORK**

Regarding the transposition of the new regulatory framework, there is already draft legislation and the market players are being consulted. There could be a slight delay because of the forthcoming national elections and the fact that, as the new framework is neutral as far as technology is concerned and therefore also applies to broadcasting networks, negotiations must be held with the regions, who are responsible for audiovisual issues.

As regards co-operation with the competition authority under the new regulatory framework, e.g. for market assessments, IBPT/BIPT has written to the Competition Council with a proposal for a collaboration protocol. By October 2002, it had not yet received a reply.

## 3.2 DENMARK

### 1. REGULATORY FRAMEWORK

#### 1.1 National regulatory authority

The National Regulatory Authority is a government agency under the Ministry of Science, Technology and Innovation. On 1 April 2002 the State Information Service and National Telecom Agency were replaced by a merged institution called the National IT and Telecom Agency (NITA). It has 236 members of staff. The NITA is independent from telecommunications operators and Danish legislation ensures that the Ministry of Science, Technology and Innovation cannot intervene in the Agency's handling of regulatory functions.

The enforcement powers of the NITA were strengthened with amendments to telecommunications legislation in June 2002. This was seen as necessary especially in order to ensure effective enforcement of LLU regulation. The amended legislation also gives the NITA more flexibility to monitor developments in the area of telecommunications and information technology.

The division of responsibilities for regulation of the telecommunications sector is relatively well-defined in Denmark and has worked well in applying the current regulatory framework. Danish legislation formalises cooperation between the Ministry of Science, Technology and Innovation, the NITA and the Competition Authority in a number of areas. For example, under the Act on Competitive Conditions and Consumer Interests in the Telecommunications Market, a binding opinion is required from the Competition Authority as to whether terms in interconnection agreements submitted to the NITA constitute a violation of the Competition Act. Contacts between the NITA and the Competition Authority also take place on a regular basis in order to discuss current issues and pending cases of mutual interest.

However, with a view to implementing the new regulatory package, the Competition Authority asked for clarification on its future role. According to the Ministry of Science, Technology and Innovation, the future role of the two bodies will be discussed in the process of implementing the new regulatory package.

The NITA has taken an active role in a number of areas. For example, with regard to local access, it has carried out investigations on its own initiative. It has also launched various initiatives to raise consumer awareness, for example, providing information on the quality of internet access services.

The Seventh Report welcomed the dispute resolution and appeal mechanism provided for by Danish legislation. The legislative framework provides mechanisms both for formal dispute procedures before the NITA and for the NITA to act as a mediator. The NITA gives also informal advice to operators. This year some operators claimed that they were not willing to file complaints with the NRA because of the slow decision-making process. However, there is no evidence to suggest that the NITA would not be able to respond fairly quickly.

The mechanism for appealing against the NRA's decisions seems to work well in Denmark. Appeals can be made to the Telecommunications Complaints Board which has to reach a decision, where possible, within three months. The decisions of the Telecommunications

Complaints Board cannot be brought before other administrative authorities but they may be brought before courts.

## **1.2. Management of numbers**

According to Danish legislation, the NITA is responsible for drawing up, administering and allocating the overall Danish numbering plan. The rules on the numbering plan and the allocation of numbers ensure that allocation is carried out in an objective, transparent, fair, timely and non-discriminatory manner.

## **1.3. Frequency management**

A new Act on Radio Frequencies came into force on 1 July 2002. The new legislation lays down the principles of frequency management and establishes licensing requirements in the field of radio frequencies. The Minister of Science, Technology and Innovation issues a spectrum policy framework mandate following a proposal from the NITA. The NITA then lays down a frequency plan within the framework mandate.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offers*

A revised Executive Order on Standard Offers in the Interconnection Field came into force on 6 October 2001. During the spring of 2002, the incumbent reviewed its offers to reflect the new requirements. The offers cover the following areas: exchange of traffic, raw copper, dark fibre, collocation, transmission services, resale in the fixed network area and, as new elements, carrier pre-selection and bitstream access. Since 1 February 2002, the incumbent has included these new products in its reference offers.

Having examined the revised reference offers, the NITA considered them to be in line with the requirements of Danish legislation and current Community law.

#### *2.1.2. Interconnection charges*

In November 2001, the NITA decided to revoke its earlier decision based on one country comparison (Norway), which reduced the incumbent's prices for establishing and operating interconnection points and for 2 Mbit/s interconnection capacity, because of the increased prices in Norway for these products. The latest decision on interconnection charges took effect on 1 March 2002. The decision was based on best practice comparison with three countries (France, Ireland and the United Kingdom) and reduced the incumbent's local interconnection charges by 20%. Both decisions were appealed but were upheld later by the Telecommunications Complaint Board.

Danish interconnection charges are clearly below the EU average and amongst the lowest in the EU. The local call termination charge on a fixed network is the lowest in the EU (€0.44).

As already indicated in the Seventh Report, the incumbent operator opposes the continued regulation of the pricing of service provision (resale) agreements. The incumbent argues that the regulation discourages investment in infrastructure and should be abolished in order to ensure efficient operation for both the incumbent and the resellers. It also argues that the

success of local loop unbundling and availability of alternative access options permit the abolition of the regulation. On the other hand, new entrants consider it important to ensure access to service provision and therefore consider that regulation is needed. The NITA pointed out that it had not used its regulatory power to set the size of the reduction since no operator had asked the NITA to take any decisions. The NITA also pointed out that the statistics it has issued show that investments in infrastructure have actually risen considerably over the last few years.

The new entrants raise the issue of reciprocity arrangements when they conclude an interconnection agreement with the incumbent. In order to ensure that the incumbent does not charge higher prices for its customers' calls to competing networks' customers than for calls to its own customers, operators agree on arrangements (a so called co-charging agreement), which ensure that the competing operator's termination charge is not higher than the local interconnection charge in the incumbent's network. The new entrants claim that these arrangements make it difficult for them to compete and especially to introduce innovative technologies such as wireless local loop in the fixed network. The NITA has not intervened in these agreements since they are concluded on a voluntary basis and it has not received any formal complaints on co-charging agreements. It also emphasises that other than SMP operators are free to set their termination prices as they wish.

In January 2001, a case which is related to the above-mentioned problem was brought to the Competition Authority. A new entrant lodged a complaint with the Competition Authority claiming that the incumbent was abusing its dominant position by offering - as a precondition for not raising end-user prices for calls to the new entrant's non-geographical numbers - a termination charge equal to the incumbent's local interconnection charge when the incumbent's customers made calls to the new entrant's 70-number series (non-geographical numbers). In May 2002, the Competition Council ruled that the incumbent's behaviour constituted an abuse of dominant position, because the incumbent received a termination charge which on average exceeded that charged by competitors providing a similar service. After the ruling of the Competition Council, the incumbent lowered the termination charges so that, in the future, the incumbent would only receive the local interconnection charge when terminating calls in the 70-number series, thereby ensuring equal conditions between the incumbent and its competitors.

### *2.1.3. Fixed-to-mobile call termination*

The representatives of user and consumer groups claim that call termination to mobile networks is still an issue. They also note that this is an area where more price transparency is needed. A complaint regarding fixed-to-mobile termination has been filed with the NITA and the NCA. The NITA is now investigating whether there is discrimination on fixed-to-mobile calls in favour of on-net calls.

The fixed-to-mobile termination tariff in Denmark is currently 16.15 cents, which is below the EU average of 18.94 cents.

### *2.1.4. FRIACO*

Danish legislation on interconnection does not prevent the provision of flat-rate internet access. However, there seems to be no demand for FRIACO-type services. The take-up of ADSL products is probably the main reason for the lack of interest in FRIACO services.

## **2.2. Interconnection leased lines**

Interconnection leased lines are included in the incumbent's reference offer for transmission services.

The data on interconnection leased lines collected for this Report indicate a two-tier cost structure. Monthly rental fees are amongst the cheapest in the EU. However, one-off fees are above the EU average and the one-off fee for 34 Mbit/s is clearly the highest in the EU.

## **2.3. Local loop unbundling**

Full local loop unbundling has been available in Denmark by law since 1 July 1998. After the Seventh Report, the incumbent submitted revised reference offers to the NITA on full local loop unbundling and shared access. The NITA reviewed the reference offers to ensure that the offers complied with the LLU regulation. In the review process, the NITA raised several concerns with the incumbent such as terms of termination, initial charge/discount system and the provision of subloops, which are now reflected in the reference offers and practices of the incumbent.

There has been a legislative basis for collocation since 1998 and the incumbent has provided a reference offer on collocation since April 1999. The latest revision was made in November 2000. At the request of the NITA, since April 2002, the incumbent's reference offer has included access to inspect the incumbent's premises. No complaints have been filed with the NITA regarding access to collocation.

The new entrants claim that there are several obstacles in LLU, which make it difficult for them to be competitive in the local access market. The difficulties new entrants claim to have faced include issues like rejected lines and additional costs which make real prices for unbundled lines higher than indicated by the basic prices. The incumbent claims that the main reason for the extra cost is that a large number of orders in Denmark are for a second line. Moreover, the incumbent claims that the additional charges are insignificant in view of the fact it does not charge according to the usage of unbundled loop.

Despite the problems expressed by the new entrants, no complaints have been filed with the NITA.

## **2.4. Bitstream access**

Since the incumbent provides ADSL products via the use of bitstream access, it has an obligation to offer bitstream to other operators under the same terms as are used for the incumbent's internal sale.

A revised Executive Order on Standard Offers, which came into force in November 2001, includes a requirement for SMP operators to provide a reference offer for bitstream access. Following the new requirements, the incumbent published its reference offer on 1 February 2002. Five companies have made an agreement on bitstream access.

## **2.5. Situation of the (broadband) local access market**

The situation in the Danish broadband market is twofold. Denmark is one of the leading countries in the EU in terms of broadband penetration. The roll-out of broadband is mostly due to the increase in DSL subscriptions. By 1 October 2002, the total number of DSL subscribers had risen to 267 500. The market increase is, however, characterised by the



strengthened market position of the incumbent operator. In July, the incumbent's market share was about 80%. Whilst welcoming the development in availability of broadband, users and consumers are worried about the competitive situation in the market.

As for alternative access options, cable modem access represented 34% of broadband subscriptions in July 2002. In December 2000, the NITA issued seven nationwide licences for wireless local loop. According to the NITA, the continuing roll-out of networks indicates that over 90% of households can be offered wireless local loop. However, wireless local loop represented only 0.2% of all broadband subscriptions in July 2002.

The incumbent bases its provision of ADSL on bitstream technology. The other operators have based their service provision mainly on fully unbundled lines and, to some extent, shared lines (there are five agreements on shared use in place). Recently, bitstream access has become a more attractive option and there currently are five agreements between the incumbent and other operators on bitstream. Operators widely share the view that bitstream is becoming more popular because of lower investment costs compared with LLU which is too risky to invest in.

After noticing the increase in the incumbent's market share, the NITA arranged meetings with providers in the ADSL market which started in November 2001. On the basis of these meetings, two studies were launched by the authorities. The Danish Competition Authority (NCA ) is analysing whether the incumbent's end-user prices indicate illegal cross-subsidisation or dumping. According to the NCA, the study will be finalised by the end of November. The incumbent has criticised the time it has taken to deal with this case.

The NITA undertook an investigation on whether the incumbent was favouring internal business areas with regard to delivery dates, access to internal databases and administration of interconnection agreements. The study, which was carried out by a consultant, was finalised in July 2002. According to the conclusions, there do not seem to be grounds for assuming that the incumbent had been discriminating against other operators. The study notes that there are differences between the incumbent's own business areas and other operators regarding access to databases. The incumbent has announced that it will implement a new user interface, which will ensure equal access.

## **2.6. Leased lines**

Prices for leased lines indicate that Denmark is one of the cheapest countries, and in some cases the cheapest country in the EU. As far as delivery times are concerned, the Commission's report on performance in the supply of leased lines in 2001 shows delivery periods above the EU average for certain types of leased lines, such as 64 kbit/s.

The incumbent has recently revised prices for leased lines. The NITA is currently investigating whether the new prices meet the cost-orientation requirement laid down in the legislation.

The NITA has conducted a market analysis on wholesale markets to find out the extent to which wholesale regulation could be withdrawn from the point of view of competition. The analysis covered markets for international connections, the backbone network and connections between access markets and backbone networks. The outcome of the analysis is that SMP obligations imposed for the provision of international connections could be abolished. Moreover, obligations imposed on the provision of backbone networks could be gradually removed starting with the obligation to provide cost-oriented prices and the obligation to publish reference offers. As far as connections from subscribers to backbone

networks are concerned, the analysis concludes that SMP obligations cannot be abolished yet. The Ministry of Science, Technology and Innovation is currently drafting amendments to the secondary legislation to rollback regulation based on the outcome of the analysis. The authorities emphasise that the relevant Community law, such as requirements regarding the provision of a minimum set of leased lines, will be taken into account in rolling back regulation.

The incumbent says that transmission capacity is increasingly subject to competition as a considerable amount of alternative trunk networks have been installed. The reference offer for dark fibre, as well as LLU and wireless local loop, puts competitive pressure on the traditional short-distance leased lines market.

Danish legislation includes leased lines as an interconnection product. The incumbent argues that the requirement of non-discrimination in relation to the pricing of leased lines makes it difficult to distinguish between retail and wholesale markets. This also makes it difficult for competing businesses to develop a margin in their provision of leased lines. The NITA points out that Community law requires the selling of leased line capacity by SMP operators to be cost-based. If price differences exist, reasons must be given for this.

## **2.7. Numbering**

A revised Executive Order on Standard Offers requires SMP operators to provide a reference offer on carrier pre-selection. Since 1 February 2002, the incumbent has included pre-selection in its reference offers.

Mobile number portability was introduced on 1 July 2001. This possibility has been successfully taken up, with around 214 000 mobile numbers having been ported by the end of July 2002. At the same time a ‘charge information facility’ was established in order to increase price transparency for end users, especially because of a price disparity regarding calls to mobile numbers and fixed telephony numbers. The operators claim that the facility is not widely used by end users. According to figures given by the incumbent for the period September 2001 – September 2002, the facility was used around 64 000 times by phone and around 30 000 times by internet.

Denmark was due to implement number portability between fixed and mobile networks on 1 April this year. Operators appealed to the authorities to postpone the implementation because of certain technical problems such as: lack of tariff transparency; no solution for incoming international calls with correct end-user and interconnection charges; and service problems for incoming SMS messages from abroad to fixed network numbers. In the end, implementation was postponed to 2004.

There are two specific issues with regard to numbering, which were reported both by the NITA and by operators. The first is that some calls from outside Denmark do not reach the Danish holders of so-called 70-numbers (numbers in this series are mainly used for calls where the called subscriber, i.e. holder of a 70-number, pays and thus co-finances parts of the minute-based price for the call). The NITA is having discussions with both the industry and the ITU to resolve this problem. The other issue mentioned by the NITA concerns applications for assignment of short codes. The demand for short codes has increased recently. The regulatory framework for assigning short codes is, however, rather restrictive due to the limited amount of short codes in the Danish numbering plan.

## **2.8. Cost Accounting**

The cost accounting system in Denmark is currently based on historic costs and best-practice comparisons. The NITA supervises the incumbent's cost accounting systems as required in the Voice Telephony Directive and the Interconnection Directive. According to the NITA's statements, the cost accounting systems for 1998 - 2001 complied with the requirements of above-mentioned Directives. The last statement published by the NITA covers the accounts for the year 2001.

Denmark is going to implement an LRAIC cost accounting system by the end of 2002. The LRAIC model will be based on two cost analyses: a top-down analysis prepared by the incumbent and a bottom-up analysis provided by other operators. The preparation of the cost model has been divided into several phases. During the reconciliation phase (November 2001 - May 2002), the NITA reviewed and reconciled the two cost analyses. The review showed a number of problem areas in both models, which led to some adjustments to the proposed hybrid model. A draft model was sent for consultation in August 2002. After the consultation period, a draft Executive Order will be issued which will specify the rules for the content and use of the LRAIC model. After finalising the Executive Order, the NITA will make a decision on interconnection prices by the end of 2002.

The preliminary version of the LRAIC model indicated that the calculated price level for switched interconnection is somewhat lower than the current price level, whereas the calculated price level for raw copper is somewhat above the current level.

## **3. AUTHORISATION**

### **3.1. Authorisation regime**

The Danish authorisation system is very light and operators think it is even too light, not requiring even a notification. The industry shares the view that there should be a registration system which would enable active undertakings in the market to be identified. Operators see a need to establish a registration system in order to ensure compliance with general requirements e.g. on data protection and security, on provision of information and, if necessary, to calculate possible future contributions to cover an USO-deficit. It is also argued that it is difficult for the NITA to conduct market analysis if active operators are unknown to the regulator. However, the NITA says that it is possible to identify providers in the market by using means such as the survey of allocated number resources, allocated mobile licences (frequency resources), interconnection agreements and the price guide. These tools can be accessed via the NITA's website. The NITA says it would only be willing to consider a registration system for justified needs. For the moment it does not see the need to change the current system.

A new Act on Radio Frequencies came into force on 1 July 2002. The new legislation lays down new licensing requirements in the field of radio frequencies. According to the new legislation, providers of mobile communications need only one licence - a frequency licence - whereas they were previously required to have a licence to establish and maintain a network and a licence to use frequencies.

Where a licence is required, licences are basically issued to any parties requesting one, as long as there is no frequency scarcity. In case of frequency scarcity, the Minister for Science, Technology and Innovation may decide to launch a public tender or hold an auction.

### **3.2. Rights of way**

Regarding rights of way, industry has some concerns relating to the fact that it has to deal with many authorities when asking for permission to lay cables. On the other hand there are examples where the industry has agreed with local authorities on coordinated actions for laying cables.

Mobile operators have reported to the NITA on problems they have faced in applying for permits to set up masts for antenna positions. To ease the situation, the NITA has launched an initiative to provide guidance on the relevant legislation to county and municipal authorities, as well as to operators, in order to give local authorities an insight into mobile operators' need to set up masts and antenna systems.

## **4. UNIVERSAL SERVICE / CONSUMERS**

### **4.1. Retail tariffs**

Danish legislation provides for a price-cap mechanism, under which maximum prices for USO services are set by the NITA. In addition to this, the legislation gives the NITA the power to ensure that falls in real end-user prices do not exceed the fall in real prices for interconnection during the same period. This is to ensure that reductions in end-user prices by the incumbent do not have a price squeeze effect. The NITA calculates the required fall in real prices for the USO provider every other year. The latest decision was taken on 2 April 2002 and with that decision, a required fall in the real price for a standard fixed-network subscription was set at 4% both in 2004 and 2005.

The NITA has recently conducted a market analysis on end-user prices in the universal service area. According to the conclusions of the analysis, international traffic is an area where competition seems to be efficient, while in national traffic there are reasons for and against effective competition. Factors such as the number of market players, price developments, end users' possibility to change service provider and end users' reactions to price changes indicate functioning competition, whereas factors such as the incumbent's market share (64%), the concentrated market structure and developments in market shares indicate the lack of efficient competition. In conclusion, the NITA does not consider that there is efficient competition in national traffic at the moment. Moreover, the analysis states that in the markets for ordinary telephone services, ISDN connections and directory enquiry services, the necessary conditions for efficient competition are not being met. The Ministry of Science, Technology and Innovation is considering whether the analysis should result in changes to the current legislation. The decision on this will be taken by the end of 2002.

### **4.2. Universal directories, itemised billing, quality of service and other aspects of universal service**

As a universal service provider, the incumbent offers a directory enquiry service via short code 118 as a part of its universal service obligations. With regard to the situation in the directory market, some new entrants claim that there is no market for directory services, since it is difficult to compete with 118. It is argued that there should be more 3-digit numbers available. The NITA says that there are other short codes available for operators to provide directory services if they so wish. The incumbent claims that there are alternatives to 118 such as web directories and phonebooks.

Following the Commission's infringement proceeding, Denmark has changed the relevant provisions on itemised billing. According to the revised provisions, which came into force on 1 October 2002, users will have the right to receive an itemised bill containing information on date, time, duration, price or other data which mean that the charges can be checked.

In 2002, the NITA completed a revision of the terms for the incumbent's handling of the universal service obligation. The revised terms, which came into force on 1 March 2002, were established on the basis of input from the incumbent and following negotiations with the company. The revision included modifications in the general USO terms regarding the specific requirements for basic voice telephony services and specific guidelines for calculating and charging special cost-based prices for delivery of USO services to technical installations. Furthermore, modifications were made to the minimum requirements for the quality of USO services provided.

Consumer protection is an area where the views of operators and consumer representatives diverge. Some operators claim that certain rules on consumer protection result in over-regulation by requiring them to provide services which are not necessarily demanded by consumers. The monitoring of billing fluctuations and the charge information facility were mentioned as examples of these mandatory services. Consumer representatives, on the other hand, say that consumers are not aware of all the additional services they are entitled to. The industry is compiling statistics on the usage of different mandatory services in order to get an overview of the extent to which such services are requested.

The Seventh Report mentioned that there was some overlap of responsibilities between the NITA and the Consumer Complaint Board in the area of consumer protection and that the Danish authorities were therefore considering adjustments in the field of consumer dispute resolution. Discussions about establishing a private complaint board to deal with consumer disputes are currently underway in Denmark. Interest groups welcome the initiative but the industry is of the view that the transfer of tasks relating to consumer disputes from the NITA to a private body should be reflected by a decrease in numbering fees.

The Ministry of Science, Technology and Innovation adopted an action plan entitled "IT for all". In connection with the initiative, a committee was established to prepare initiatives relating to disabled users' access to IT and telecommunications services. This work may lead to changes in universal service obligations.

## **5. DATA PROTECTION**

### **5.1. Traffic data retention**

Denmark has adopted new anti-terrorism legislation which came into force on 1 July 2002. The new legislation includes rules on the retention of traffic data and requires undertakings to record and store traffic data for one year. The requirement is imposed on the grounds of security and will be specified in an Executive Order issued by the Ministry of Justice after consultation with the Ministry of Science, Technology and Innovation. The legislation allows for the Executive Order to require the retention of more data than is needed for billing purposes.

In addition to the new requirements imposed on the grounds of security, Danish legislation allows operators to store traffic data needed for billing purposes for up to five years. This is the period during which a bill may be legally challenged.

## **5.2. Unsolicited calls and e-mails**

The provisions of Directive 97/66/EC regarding unsolicited calls are implemented in the Danish marketing legislation. The provisions of the legislation cover both natural and legal persons and provide that unsolicited calls for the purpose of marketing by electronic mail, automatic calling systems or fax are prohibited without prior consent.

## **6. MOBILE ISSUES**

In October 2001, Denmark awarded four licences for third-generation mobile telephony through a sealed-bid auction to TDC Mobile, Telia Mobile, HI3G (new entrant) and Orange. The price of each licence was DKK 950 million (approx. €127 million). The roll-out conditions require that 30% of the population be covered by 2004 and 80% by 2008. There are no separate territorial coverage requirements, nor has a legal deadline been set for the launch of 3G services.

Market players are not willing to give estimates as to when commercial 3G services will be launched. Some doubts were expressed that the market would probably not be big enough for four network operators. As far as roll-out requirements are concerned, some operators expressed the view that the rules on network sharing are rather strict in Denmark. Shared use of masts, sites and buildings is allowed by the Mast Act, but the requirement for full control of the network prevents operators from sharing elements of the core network or radio access network. The NITA says that it is important to maintain clear rules, which have also been agreed by operators. The operators have not requested changes to these rules.

The NITA is not actively supervising the progress of 3G network roll-out at the moment but expects that the minimum requirements will be met. No requests to postpone roll-out plans have been submitted to the NITA.

Danish legislation ensures access to the mobile networks for service providers, including MVNOs. So far, only one MVNO agreement has been concluded. It is however believed that further introduction of MVNO agreements and pan-European operators would put some pressure on international roaming prices. It was also suggested that one way of getting more flexibility on roaming pricing would be to establish an unbundled access service to international roaming. By unbundling the international roaming, only the access path would be provided by the visited network thus allowing the home operator to set prices more flexibly. These kinds of arrangements have already been agreed on a commercial basis and there do not seem to be any regulatory barriers which would hinder concluding agreements.

The Seventh Report mentioned that the analogue NMT450 and NMT900 networks would be phased out by the end of 2002. This phasing-out was achieved on 1 March 2002 when the incumbent returned its licences for those analogue networks.

## **7. TRANSPOSITION OF THE NEW REGULATORY FRAMEWORK**

Denmark will implement the new regulatory package by amending the current telecommunications legislation. A public consultation on a new draft bill ended on 15 November 2002. The draft bill will be submitted to the parliament in the spring of 2003 so that the legislation can be adopted by 25 July 2003 as required.

Earlier this year Denmark adopted changes to the current legislation. The law on radio frequencies, which came into force on 1 July 2002, reflects certain provisions of the new Framework Directive and Authorisation Directive.

The NITA is planning to start collecting data for preparing market analyses before the legislation comes into force in order to be able to take the necessary decisions in time.

## 3.3 GERMANY

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

Under the Telecommunications Act (TKG), all regulatory tasks in the telecommunications sector are assigned to RegTP (Regulierungsbehörde für Post und Telekommunikation). This includes taking measures to safeguard competition, in particular to prevent abuse of a dominant position. RegTP must consult the Federal Office of Competition on decisions concerning the definition of the relevant markets and the determination of a dominant position (Section 82 of the TKG), as well as on decisions relating to tariff approval, access and interconnection. The views of the Federal Office of Competition is binding for RegTP with regard to defining significant market power.

The Interconnection Directive gives the NRA powers to intervene, on its own initiative, at any point in the negotiations leading up to an interconnection agreement (Judgement of the Court of Justice in case C-221/01, No 33 of the grounds). The TKG empowers RegTP to define, on its own initiative, interconnection conditions under the abuse-of-dominant-position procedure (Section 33 TKG). In respect of this latter power, Germany's Supreme Administrative Court (Bundesverwaltungsgericht) ruled on 25 April 2001 that it is not limited to a dispute settlement context. In any event, RegTP has not used these powers. As regards the setting of conditions for local loop unbundling, RegTP relied in certain cases on the Section 33 procedure for dispute settlement in accordance with the local loop unbundling regulation.

The TKG sets out a procedure for settling interconnection disputes (Section 37 TKG), but the provisions in question do not give RegTP sufficiently clear powers in this area. This is highlighted by their application by the courts which, inter alia, deny RegTP powers to set interconnection tariffs within the dispute settlement procedure. In its decision of 3 May 2001, the Higher Administrative Court for North Rhine-Westphalia (OVG Münster) stated that DT must be given the possibility to file a request for tariff authorisation. RegTP may only set interconnection tariffs as part of a two-step procedure, the conditions of which have not yet been clarified by the courts. RegTP's powers to resolve disputes have been further limited by the decision of 10 October 2002 of the Cologne Court (VG Köln) (see also point 2.1.4 ). RegTP has appealed against those court decisions.

RegTP's lack of powers to set interconnection tariffs and to order interconnection agreements as part of a dispute settlement, which is a consequence of the jurisprudence, seriously affects its powers to settle disputes in conformity with the Interconnection Directive. It is also doubtful whether the German framework adequately safeguards the principle that the party requesting dispute settlement has a right to obtain a decision within six months. Although the jurisprudence gives scope to RegTP to set tariffs in the framework of an own-initiative tariff approval procedure if DT fails to file a request for tariff approval in good time, the German procedural framework does not guarantee that those time limits will be observed. This also highlights the need for a statutory period within the abusive-positions procedures, where there are currently no time limits for rendering a decision.

With regard to tariff disputes, RegTP currently sets tariffs for interconnection and local loop unbundling in a two-step procedure: the technical conditions are determined in the first step, and tariffs are then set in the light of the decision taken. The first step often consists of an abuse-of-dominant-positions procedure which does not specify time limits. This two-step



approach results in an unduly lengthy procedure to set interconnection conditions, including tariffs, and leads to delays in completion of all interconnection and unbundling conditions.

Furthermore, with regard to the setting of conditions under the dispute settlement procedure (Section 37 TKG), RegTP considers that it has powers to set interconnection conditions only if negotiations between parties have failed.

RegTP has used its powers under the TKG to impose penalties on DT to enforce time limits set for the provision of leased lines and unbundling. DT appealed against both decisions, in particular against the imposition of penalties. With regard to the unbundling penalties, RegTP has suspended the obligation to implement its decisions until 15 November 2002, while the decision relating to penalties in the context of leased lines has been suspended by the courts (see under point 2.6). Consequently, the decisions on penalties are currently not being implemented.

RegTP considers that it does not have the power to deal with complaints regarding the fees charged for the provision of subscriber data to providers of directory services. In particular, the arbitration procedure under the Consumer Protection Ordinance (Section 35 TKV, see point 4.4) does not cover application of the relevant provision of the TKG (Section 12 TKG). The Federal Office of Competition has powers to handle competition issues not covered by RegTP's remit and has recently opened a proceeding relating to the conditions of subscriber data provision.

The length of appeal procedures because of confidentiality rules constitutes one of the most substantive market entry barriers in Germany. The German law on court proceedings provides for the right of parties to consult all documentation filed by the other party. RegTP cannot, therefore, submit documents in court which are protected by confidentiality rules. This is particularly relevant as regards the incumbent's cost accounting data.

RegTP is therefore not in a position to submit the relevant documents to justify its decisions on tariff approval. As a result, many appeals cannot be dealt with by the courts (approximately 350). A number of court actions exclusively concern the confidentiality aspect (three before the Supreme Administrative Court) and must be decided before the cases can be heard in substance. No definitive judgement has so far been rendered in these confidentiality proceedings. One judgement on tariffs has been rendered to date, annulling the setting of tariffs by RegTP owing to the absence of supporting documents to justify the decisions.

Germany took legislative action to address the problem of lengthy appeal procedures due to confidentiality rules. Section 75a of the TKG, which was added to the TKG by an amendment of 7 May 2002 (*Post und telekommunikationsrechtliches Bereinigungsgesetz*), now gives the regulatory authority the power to decide on confidentiality. However, under the new rules, RegTP must first clarify – as the Ministry of Economic Affairs was previously required to do – which parts of the documentation can be submitted to the court. The new legislation is therefore not sufficient to unblock the appeal proceedings.

## **1.2. Management of Numbers**

RegTP is responsible for structuring the national numbering space, setting the conditions for allocating and using numbers, and processing applications for numbers and number blocks.

## **1.3. Frequency Management**

RegTP is responsible for the assignment of frequencies.

The TKG empowers RegTP to assign frequencies under a tender, auction or competitive bidding procedure in cases where demand exceeds the number of frequencies available.

Three regulations on frequency allocation were issued on the basis of the TKG: the frequency allocation plan (Frequenzbereichszuweisungsplanverordnung, FreqBZPV) specifies at a general level which radio services are allocated to certain frequency bands. This serves as a basis for a more specific plan to allocate frequencies (Frequenznutzungsplan). That plan is drawn up on the basis of the regulation on the frequency usage plan (Frequenznutzungsplan-aufstellungsverordnung – FreqNPAV). Finally, the scope of usage for frequency users is defined in the frequency assignment regulation (Frequenzzuteilungs-verordnung – FreqZutV). The three regulations provided for in the TKG were adopted by the government on 26 April 2001. The government intends to revise its frequency allocation plan and has published a bill on the web site of the Ministry of Economic Affairs and Technology (Entwurf einer Neufassung der FreqBZPV as of 26 July 2002).

All frequencies available for GSM, WLL and 3G services have been assigned by RegTP on the basis of tender, auction or competitive bidding procedures.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offer*

Completion of the RIO has been achieved on the basis of several individual decisions which RegTP then declared to be applicable to all contracts (Erklärung zum Grundangebot). Delays in the inclusion in the RIO of further elements decided by RegTP are due to the fact that RegTP is awaiting the conclusion of the urgent appeal procedure before declaring certain elements to be part of the RIO.

The right and an obligation to interconnect all operators, in accordance with the Interconnection Directive, have been ensured by RegTP's adoption of administrative rules on 17 October 2001, published in its Official Journal. However, there is still concern that the right to interconnect with DT is subject to the interconnected operator's obligation to establish up to 23 further interconnection points once a certain capacity of traffic (48.8 Erlang)<sup>2</sup> routed into a given interconnection point is exceeded ("migration obligation"). No complaints with regard to this requirement have been filed to RegTP or to the Commission since the introduction of EBC (see under 2.1.2).

#### *2.1.2. Interconnection charges [cost-orientation; cost standard]*

On 12 October 2001 RegTP set interconnection tariffs, applicable with effect from 1 January 2002, based on element based charging and comprising 475 POIs at a local level and 23 POIs at a regional level. Those tariffs are charged according to the level of interconnection provided.

DT appealed against RegTP's decision. In its decision of 17 December 2001, the administrative court (Verwaltungsgericht (VG) Köln) rejected DT's request for a suspension

---

<sup>2</sup> Erlang: A measure of telecoms traffic. 1 Erlang corresponds to a circuit carrying one call for one hour.

of RegTP's decision, a ruling endorsed by the Münster Higher Administrative Court on 8 May 2002. Proceedings continue as to the substance.

RegTP based its decision on the principle of the obligation under the TKG to provide an efficient service, and on Commission Recommendation 98/195/EC<sup>3</sup> suggesting that the regulatory authorities take an approach to interconnection pricing based on the costs of an efficient operator and forward-looking long-run average incremental costs. Furthermore, a network having 475 POIs at the lowest level of interconnection, the basis for the charging system, was considered by RegTP to be the best possible compromise between DT's approach and that of other operators regarding the appropriate network configuration.

With regard to interconnection charges which new entrants may request from DT for terminating tariffs, DT imposes reciprocity, i.e. new entrants can charge for terminating DT traffic on their own networks as if they had a network architecture similar to DT's.

### *2.1.3. Fixed to mobile call termination*

The mobile termination rates for peak time of the two major mobile operators Vodafone and T-Mobile are situated within the EU average, with four countries (Austria, Finland, Luxembourg, Sweden) having lower rates (see Annex II Chart 47).

RegTP published its conclusions on the mobile and the national interconnection market in its Official Journal of 8 March 2000 (OJ 5/200, Verf. 21/2000). RegTP found that mobile operators did not have SMP in any market, arguing that they were not in a position to act independently (in any market) as, from the point of view of end users, termination was part of an overall mobile package offered. End-users would react to price increases by shortening their call duration and, in addition, take account of the prices from fixed to mobile networks when considering a possible subscription to a mobile operator. No mobile operator has been notified as having significant market power in the national interconnection market.

The sensitivity of end-users to the pricing of mobile termination has not been subject to an empirical survey, however. New entrants do not have a procedural right to appeal against the decision.

### *2.1.4. FRIACO*

The Interconnection Directive gives the NRA powers to set conditions for interconnection corresponding to market needs (regardless of whether conditions are set in the process of dispute settlement or on the initiative of the NRA) and explicitly refers in this respect to capacity-based charging (tenth recital).

DT offers competitors and its own subsidiary T-Online access to its internet platform, including connection to the internet platform (T-InterConnect Online Connect, TICOC), which is priced at a flat rate (OVF - Online Vorleistungsflatrate PMX), and requires connection at 1622 points. However, in practice, new entrants are not able to connect at all 1622 PMXAs and internet access is generally provided to competitors via interconnection. Furthermore, DT does not itself use OVF at all 1622 PMXAs.

---

<sup>3</sup> (Commission Recommendation of 8 January 1998 for interconnection in a liberalised telecommunications market (part 1 - interconnection payment).

In its decision of 11 June 2002, RegTP ruled that DT is obliged to offer competitors interconnection for internet services at a flat rate (FRIACO) and set the number of local POIs at 475, which corresponds to the number of POIs at the local level under EBC.

RegTP based its decision among other things on the principle that SMP operators must make an offer corresponding to market demand and must offer competitors services similar to those it provides to its subsidiaries. As set out above, those criteria are also compulsory under the Interconnection Directive.

RegTP expected DT to submit an application for approval of rates, but as DT challenged its decision, no application has been submitted to date. In its decision of 10 October 2002, the VG Köln has, in an emergency court action, suspended the obligation to implement the decision on grounds that RegTP is not empowered to set conditions for interconnection under the dispute settlement procedure, but only under the abuse-of-dominant position procedure (see also under NRA/powers). RegTP and the operator requesting FRIACO have appealed against the Court's decision. In its decision 13 November 2002, the Münster Higher Administrative Court decided that RegTP cannot force DT to submit a request for tariff authorisation. The obligation to implement the decision of 11 June 2002 of RegTP is still subject to a decision of the Münster Higher Administrative Court within the urgency procedure.

## **2.2. Interconnection leased lines/partial circuits**

### *2.2.1. Availability*

Interconnection leased lines are not regulated as part of the RIO, but are covered by the tariff authorisation for carrier leased lines ("Customer sited-IC leased lines"). In its decision of 12 June 2002, RegTP laid down detailed rules to ensure their availability in non-discriminatory terms (see below under leased lines).

## **2.3. Unbundling**

### *2.3.1. RUO*

By 1 October 2002, 91 agreements on full unbundling had been concluded and 855 404 fully unbundled lines provided by DT, compared to 549 167 lines on 1 October 2001. By 1 October 2002, three contracts had been concluded on shared access, with 336 lines ordered and 13 actually operational. No sub-loop has been unbundled so far (see details below).

As in the context of negotiating interconnection agreements, negotiations to conclude agreements on access to the unbundled local loop are unnecessarily lengthy and cumbersome, because not all conditions set by RegTP in its decisions are declared to be part of the RUO, and must therefore be re-negotiated or requested via dispute settlement, although already decided by RegTP.

DT failed to published its RUO in time at the beginning of 2001. It published a RUO on full unbundling only on 1 March 2002 after having been ordered to do so by RegTP in a decision of 1 February 2002.

In its decision of 1 February 2002, RegTP ordered DT to integrate in its RUO conditions for access to sub-loops. This covers the rental of copper sub-loops regardless of whether the part between the cable distribution frame (Kabelverzweiger, KVz) and the main distribution frame (Hauptverteiler, HVt) is copper or fibre (ISIS/OPAL-lines). DT included access to sub-loops

in its RUO published on the internet on 1 March 2002. Sub-loop unbundling is regarded as a precondition for providing VDSL-services. However, neither new entrants nor DT provide VDSL-services.

In its decision of 30 March 2001, RegTP ordered DT to submit a binding offer for shared access as part of the reference offer by 30 May 2001. However, RegTP did not enforce those decisions in due time. On 15 March 2002, RegTP set prices for shared access. Finally, on 5 April 2002, DT published its RUO, including conditions for shared access.

In its decision of 1 July 2002, RegTP stated that DT must offer access to its electronic information system on the correspondence of subscriber addresses to specific distribution areas, as well as on collocation sites, virtual collocation and on the situation of OPAL-lines. DT has appealed against the decision of 1 July 2002. DT does not offer access to an electronic information system for ordering. The AKNN is currently drawing up a specification for an interface that is due to be finalised at the end of 2002. As the AKNN is a working group that relies on reaching a consensus of all operators, including DT, it is not certain that this time limit will be met. Billing is offered by DT in electronic form.

In its decision of 30 March 2001, RegTP reduced the tariff for access to the local loop applicable until 31 March 2003. For the most common type of access to the customer, the unbundled copper pair, the monthly rental charge was set at €12.48. In its decision of 11 April 2002, RegTP reduced the one-off fees applicable until 30 June 2003. However, the price reduction has not fully allayed concerns about a price squeeze (see under universal service, tariffs).

In all its decisions, RegTP used a costing model based on current costs and long-run incremental costs (see cost accounting).

### *2.3.2. Collocation conditions and effective implementation*

Conditions for collocation, including the price of room rental and air conditioning, have been set by RegTP and were declared to be part of the RUO.

Delivery periods for local loop unbundling and collocation had been set by RegTP in its decision of 7 June 2000 at 16 weeks for a new collocation room and 7 weeks for enlargement of an existing collocation room. On 1 July 2002, RegTP set penalties at €20/calendar day for exceeding the time limits set for the provision of local loop access and €250/calendar day for exceeding the time limits for the provision of collocation. It also imposed penalties on competitors of €10 for each local loop ordered under a planning system but no longer required. The penalties for competitors only apply if a competitor's planned order exceeds 100 local loop lines per month and if the deviation from the plan exceeds +/-20%. RegTP also decided on guarantees, cancellation, access to collocation areas and competitors' means of obtaining information.

However, the decision has not been implemented following a decision of the Cologne Administrative Court of 12 November 2002 suspending the obligation to implement it on grounds that DT may offer competitors only those conditions which it offers itself internally and that RegTP had the burden of proof with regard to the existence and content of internally offered conditions. The Court in particular interpreted the unbundling regulation in such way as to require DT to offer unbundling within the same periods as the subscription. As a result of this suspension, there is currently no applicable rule on penalties. DT appealed against the decision, however. RegTP has suspended the obligation to implement its decision until 15 November 2002 pending the outcome of the emergency procedure. It could not be clarified

whether DT actually complies with the time limits set by RegTP in its decision of 7 June 2000. No data are available as to the factual delivery periods as DT is not implementing its reporting obligations until the emergency procedure is completed. RegTP is currently examining a possible appeal against the Court's decision.

## **2.4. Bitstream access**

### *2.4.1. Non-discriminatory access*

In 2001, a new entrant requested interconnection with DT at the level of the ATM switches with a view to offering DSL to residential and business users. In its decision of 8 May 2001, RegTP stated that DT is not obliged to offer competitors interconnection of their ATM networks with DT's ATM network for the purpose of routing DT's ATM –DSL traffic directly into their own networks. No further request has been filed to RegTP with regard to access at the ATM level since then.

New entrants questioned whether it was indeed technically impossible to interconnect to DT's ATM-network . DT has since transformed its ATM network so that it is no longer possible to interconnect at the ATM level. This raises the question as to whether the SMP operator in the fixed market should be required to design its network to allow interconnection and access for new services with a view to securing the development of competition in new markets.

DT offers ISP a number of possibilities for taking over internet traffic at one or more of the 74 "BBPoP (broadband-points of presence).

Previously expressed concerns that DT's network does not allow further roll-out of DSL beyond a certain saturation level (10% of lines) may be addressed. At the hearing of 8 October on the status of the telecommunications market in Germany, DT stated that as a result of technical progress, up to 50% of its lines could now be used for DSL from a technical point of view.

### *2.4.2. Tariffs*

In its decision of 30 March 2001, RegTP considered that some variants of DT's DSL-offer were below cost. However, RegTP did not reject the pricing scheme since a predatory effect had not been proven. DT increased its monthly charge for DSL as from 1 May 2002. The new prices apply to new customers who subscribe to those services from 25 February 2002 onwards.

Following this price increase, RegTP closed an abuse-of-dominant-position procedure without, however, determining whether the increase had removed the pricing below costs. The closure of the abuse procedure with regard to DSL pricing does not therefore give sufficient safeguards as to the absence of predatory pricing.

## **2.5. Situation of the (broadband) local access market**

### *2.5.1. Status of DSL market, position of incumbent*

The DSL market is one of the markets showing the highest growth. However, it is strongly dominated by DT.

DT had 2.5807 million DSL lines available as of 1 October 2002, while new entrants provided 19 000 DSL lines on the basis of their own infrastructure, 161 000 DSL lines via full

unbundling, 210 000 on the basis of DT's offer « T-DSL-ZISP and TICOC » and 320 000 DSL lines on the basis of resale. New entrants also provided 13 DSL lines via shared access.

According to information provided by DTAG 450 000 customers of DSL have chosen an ISP other than T-Online as on 1 July 2002.

### 2.5.2. *Development of alternative means of access*

Alternative means of access are not widely available, but it is not possible to draw an overall conclusion, as the data are incomplete. There were more than 86 000 connections provided by new entrants through cable modem as of 1 October 2002. No data are available with regard to WLL-services. As of 1 October 2002 the incumbent had provided 5 400 connections by other means (satellite, optical fibre). More than 2 000 customers of new entrants were actually using powerline access by 1 October 2002, whereas more than 45 000 connections were on offer. Access via satellite is also provided by new entrants, but there are no figures on how many customers are using this form of access.

## 2.6. **Leased Lines**

### 2.6.1. *Pricing*

In its decision of 12 June 2002, RegTP set the tariffs for leased lines. Prices are in the lower range compared to other Member States. For example, the monthly rental for a 2Mbit leased line of 2 km is €168.75, which is the third lowest price across the EU.

### 2.6.2. *Delivery periods and quality of service; non-discrimination*

In its decision of 9 October 2001, RegTP set binding time limits for delivery of carrier leased lines (*Carrier-Fest-Verbindungen, CFV*; ): eight weeks if no work needed to be carried out, four months in the event of minor work and six months in the event of substantial work. The decision was supplemented by its decision of 31 May 2002 setting binding time limits for delivery to competitors of leased lines connecting end-users (*Standard-Festverbindungen, SFV*): 12, 15 and 30 working days for bandwidth of 64 kbit/s, 128kbit/s to 2 Mbit/s and over 2 Mbit/s respectively. In addition, DT was ordered to offer competitors all conditions and additional technical facilities offered to its own customers.

With regard to both types of leased lines, RegTP decided that DT must propose to competitors a precise delivery date situated within the time limits set, and offer penalties of five percent of the monthly rental payable per calendar day of overrun (over the agreed delivery date), applicable from the very first day on which a deadline is missed. DT can be released from its obligation to provide compensation if it can prove it was not at fault.

The decision of 31 May 2002 was taken on the basis of evidence gathered by RegTP on DT's discriminatory practice against competitors with regard to delivery of leased lines. RegTP inter alia concluded that there was discrimination by comparing contractual conditions offered by DT to its end-customers with the conditions offered to competitors, and by comparing data on delivery periods provided by DT for the ONP 2001 leased lines report with data on delivery periods provided by competitors. The decision appears to satisfy market needs and was welcomed in principle by new entrants.

However, the decision has not been implemented following a decision of the Cologne Court of 15 October 2002 suspending the implementation obligation, on grounds that DT may offer competitors only those conditions which it offers itself internally and that RegTP had the

burden of proof with regard to the existence and content of internally offered conditions. RegTP has appealed against the Court's decision. Pending the emergency procedure, the time limits set by RegTP are not being implemented in practice.

## **2.7. Numbering**

### *2.7.1. Carrier selection and pre-selection*

The option of carrier selection and pre-selection at all levels is vital to open up all market segments. The Numbering Directive specifies that notified operators must provide carrier pre-selection to any interconnected operator from 1 January 2000. However, DT does not currently provide the option of local call carrier selection and pre-selection. As a result, in Germany, only 33 % of subscribers to an access line connection (in relation to all access lines, including those of DT and alternative operators) can choose one or more alternative operators for local calls.

In June 2000, the Commission opened an infringement proceeding against Germany for failure to fully implement the Numbering Directive, and decided to apply to the Court of Justice on 20 December 2001.

In its decision of 1 August 2000, RegTP stated that the German Telecommunications Act does not cover pre-selection for local calls. Subsequently, Germany took legislative action to empower RegTP to impose the option of local carrier pre-selection. The German authorities planned to introduce the facility before the end of 2002. After a difficult legislative process, an amendment to the provision on carrier pre-selection (Section 43(6) TKG) was finally adopted by the Parliament on 12 September 2002 and by the Bundesrat (second chamber) on 27 September 2002, providing that carrier selection and pre-selection must be provided for all types of calls from 1 December 2002. However, the new Act provides that RegTP, in its decision implementing the obligation to provide the facility, must ensure that incentives for efficient investment in infrastructure facilities and to promote long-term competition are not removed, and that the existing network is used efficiently in respect of short-distance interconnection. It also provides that the network operator chosen by the user must make an appropriate contribution to the cost of providing the subscription line. The new Act also allows RegTP to suspend the obligations partially or in full to the extent and as long as this is justified for technical reasons. Those limitations raise a number of concerns as to the possibility of imposing network architecture requirements on the interconnected party as a condition for obtaining carrier selection and pre-selection, the means of ensuring the technical availability of the facility, compliance with the principle of cost-orientation for the provision of pre-selection and interconnection and the compensation arrangements for an access deficit. In its Communication No 463/2002 of 16 October 2002, RegTP launched a public inquiry and asked for comments to be filed before 22 November 2002 regarding the manner in which the new law is to be implemented.

Carrier selection and pre-selection for long distance and international calls appear to work satisfactorily.

### *2.7.2. Number portability*

Fixed number portability was introduced on 1 January 1998.

Introduction of mobile number portability (MNP) was mandated by RegTP from 1 November 2002. Mobile network operators handle calls to ported numbers by direct routing. The fixed network operator decided to implement - at least for the moment - indirect routing.



According to the TKG, the customer can be charged only the costs which are directly attributable to the change.

The porting of fixed numbers is currently free of charge to the customer. In future DT may introduce a fee. The fee is subject to ex-ante regulation.

The mobile operators are charging departing customers for MNP. RegTP recently asked the operators to provide cost calculation data. The TKG gives RegTP the possibility of issuing administrative orders to ensure that only costs directly attributable to a change of customer are charged. A fine can be imposed to enforce these administrative orders.

## **2.8. Cost accounting and accounting separation**

### *2.8.1. Cost accounting systems in place, statement of compliance*

In its administrative rules of 14 March 2002 (Communication No 120/2001, Official Journal 5/2001, p. 647-648), RegTP stated that it is bound to authorise tariffs on the basis of cost accounting data submitted, and that in principle it will not base its decisions under Sections 2 and 3 of the Telecommunications Rates Regulation Ordinance (TEntgV) on the prices prevailing in comparable markets. The administrative rules also state RegTP's obligation to publish an annual statement of compliance.

On the basis of its administrative rules, RegTP specified the requirements as to the incumbent's cost accounting system in detail in its 2001 annual report (page 52-68). It explained how to apply the principle of showing specific costs as part of total costs and how to show the costs of the efficient service (Gesamtschau). RegTP also described the incumbent's cost accounting system "DELKOS", based on the "INTRA" calculation including a local network, core network, retail and other, and showing LRIC and current costs.

In its statement published on 6 March 2002 (Communication No 126/2002, Official Journal 4/2002, p. 374-376), RegTP noted a series of improvements. It concluded however that DT's cost accounting system still had some shortcomings.

## **3. AUTHORISATIONS**

### **3.1. Licence conditions**

Previous reports highlighted concern about the level of licence fees and their compliance with the principle of coverage of administrative costs. The former regulation on licence fees provided for a €1.52 million fee for a national licence for voice telephony and a €5.39 million fee for operating transmission lines. Following an infringement proceeding opened in 1999, the Commission decided on 18 July 2001 to appeal to the Court of Justice. Following the judgment of 19 September 2001 of Germany's Supreme Administrative Court annulling the regulation on licence fees, the Commission decided to suspend execution of its decision pending the adoption of a new regulation on licence fees.

On 9 September 2002, a new regulation on licence fees entered into force. It provides for licence fees covering the administrative costs of the award of the licence. As the one-off fee is the same regardless of the territory covered, operators applying for several territorial licences would be charged a higher amount than those applying for a national licence only.

The new regulation offers repayment and conversion of territorial licences into national licences only to those operators where either the validity of the administrative act in question can be challenged in the courts or where RegTP has suspended its definitive validity. Consequently, operators not having challenged the validity of the imposition of licence fees will have to pay a substantially higher amount than those which can obtain repayment and/or conversion of their licences into national licences. However, the German authorities plan to transpose the new framework on fees for authorisations in such a way as to allow for offsetting the licence fees paid.

The Commission is currently examining whether the new regulation removes the grievances of the above mentioned infringement case, together with complaints filed by operators against lack of retroactive applicability of the new regulation with regard to valid administrative acts.

### **3.2. Rights of way - role of local authorities in infrastructure development**

The TKG provides that licence holders are granted the right to use public ways for installing telecommunications lines free of charge. The entity responsible for maintenance of the public way must give its consent to the individual works. The TKG also sets out the principles for facility sharing and access to private land.

## **4. UNIVERSAL SERVICE/CONSUMERS**

### **4.1. Retail tariffs**

In its decision of 21 December 2001, RegTP established a new price-cap procedure, applicable from 1 January 2002, creating four separate baskets for calculating prices: access lines, local connections, national long-distance and international connections. The price-cap procedure allowed DT to increase its monthly subscription fee for the local connection as from 1 May 2002.

The increased subscription fee is still below the price for full unbundling set by RegTP on 31 March 2001 at €12.48. On 8 May 2002, the European Commission sent DT a statement of objections setting out the preliminary conclusion that the German incumbent operator has, by maintaining a price-squeeze, abused its dominant position through unfair pricing regarding the provision of local access to its fixed network (local loop). On 31 October 2002, DT requested RegTP to authorise a further increase of the monthly subscription fee by €0.99.

Under the authorisation procedure for optional tariffs, RegTP does not examine cost orientation on the basis of cost accounting data submitted, but only verifies whether the optional tariff includes anti-competitive rebates and whether the difference compared to the wholesale prices is adequate.

However, the anti-competitive effects of some of DT's special tariff schemes for consumers have not been sufficiently addressed, in particular because RegTP did not, on the basis of a forward-looking estimate, determine the effects of those offers in the market, but postponed the examination of market impact.

In various decisions under tariff authorisation procedures, the latest dating from 28 June 2002, RegTP authorised DT's bundled tariffs based on a price scheme called "AktivPlus", which offers the customer various services for an additional fee on top of the subscription fee, such as reductions on local calls as well as on all national calls and fixed to mobile calls. They also offer a variant of this price scheme called "AktivPlus XXL" offering customers free national

calls on Sundays and public holidays for a flat rate fee. RegTP had made those authorisations subject to revision if market data showed an adverse competitive effect. Between March 2001 and March 2002, the number of subscriptions to AktivPlus increased from 5.8 million to 9.2 million customers (see DT's first quarterly report for 2002), which accounts for approximately 25% of the total subscriptions in Germany. New entrants expect a further increase of AktivPlus users to more than 10 million before the end of 2002, resulting in a further loss of their market share and creating a high market entry barrier, in particular because of low customer acceptance of pre-selection.

RegTP commissioned a study on the effects of the AktivPlus price schemes on market developments which has not yet been completed. A tariff authorisation procedure is currently pending at RegTP for AktivPlus.

During the hearing of 8 October 2002 on the status of the telecommunications market in Germany, DT held that the AktivPlus price schemes were not bundled offers as every component could be obtained separately. It emerged, however, that in case of separate purchase, the retail tariffs would be different from those under the bundled offer.

New entrants also face difficulties with DT's special tariffs in the business market. DT offers business users large rebates under its tariff schemes "TDN (Telekom Designed Network)" and "T-VPN (Telekom Virtual Private Network) Best Price". In its decision of 15 October 2001, RegTP set the limits for the tariff options that may be offered to closed user groups, stating that only communications within closed user groups – not those offered to closed user groups over a public network – could be exempted from tariff authorisation. As a result, RegTP stated that all tariffs in TDN or T-VPN contracts which should have been made subject to ex-ante tariff authorisation, but which DT had not submitted for authorisation (and therefore had not been authorised by RegTP), were to be replaced by the authorised tariffs.

In its decision of 13 December 2001, the Cologne Administrative Court suspended the obligation to implement the decision, a ruling endorsed by the Münster Higher Administrative Court (OVG Münster) on 13 March 2002. This also leaves business users with legal uncertainty about their contract terms.

According to Section 30(2) TKG, RegTP has opened two tariff authorisation procedures on its own initiative with regard to certain of the TDN-agreements, which are due to be decided at the beginning of December 2002.

#### **4.2. Funding – implementation of the ruling of the Court of Justice**

Germany has not put in place a funding scheme for universal service.

#### **4.3. Universal directory, itemised billing, quality of service**

DT provides a directory in paper and in electronic form and an inquiry service. All operators are required to provide DT with subscriber data for inclusion in the database operated by DT.

Several alternative providers offer directory services. Under the TKG (Section 12(2)), DT must provide alternative directory service providers with information from its database against payment of a reasonable fee. RegTP does not consider it has the powers to implement this provision. In 1998, the Federal Office of Competition decided on a ceiling. New entrants have filed complaints to the Commission and the Federal Office of Competition to obtain a review of the ceiling and the conditions under which those data can be obtained. The latter opened a proceeding on 5 September 2002.

Itemised billing, including a basic level of itemised billing free-of-charge, is offered in Germany.

RegTP has published data on all the quality parameters of several operators, including the universal service provider/SMP operator (Communication No 332/2002, Official Journal 2002, p. 1020-1043). These are based on ETSI EG 201 769 and have been further specified by RegTP.

#### **4.4. Dispute resolution**

RegTP has set up an arbitration body under the Consumer Protection Ordinance (Section 35 TKV). This procedure applies to complaints from all types of end-users, including business users. RegTP laid down the rules of the procedure in its Official Journal (Communication No 643/2001, Official Journal 22/01 of 14 November 2001). According to its 2001 Annual Report, RegTP had handled 284 arbitration procedures by 30 June 2001. It also handles a large number of complaints (about 40 000/year).

### **5. DATA PROTECTION**

#### **5.1. Implementation/Traffic data retention**

Under the Telecommunications Data Protection Regulation (TDSV), operators can keep traffic data necessary for billing purposes for a maximum of six months after invoicing. If, prior to expiry of the six-month time limit, the customer has disputed the amount billed, the traffic data may be stored until such time as the dispute has been finally settled.

Operators may also keep traffic data for network security purposes for up to six months.

Traffic data retention on security grounds can be imposed on operators only in individual cases and requires a court order.

#### **5.2. Unsolicited calls and faxes**

Unsolicited calls for commercial purposes are prohibited under the law on unlawful competition (*Gesetz gegen unlauteren Wettbewerb, UWG*). According to a number of court rulings, this also applies to unsolicited e-mails, but there has not yet been a ruling from the highest court on this matter.

A large number of complaints have been filed with RegTP about unsolicited faxes sent for the purpose of marketing premium rate services (PRS). On 28 August 2002, the Second Regulation amending the Telecommunications Customers Protection Ordinance (Telekommunikations-Kundenschutzverordnung, TKV) entered into force. The new Section 13a provides that any party who has provided customers with a number to access premium rate services, and who has knowledge that advertising material is sent to this number unlawfully, must immediately take appropriate measures to prevent the contravention. In particular, if a warning does not produce results, the party must as far as possible block the premium rate number if it is aware that there is a repeated and serious contravention.

Following this amendment to the Telecommunications Customers Protection Ordinance, the customer can now make direct representations to the network operator which has transferred the premium rate number to a third party for use, and can request it to take immediate action against unlawful fax, e-mail or SMS messages sent for advertising purposes.

In the hearing on 8 October 2002 on the status of the telecommunications market in Germany, network operators and consumer associations took the view that the new regulation does not achieve the necessary improvements, as the scope for misuse of numbers remains unclear, with regard to unlawful advertising in particular. Network operators also pointed out that they are often not in a position to identify the premium service provider or to assess whether the latter is acting in conformity with the provisions. It therefore appears that the new legislation does not substantially improve the possibilities to withdraw PRS numbers on the above grounds.

## **6. MOBILE ISSUES**

### **6.1. UMTS**

The 3G Decision was implemented by RegTP's decision of 10 May 1999 and two decisions of 18 February 2000 setting out the conditions for the award of 3G licences. Six licences have been awarded as a result of an auction in August 2000.

Marketing of 3G services has been announced by one operator for mid 2003, and by another for the end of 2003. Another licence holder intends to launch 3G as part of trials within closed user groups before the end of 2002 and announced it would launch a commercial service in 2003.

### **6.2. Infrastructure sharing**

Operators have the obligation to achieve the target of 25% coverage of the population before the end of 2003 and of 50% by the end of 2005. Every operator must ensure that it retains control over the management of its own network (so called "*Netzfunktionsherrschaft*").

In its interpretation of 5 June 2001, RegTP specified the details for facility sharing, stating that the running of core network must be self-managed, while the other elements of the network, such as antennae and masts, can be shared. Two infrastructure sharing agreements have been concluded.

## **7. PREPARATION FOR THE TRANSPOSITION OF THE NEW FRAMEWORK**

The bills to transpose the new framework are in the process of being drafted. It is planned, inter alia, to address the issue of attributing full powers to RegTP in the this context, thus allowing RegTP to intervene, on its own initiative and in the context of dispute settlement, to set conditions and tariffs for interconnection as provided for under the new framework.

Under the Telecommunication Act, RegTP examines on a case-by-case basis whether an operator has SMP. It has the powers to publish a list of SMP operators. RegTP is not, however, empowered to carry out an SMP assessment on the basis of an abstract market analysis and lacks the powers to carry out the necessary inquiries.

In April 2001, RegTP launched a public consultation to establish rules for market analysis and published the results of the consultation (Communication No 547/2001, Official Journal 19/2001, p. 2931-2948). The overall finding was that general rules on how to carry out market analysis could not be established because market players had divergent positions. RegTP continues to decide on a case-by-case basis and in accordance with the principles of competition law.

## 3.4 GREECE

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

A clear distinction of regulatory tasks is drawn between the EETT and the Ministry of Transport and Communications. The EETT exercises all regulatory functions including the adoption of regulations while the Ministry is responsible for policy making and drafting legislation following consultation with the EETT. The performance of the EETT in the exercise of its regulatory functions has been improved significantly while transparency in decision making has been increased. Public consultations are being conducted on a variety of issues although it seems that some operators would expect the EETT to take more notice of their comments.

The number of EETT's employees has now reached 78 while an additional 25 employees are in the process of being recruited and it is projected that staff numbers will increase to 180. A new regulation has been adopted recently on public hearings conducted by the EETT in the course of its mission to identify possible infringements of laws and regulations. This regulation is expected to tackle some of the concerns of market players regarding the ability of the EETT to take effective interim measures.

Some new entrants would encourage further intervention by the EETT in taking action on its own initiative instead of first expecting the submission of a complaint while, in contrast, the incumbent would favour less intervention. The incumbent considers that it devotes a lot of its time and resources to implementing the decisions of the EETT while it finds that the bulk of information requested by the EETT is excessive *vis-a-vis* the significance of the issues in question.

Under the Communications Law currently in effect the responsibility for regulating competition telecommunications matters is shared by the EETT and the Competition Authority. In practice, it is mainly the EETT which deals with competition matters in the telecommunications sector as the body having the appropriate expertise. The incumbent favours more involvement of the Competition Authority.

The EETT has undertaken a study focused mainly on the organisational/structural aspects of its operations, which might lead the Minister of Transport and Communications to adopt further legislative measures aimed at greater efficiency in decision making by the EETT.

#### 1.2. Management of numbers

A new numbering plan was introduced in July 2001 to be completed within one and a half years. The new plan is expected to ensure the availability of adequate numbering space for end-users and facilitate the introduction of new services and expansion of the ones that are already being offered. Furthermore, it facilitates the introduction of new operators in the sector, as a wide range of numbers assigned to different services is available and can accommodate the needs of telecommunications operators for many years. It applies to all numbers used for the provision of fixed and mobile voice telephony and personal communications services. The implementation of the plan for fixed telephony services will be completed in November 2002 and for mobile in January 2003. The time limits for such implementation were blamed by the incumbent as the cause of many faults (around 7%) experienced in incoming international calls.

The level of fees paid for the allocation and use of numbers and short codes is questioned by mobile operators who consider them high. According to them, following the introduction of the new numbering plan, numbers should not be considered as a scarce resource and therefore the fees charged for their allocation and use should be reduced.

### **1.3. Frequency management**

Previous problems experienced in relation to the assignment of radio frequency spectrum seem to have been overcome since the transfer of allocation powers to the EETT in 2001. Processing time of applications for allocation of frequencies has been improved significantly. According to the EETT, during 2001, more than eight thousand five hundred (8.500) channels and by the end of July 2002 more than ten thousand five hundred (10.500) channels were assigned to be used for the microwave links of the mobile operators.

Following a decision adopted by the EETT in 2001, it seems that the level of frequency fees charged for spectrum usage to operators has risen. Mobile operators and the incumbent claim that such an increase is not justified in relation to the administrative costs involved in the management of spectrum. The EETT is currently conducting a review of the current framework regarding spectrum fees expected to be finalised by the end of 2002, which might lead, if necessary, to amendments.

A new system for the management and monitoring of frequency spectrum is envisaged by the EETT with the assistance of a consultant to prevent unauthorised use of frequencies by operators.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offer*

At present, fourteen (14) interconnection agreements with fixed operators and four (4) with mobile operators are in place while according to the incumbent all requests for interconnection with its network have been met. All interconnection agreements have been notified to, and are being examined by, the EETT.

New entrants expect further improvements to be made regarding the level of detail of information contained in the annual RIO and the timing of its publication. In particular, it is reported that further detailed information has to be included in the RIO to help them in making their business plans and decisions.

In addition, the timing for publishing the RIO and approving the interconnection charges for 2002 has been questioned. A late submission by the incumbent and the numerous directions for amendments required by the EETT led the EETT to finally approve the RIO 2002 only in August 2002. The RIO for 2003 has not been submitted by OTE to the EETT for approval and therefore has not yet been published. Under the current regulatory framework in Greece, before a RIO is finally published and becomes effective it needs first to be submitted to and approved by the EETT. Currently EETT is about to conduct a public consultation on RIO 2002 and other issues relevant to interconnection the results of which will be taken into consideration for the approval of RIO 2003, which is expected to be published at the beginning of 2003.

### *2.1.2. Interconnection charges*

New entrants are not satisfied with the interconnection charges, considering them too high for the development of competition. A further decrease in retail prices for local calls by the incumbent seems to have made it more difficult for new entrants to make profits from the provision of fixed voice telephony service since the margin between them and local interconnection charges has decreased. In addition, no provision of off-peak interconnection charges is envisaged. Meanwhile, the EETT introduced interim interconnection charges upon finding that the rates submitted by OTE were not cost-oriented. The audit on cost orientation of interconnection charges was concluded in August 2002. Prices included in the approved RIO 2002 for call origination/ termination based on the above audit are cost – oriented.

### *2.1.3. Fixed to mobile call termination*

Fixed to mobile call termination charges are considered by new entrants as one of the major obstacles for the development of competition in the fixed voice telephony market. Discriminatory treatment by operators designated as SMP in public mobile telephone network and services markets against new entrants is reported. In particular it is reported that mobile SMP operators offer retail prices to their customers which are well above cost and around one third lower than the interconnection charges imposed on new entrants for terminating their calls to mobile networks. This situation automatically excludes the new entrants from the market. New entrants expect decisive action by the EETT to correct distortions of competition by such practices.

EETT is currently holding a public tender for the appointment of a consultant who will assess the level of competition in the market for mobile call termination based on the new regulatory framework and suggest appropriate remedies.

Recent reductions in the fixed to mobile termination charges made by the three established mobile operators are not considered sufficient by new entrants to avoid discrimination. Mobile operators object to such allegations while the EETT considers the reductions made by mobile operators as minimal in the light of further charges imposed on top of the interconnection rates.

### *2.1.4. SMP designation*

In March 2002, the EETT made a new determination of operators having significant market power (SMP) in the public mobile market, designating as SMP two of the four mobile operators (COSMOTE and VODAFONE). At present, there is no designation of mobile operators in the national market for interconnection, although the EETT is currently carrying out a relevant inquiry.

## **2.2. Unbundling**

### *2.2.1. RUO*

Progress regarding access to unbundled loops of the incumbent is very slow. While regulatory requirements have been put in place with the publication of two RUO, which have been approved by the EETT and published, the first (for full access) in May 2001 and the second (for shared access) in December 2001, covering both full and shared access, a very limited number of lines is provided by the incumbent. In practice, so far only 93 fully unbundled local loops are provided with distant collocation to beneficiaries covering 22 switches in the country. Physical collocation is available by the incumbent but only limited interest has been



expressed, while it seems that there is disagreement between the interested party and the incumbent on the level of contribution of both sides to recover the cost for the provision of the cabinets. On the other hand, the incumbent seems to be reluctant to invest in physical collocation if no actual demand is expressed.

On inquiring into the reasons for such slow progress, the incumbent reported that there is no real demand by operators for access to its local loops despite the fact that it has carried out all the necessary preparatory work to provide such access. In its view, such interest needs to be expressed with formal requests for the provision of access. New entrants on the other hand claim that the cost of the service is very high and additional difficulties such as lack of a wholesale price for backhaul services, disagreements on who will pay for the cost of collocation, absence of number portability discourage them from requesting access. The EETT reports that it is ready to intervene in cases where the incumbent fails to provide access upon submission of relevant requests. Currently, the EETT has collected evidence sufficient to presume possibly the existence of significant obstacles in obtaining unbundled access to OTE's local loops, referring to delays in the delivery of service and unsatisfactory conditions (including collocation and other contractual terms and conditions) imposed by OTE. EETT is currently conducting a hearing where OTE is invited to state its position on these allegations to allow EETT to determine the existence of any violations and impose penalties accordingly. The outcome of the hearing is awaited.

It should be noted that the audit on cost orientation of prices for unbundled access was only completed in August 2002, and charges could be modified in the light of the results of the audit.

### **2.3. Situation of the (broadband) local access market**

#### *2.3.1. Status of DSL market, position of incumbent*

DSL service is not provided in Greece, while the initial plans of the incumbent to provide only a wholesale product seem to have been changed. The incumbent is currently planning to launch the service on a retail basis in October 2002. However, the incumbent is obliged by the EETT to make a wholesale offer available and its terms and conditions public before the provision of its retail service.

In the light of the delays and problems caused by OTE for the provision of access to unbundled lines, the EETT is concerned that OTE might try to use DSL access in a way which points new entrants to ADSL instead of LLU, so that they remain dependent on OTE.

#### *2.3.2. Development of alternative means of access*

The roll out of services based on seven wireless local loop licences granted last year seems to be slow. According to the conditions of the WLL licences granted, operators are expected to meet the minimum roll-out requirement by January 2003. At present, EETT is examining the current situation for network deployment and will decide whether an extension of the deadline is necessary. On the other hand, satellite services are mainly used for one-way transmissions of television programmes without any kind of connection to the public switched telephone or data network.

#### *2.3.3. Provision of internet service*

The fact that the incumbent uses its resources and infrastructure to favour its internet subsidiary has been reported. In particular, the incumbent is blamed for the provision of bundled services between its ISDN and its subsidiary's services for access to internet. A

decision by the EETT on this issue is expected shortly, while a hearing launched to investigate similar allegations is currently in progress.

Flat rate internet charging is not currently available in Greece. The incumbent's subsidiary claims that the tariffs charged by all operators for access to internet are very low and therefore there is no need for the introduction of flat rate, without discounting such a possibility in the future. Based on data submitted to the Commission, Greece offers the second lowest tariffs in the EU for internet access on a 20-hour provision per month. EETT is planning to launch a Public Consultation with regard to RIO 2003, in which, among others, issues of fees will be discussed.

## **2.4. Leased lines**

### *2.4.1. Pricing*

The main problems experienced in the leased lines market are connected with pricing issues. In this connection, the EETT with the assistance of an external auditor reviewed the retail prices for leased lines proposed by the incumbent in November 2001 in order to verify their cost-orientation. The audit concluded that prices were not cost-oriented by leased line type while on aggregate the cost for leased lines was correct. Based on these results, the EETT directed the incumbent to make appropriate adjustments within a certain time (until 30 June 2002). Adjusted prices would be effective as of January 2002. In addition, OTE was directed to provide wholesale prices. Upon the incumbent's failure to meet EETT's directions a hearing was initiated which prompted the incumbent to submit new prices for leased lines which are currently being reviewed by the EETT. The decision of the EETT is still pending.

According to the incumbent, leased lines prices were reduced significantly (by 37%) in October 2001 upon the application of the cost accounting system approved by the EETT. Prices for leased lines for interconnection (partial private circuits) are based on the EC Recommendation.

New entrants complain about the policy of OTE not to offer wholesale prices for leased lines. The incumbent offers discounts based on a number of factors such as the volume purchased per category or the duration of a contract without distinguishing between retail customers and wholesale supply to other operators. Despite the fact that the EETT, with its above decision, directed OTE to provide wholesale prices, it seems that the latter has failed to do so.

### *2.4.2. Service level agreements*

OTE was designated as having significant market power in the leased lines market. As a result of this, the EETT reached a decision directing OTE to notify to it and then publish a reference offer for the provision of leased lines on both wholesale and retail basis. Strict requirements were laid down for the discontinuation of the provision of leased lines by OTE and notification to the EETT of projected discounts by OTE. The reference offer has to include a minimum list of information such as delivery issues, order and repair times and obligations imposed on the organisations having SMP in the leased lines market. The reference offer was due to be notified in August 2002. However, it is reported that the incumbent still does not offer SLA and, despite its obligations laid down in the Decision of the EETT, does not provide the same quality of services to its competitors as to its own affiliates. OTE has recently submitted to EETT a reference offer for leased lines, which is currently under examination by EETT.

### *2.4.3. Delivery periods and quality of service*

The incumbent claims that some delays experienced in the delivery of leased lines are caused by a sharp increase in the demand because of the price reductions and a failure by interested operators to anticipate their supply needs.

## **2.5. Numbering**

### *2.5.1. Carrier selection and preselection*

Carrier selection codes were assigned to 15 operators until July 2002, while 10 new operators were assigned calling card numbers. Regarding carrier preselection (CPS), Greece made use of its right to defer from its obligation and prolong the period for the introduction of the service. Recently, the EETT adopted a Regulation providing for the introduction of CPS in the Greek telecommunications market. The CPS scheme contains three options: 1) international calls 2) long-distance calls and calls to mobiles and 3) all calls (including local calls). The anticipated dates for their introduction are: international calls on 1 December 2002; long distance and calls to mobiles on 1 February 2003; all calls on 1 February 2003. Customers will be able to “override” their pre-selections for individual calls on a call-by-call basis by dialling a carrier selection code. Competition in the fixed voice telephony market is expected to increase following the introduction of CPS.

### *2.5.2. Number portability*

Following a public consultation on the provision of the number portability service in Greece the EETT recently adopted a new regulation providing that the service will be introduced for both geographical and non-geographical fixed telephony on 1 January 2003 and for mobile numbers on 1 July 2003. A centralised reference database for number portability will be introduced on 1<sup>st</sup> July 2003 to facilitate the provision of the service.

## **2.6. Cost accounting and accounting separation**

### *2.6.1. Cost accounting systems in place, statement of compliance*

The Commission has opened infringement proceedings against Greece for failing to ensure that a suitable cost-accounting system is operated by the incumbent both for interconnection and voice telephony, that compliance with such a system is verified by a competent body, and that a statement of compliance is published.

Two cost accounting systems have been approved by the EETT and applied by OTE. A cost accounting system based on the Fully Distributed Cost methodology with Historic Costs (FDC-HC) for cost allocation and accounting of voice telephony services and leased lines and a second one based on the LRAIC-CCA cost model for cost allocation and accounting in the provision of interconnection services and unbundled access to the local loop.

An audit was conducted by the EETT with the assistance of an independent auditor selected by the EETT to examine the application of the cost accounting system by the incumbent and the cost-orientation of the tariffs charged by it for the provision of leased lines. Following the conclusions of the audit, the EETT adopted a decision directing the incumbent to apply a number of recommendations made by the EETT to improve its cost accounting system. The audit concluded that the tariffs charged by OTE for the provision of leased lines were not cost-oriented and that no wholesale leased lines prices are offered by OTE. The incumbent was directed to make relevant adjustments until 30 June 2002 (see above under Leased Lines). With regard to tariffs for the provision of voice telephony, the audit found them to be cost – oriented.

A second audit was also conducted by the EETT with the assistance of an independent auditor, and was concluded in August 2002. The audit focused on the application by the incumbent of the LRAIC cost accounting system, which has been approved by the EETT in setting interconnection charges and charges for the provision of unbundled access to the local loop. The cost-orientation of such charges in accordance with the Interconnection and New Voice Telephony Directives was also examined. According to the EETT no statements of compliance were published due to the late submission of the results of the audit.

The EETT reported that it has now adopted the decisions for the statements of compliance for interconnection and voice telephony services which are shortly to be published in the Official Gazette of the State.

### **3. AUTHORISATIONS**

#### **3.1. Licence conditions, fees**

Concerns regarding the level of licence fees paid by holders of individual licences have been reported. Market players consider that such fees have exceeded the administrative costs involved and therefore they need to be reviewed. Licence fees should cover only the administrative costs incurred in granting and monitoring licences.

In particular, there are certain operators, especially the smaller ones, who consider that they should not pay licence fees at all. Licence fees charged on holders of individual licences in Greece are calculated on the basis of a scale starting from 5% of their annual turnover (which can increase gradually as the turnover increases over €300 million) and which cannot be, in any case, less than €600 per year. The main argument of these operators is that because of their small size, EETT's usage of its resources to monitor their licences is minimal. The incumbent has also expressed similar concerns for different reasons. On the other hand, EETT claims that such fees are used to recover administrative costs involved in administering individual licences through its continuing exercise of regulatory controls. Such controls are in principle targeted at the incumbent and mainly for the benefit of small operators who would not otherwise be able to compete against the incumbent. It seems that all operators including the incumbent would favour a decision by the EETT revising the level of the licence fees.

#### **3.2. Licensing of base stations**

Licensing procedures for the installation of base stations and antennae are reported as complex and time consuming. Mobile operators would favour a one-way process to be established in obtaining authorisations to install and operate a base station. Various services are involved before an authorisation is obtained, such as the civil aviation service, the national committee for atomic energy, city planning authorities, archaeological authorities, in addition to an approval granted by the EETT to use radio spectrum frequencies. The lack of a certain time limit within which a licence is granted as well as health considerations expressed by certain city planning authorities are factors which also contribute to long delays before a permit is finally granted.

In order to tackle problems regarding the installation of antennae the Ministry has formed a working group in which other Ministries are also involved. The work of the group is focused on further improving the existing regulatory framework in relation to such installations by updating it.

## **4. UNIVERSAL SERVICE/CONSUMERS**

### **4.1. Retail tariffs, cost orientation**

Retail tariffs have been subject to regulatory controls although no price-cap regime has ever been imposed on the incumbent. The incumbent has not been free to determine its retail tariffs for the provision of fixed voice telephony service and complains that tariffs which are in effect are not distinguished as peak and off-peak as a result of EETT's calculations of the cost of service, an allegation which is refuted by the EETT. OTE is designated as having significant market power in the fixed voice telephony network and services market and therefore is subject to cost-orientation obligations. Certain other obligations are imposed on the incumbent such as the obligation to notify its new or modified tariffs to the EETT within 45 days before they become effective or to provide sufficient evidence regarding cost-orientation of the proposed tariffs which the incumbent criticises as being too long. In addition, the incumbent is obliged to prove the cost-orientation of the proposed tariffs within three days of their publication.

An audit was conducted by the EETT with the assistance of an external auditor at the end of the period set for tariff re-balancing. The focus of the audit was to examine whether retail tariffs are cost-oriented. The audit concluded that tariffs for voice telephony service provided by OTE are cost-oriented and re-balanced. The audit also concluded that ISDN tariffs are not cost-oriented. The incumbent was requested by the EETT to prove such cost-orientation by September 2002.

### **4.2. Funding, USO provider**

The incumbent continues to be designated as the universal service provider in Greece until the end of 2002 while it receives no funding for the provision of the service. No calculation of the USO cost has been undertaken so far. In its efforts to review the universal service provision in Greece, the EETT adopted during 2002 important decisions regarding universal service. In particular, a public consultation was conducted on the content of the universal service which led to the adoption of a decision by the EETT determining a minimum set of services of certain quality to be offered by the USO provider/s to the public at affordable prices. In another decision, the EETT provides that other telecommunications operators can be designated by the EETT to provide various elements of the universal service where the incumbent declares that it is not in a position to offer the service. Recently, the EETT adopted a new decision regarding the cost accounting principles for the provision of USO. The cost of the USO will be calculated on the basis of these principles.

### **4.3. Universal directories, itemised billing, quality of service**

No universal phone directory and directory inquiry service including all operators, fixed and mobile, is available at present in Greece. The Commission has taken appropriate action against Greece to this end. The EETT had already adopted a decision regarding the provision of the service but it has not yet been implemented, due to legal questions regarding the protection of personal data.

Regarding itemised billing, a lack of the provision of the service in the past has been settled now. Since March 2002, the incumbent has been providing the service at the request of the subscriber. The provision of the service follows a decision adopted by the EETT in 2001 directing the incumbent to provide a basic level of itemised billing.

The EETT has set quality of service standards whose targets may be revised over time. The USO provider will be providing information to the EETT about the quality of its services within three months of the end of each year.

#### **4.4. Rights of way**

General civil law provisions are applied for obtaining rights of way in private properties while mobile operators would favour specific legislation instead to avoid paying high amounts to reimburse owners for leasing their properties who tend to consider them as scarce resources. In addition, they would favour a one stop shopping procedure for obtaining access to public properties.

### **5. DATA PROTECTION**

#### **5.1. Implementation/Traffic data retention**

Under the Law transposing the Data Protection Directive in Greece, traffic data is erased or becomes anonymous at the end of each call. In principle, processing and storage of traffic data is only allowed until the end of the period during which the bill needs to be paid or can be challenged. The user can request the operators to erase the last three digits of calling numbers or all digits following the sending of the bill. No problems have been reported so far in this connection.

#### **5.2. Unsolicited calls and e-mails**

The approach chosen by the incumbent for unsolicited calls is generally opt-out. However, opt-in is applied for unsolicited calls and faxes for advertising purposes and for unsolicited e-mails.

### **6. MOBILE ISSUES**

#### **6.1. UMTS**

As reported in the 7<sup>th</sup> Implementation Report, in 2001 the EETT made available by auction frequency spectrum for the provision of 3G services as well as spectrum for the provision of 2G services. Following the auction, three 3G licences were granted to the three established 2G mobile operators, of which one was a new entrant. No licensee, including existing GSM and DCS operators, was allowed to acquire more than 30 MHz of radio spectrum.

#### **6.2. Barriers to rollout of 2G, 3G**

The fourth mobile operator launched its 2G operations in September 2002. No problems were reported in this connection.

3G mobile operators also holding licences for the provision of 2G services reported that the problems they face for the authorisation of base stations for the provision of 2G services will be further aggravated in rolling-out their networks for the provision of 3G services (*see* above under 3.2) especially in the light of the higher number of base stations required for the deployment of 3G services. In order to tackle this problem, 3G operators expect additional efforts to be made to establish fast-track procedures for the authorisation of base stations and inform the public about the lack of health risks if the conditions for the network deployment are to be met.

Some concerns were also reported regarding the content of the service. In particular, the plans of mobile operators to offer news services to users seem to be restricted following a newly adopted Law introducing limitations in reaching agreements for the provision of electronic news via internet portals. Although the law is in principle focused on the ability of mass media companies to enter into agreements with the public sector, it seems that it also affects the provision of news services by mobile operators.

### **6.3. Regulatory aspects, health, infrastructure sharing**

In order to tackle the need for a high number of antennae to provide 3G services, the EETT adopted a regulation providing for the use of existing 2G antennae for the provision of 3G services. So far, no agreements for sharing of infrastructure between 3G licensees have been reported. Delays experienced by mobile operators are caused mainly by the concerns of city planning authorities and other private parties over the public health implications of the installation of mobile antennae. These problems are likely to grow as 3G networks are rolled out.

Mobile operators consider that 3G services will be promoted if the regulation providing for the assignment and usage of short codes is extended to include entertainment services. The regulation currently in effect provides for the use of short codes for the provision of services other than entertainment. Such provision was meant to make the most efficient use of numbers. It seems that based on the experience gained so far from the application of the regulation, and as soon as it is shown that no scarcity of short codes exists, the regulation could be revised to include entertainment services also.

### **6.4. Timing of 3G rollout**

The mobile operators with 3G licences would favour a reconsideration of the roll-out and coverage requirements in their licences in the light of the issues related to network deployment referred to above in addition to possible technical obstacles. Stating that the licence will run from the first commercial launch in Greece is one of the proposals that have already been put to the Ministry for its consideration.

## **7. PREPARATION FOR THE TRANSPOSITION OF THE NEW FRAMEWORK**

### **7.1. Status of transposition and timetable for adoption of necessary legislation**

Although a working group has already been formed within the Ministry to draft the relevant legislation no specific timetable for the adoption of the necessary legislation for the transposition of the new framework has been set. In general, according to the Ministry, legislation is expected to be adopted in the first quarter of 2003.

### **7.2. Prospects for market assessments and notification of measures by NRAs**

EETT appears to enjoy a number of powers allowing it to collect the information necessary for conducting market analysis. In particular, under the existing legal framework (Law 2867/2000, art. 3 par. 15 and 19), the EETT is empowered to keep a data base containing information on the Greek telecommunications market. In addition, operators are obliged to provide EETT with all necessary information to allow it to monitor the implementation of the telecommunications laws in force. On the other hand, operators holding an individual licence are required under their licences to submit to EETT regular reports concerning their activities.

EET controls all interconnection agreements concluded between operators and notified to it by the respective parties.



## 3.5 SPAIN

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

On 26 July 2002, the Spanish Council of Ministers decided to remove the Telecommunications Market Commission (CMT) from the umbrella of the Ministry of Economy and to organically attach it to the Ministry of Science and Technology. This move should contribute to further coordination between the two arms of the Spanish regulator. However, the Ministry of Economy remains responsible for tariffs, which are, ultimately, decided by the Government's Executive Committee for Economic Affairs as far as the prices of the incumbent operator are concerned. A key objective of these two authorities is to keep inflation down, and market players note that this aim is not always convergent with the sector-specific policies of the Ministry of Science and Technology (State Secretariat for Telecommunications and the Information Society, SETSI) and the CMT.

This change thus appears not to have allayed the market players' continuing concerns regarding the complexity of the regulatory framework, the number of authorities involved in the regulatory process and the need for further coordination between these authorities with a view to achieving greater regulatory certainty. This need for further coordination also concerns the relationship between the central and the regional/local authorities, as the latter have adopted regulations and fees that hinder and complicate the exercise of rights of way. The Spanish regulator recognises this need for close coordination, with a view to which the new draft telecommunications law, which is intended to transpose the new Community regulatory framework, reaffirms and strengthens the general principles that all public administrations must comply with so as to guarantee the rights of operators and users.

The Spanish authorities have traditionally intervened significantly in the retail market. Market players have called on the authorities to shift their focus from the level of end-user prices to conditions and competition on the wholesale market. The new Minister for Science and Technology has been sensitive to this call: shortly after assuming his new post, he announced<sup>4</sup> measures to relax the current price cap regime (which is pegged to the consumer price index and closely controlled by the Ministry of Economy) and to increase competition in the sector as a means of improving competitiveness and lowering end-user tariffs.

As indicated above, the Spanish authorities have, generally speaking, been very active in recent months. The CMT has initiated several proceedings to ensure the effective implementation of its decisions, including ex officio proceedings. However, the fact that the CMT has no (on-site) inspection powers<sup>5</sup> undermines its ability to fully enforce its decisions. Also, the number of pending proceedings is inflated by the numerous appeals that the incumbent lodges against the regulator's decisions. By June 2002, the incumbent had already

---

<sup>4</sup> Reference is made here to a press release issued by the Ministry of Science and Technology on 2 October 2002 stating that the current economic situation makes it advisable to achieve price reductions by strengthening the commercial opportunities available to new entrants rather than through direct regulation of the incumbent's tariffs.

<sup>5</sup> Article 76 of the General Telecommunications Act nonetheless stipulates that in matters pertaining to the competence of the CMT, and upon the latter's request, the Ministry of Science and Technology (MCYT) carries out the inspections requested. It furthermore specifies that, in any event, it is the MCYT that exercises the inspection functions.

launched twenty-five appeals against the regulator's decisions, compared with twenty-one for the whole of 2001.

In September 2002, there were four pending sanction proceedings initiated by the CMT against the incumbent, relating to carrier pre-selection, number portability, public telephone booths and capacity-based interconnection. In July 2002, the CMT imposed the largest ever fine (€18 million) on the operator for failure to comply with a decision it had taken regarding closed user groups.

## **1.2. Management of frequencies**

At the end of September 2002, the new Minister announced<sup>6</sup> that the administration was considering the creation of a State Agency for Radiocommunications that would be responsible for frequency management and could grant authorisations for interchanges of frequency.

## **2. INTERCONNECTION AND ACCESS REGIME**

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offer*

The currently applicable reference interconnection offer (RIO) was adopted by the CMT on 9 August 2001. This was the first RIO based on an analysis by the CMT of the incumbent's cost accounts established on the basis of current costs, and it resulted in a fall in interconnection charges of 26% (on a weighted average) compared with the 2000 RIO. Also, the offer introduced a number of novelties<sup>7</sup>, in particular a new capacity-based interconnection service. The objective of this new service was to give the new entrants more flexibility in setting their end-user tariffs and to allow them to compete more effectively with the incumbent operator.

In 2002, some changes have been made to the 2001 RIO. On 17 January a new alternative termination model for intelligent network services was established alongside the existing (and improved) access model, and on 27 June a new transit service for the internet access numbers 908 and 909 was introduced. The CMT also adopted, in February 2002, the non-provisional interconnection leased lines prices included in the RIO.

The RIO for 2001 was welcomed by the new entrants. It appears, however, that it has been difficult, and in some cases impossible, to implement many of its components in practice. In particular, only three agreements on capacity-based interconnection have been concluded, and they only include in part the provisions contained in the RIO (e.g. the provision of voice and data over the same link is not available)<sup>8</sup>. Other operators are still negotiating a capacity-based agreement with the incumbent. The difficulties that have arisen in this process have prompted the CMT to adopt five Precautionary Measures, which have been appealed by the incumbent. These Measures have allowed the new entrants to benefit from the prices set out

---

<sup>6</sup> Mr Piqué's address of 25 September 2002 to the Congress' Science and Technology Commission.

<sup>7</sup> For further details, see the 7<sup>th</sup> Report on the implementation of the telecommunications regulatory package (COM(2001)706), and the Spanish regulator's submissions for the preparation of this 8<sup>th</sup> Report ([http://europa.eu.int/information\\_society/topics/telecoms/implementation/annual\\_report/8threport/index\\_en.htm](http://europa.eu.int/information_society/topics/telecoms/implementation/annual_report/8threport/index_en.htm)).

<sup>8</sup> Situation as of September 2002.

in the RIO for the combined provision of voice and data over the same link even though these have, in practice, been provided over separate links. A proceeding was also opened against the incumbent for alleged failure to provide the combined (voice and data) capacity-based interconnection model, which resulted in the imposition of a €13.5 million fine in October 2002.

Implementation of capacity-based interconnection is one of the regulator's priorities and forms part of the measures announced by the Minister for Science and Technology on 2 October 2002 to promote competition in the telecommunication sector. A study has been commissioned by the CMT to review the prices of capacity-based interconnection for inclusion in the next RIO.

Data gathered during the preparation of this Report suggest that interconnection charges have fallen considerably since the previous reporting period, with the exception of double transit charges. Local level charges are now slightly below EU average. Single transit charges have fallen even more than the local level charges, but remain slightly above the EU average. In this regard, the incumbent has repeatedly noted that comparison of nominal rates between the Member States does not provide an accurate picture of the Spanish situation and reiterates that the combined result of capacity-based interconnection and discounts by volume is that its interconnection charges are the lowest in Europe. As mentioned in the 7<sup>th</sup> Report, it has appealed the RIO 2001 on the grounds that the prices included therein are not cost oriented, in particular as concerns capacity-based interconnection.

Another development that undermines the attractiveness of the reduced RIO 2001 charges is that, in the context of two interconnection disputes, the CMT has decided that the termination charges that new entrants are authorised to levy must be "referenced to the RIO", i.e. be based on the RIO prices applied to the incumbent's network for similar services. This means in practice that new entrants may not levy higher charges than those corresponding to "local level" in the RIO 2001. The CMT argues that the RIO prices provide a signal of efficiency to the market and constitute the reference prices towards which all networks should tend and which they should undercut. Thus its decision produces effects beyond the abovementioned two cases, as the model is being applied in interconnection negotiations with the other new entrants, including cable operators, as confirmed by several CMT decisions.

The question arises as to whether such decisions indirectly impose a network architecture on the new entrants. Also, the practical result of these decisions appears to be that the entrants' interconnection charges are indirectly regulated (not in terms of cost orientation or other SMP-related obligations, but in terms of profit margins).

### *2.1.2. Fixed-to-mobile call termination*

Mobile operators with SMP in the national interconnection market (i.e. Telefónica Móviles and Vodafone) must comply with the cost orientation requirement. The CMT has initiated a process to orientate the termination charges of these two operators to their costs. On 11 July 2002, it cut the termination charges of both operators by 17.13% (with effect from 1 August 2002). This figure was arrived at using European benchmarking. The authorities expect these cuts to translate into a reduction of 11.44% in the end-user prices of these calls.

Both mobile operators have appealed this decision and questioned the CMT's timing in setting these prices just as they were about to submit their 2000 and 2001 cost accounts (the deadline for submission was 31 July 2001). Telefónica Móviles also points out that it (and Vodafone) already cut its termination charges by 17% in 2001 "on a voluntary basis" and claims that

these reductions did not translate into lower user charges, as fixed operators used them to increase their margins.

The CMT decided to set these prices on its own initiative to respond to market needs. It used benchmarking, as although it recently approved the cost accounting system of both operators, it did not yet possess final cost accounting data. Once the latter have been analysed, these operators' interconnection charges will be reviewed in the light of the actual costs they incur.

Fixed-to-mobile charges are subject to the price cap, in the framework of which they fell by 13% in 2001. A further reduction of 13% is scheduled for 2002.

## **2.2. Interconnection leased lines / partial circuits**

According to data collected in the preparation of this Report, the monthly rental charges levied in Spain for leased short-distance (interconnection) lines have fallen considerably since the last reporting period; however, they remain the most expensive in the EU in terms of 2 Mbit/s lines.

The reference interconnection offer (RIO) for 2001 incorporated, for the first time, a wholesale offer for half circuits. A series of other improvements were introduced such as, for example, the extension of leased line interconnection to 34 Mbit/s and 155 Mbit/s lines, the establishment of delivery and repair terms, and penalties for breaches of those terms. Service availability and quality levels were also introduced, as were new reporting obligations.

The RIO introduced provisional prices, and on 26 February 2002 the CMT established the non-provisional prices of interconnection leased lines. They provide for an average margin in the order of 25% below the incumbent's retail offer. The RIO also provides that operators that have requested interconnection leased lines since 9 August 2001 (i.e. the date of adoption of the new RIO) will benefit from the prices set on 26 February 2002 with retroactivity to the date of their request.

The CMT also decided that the incumbent should present within three months (as from 21 February 2002) a proposal for modification of its cost accounts with a view to ensuring that there is sufficient unbundling for setting the prices of connectivity services and of the link to the customer, in all the lengths and capacities defined in the RIO. Based on an analysis of the operator's proposal, the CMT will introduce the relevant changes to the cost accounting system.

These developments are welcomed by the new entrants. However, they maintain their claim that alongside these public prices there are special tailor-made offers by the incumbent to corporate customers. The CMT has not established whether such offers exist and is constrained from so doing by its lack of inspection powers.

## **2.3. Local loop unbundling**

### *2.3.1. Reference unbundling offer and regulatory measures*

The incumbent operator duly published its reference unbundling offer (RUO) in January 2001. Nevertheless, the local loop unbundling process proved so cumbersome that the CMT had to adopt three Precautionary Measures<sup>9</sup> in the course of 2001 to facilitate it.

---

<sup>9</sup> For further details, see the 7<sup>th</sup> Implementation Report, COM(2001)706.

Despite these measures by the CMT, only some tens of local loops had been unbundled by the beginning of 2002 (i.e. one year after the adoption of the Local Loop Unbundling Regulation). The process was stalled as market players waited for the CMT to review the RUO, a new version of which was adopted on 29 April 2002. In this new offer, the prices of more than fifty different service elements were reduced, in most cases by more than 30% compared with the previous RUO.

The prices relating to collocation (already set in one of the abovementioned Precautionary Measures) and the monthly rental prices for the fully unbundled loop and shared access to the loop (established by the Government's Executive Committee for Economic Affairs in December 2000) were not modified, however. In this context, it should be noted that where the monthly price of the local loop remains at €12.62, Telefónica's line rental charge is €11.68.

The new RUO incorporates and further develops the requirements laid down in the abovementioned Precautionary Measures regarding collocation and the delivery of the signal. In addition to the abovementioned price reductions that also apply to these two services, regarding collocation, the new RUO introduces *inter alia* a 15-day deadline for the provision of the housing option, a flat-rate energy charge, new procedures for access to collocation sites (based on yearly badges for new entrants' accredited personnel) and penalties in the event of delays in provisioning. As to the delivery of the signal, penalties are also applicable in the event of delays in provisioning, and the RUO includes a detailed list of the services that can be contracted.

The RUO improves the information systems and administrative procedures available to new entrants by allowing them to access the incumbent's services and databases on-line and provides for a standard contract form that includes a service level agreement. It also removes restrictions on the use of (combinations of) DSL technologies in the incumbent's local loops.

The incumbent has appealed the new RUO in respect of both the conditions and the prices included therein; it considers that the latter are not cost oriented.

### 2.3.2. *Effective implementation*

With a view to ensuring the effective implementation of this new reference offer, which has been welcomed by the new entrants, in March 2002 the Ministry launched a programme of inspections into all exchanges that have been solicited in the context of the unbundling process. No insurmountable obstacles were identified in this context. In this regard, it should be noted that the incumbent has made significant investments to prepare its exchanges for collocation. Preparatory work at all of the 103 exchanges solicited by the new entrants has been completed; these exchanges represent 24% of all local loops (i.e. more than four million loops).

As of 1 October 2002, 1 181 local loops had been unbundled. No loops were in shared use due to a lack of demand. This represents undeniable progress in the few months since the adoption of the new RUO in April 2002. However, the overall figure remains low compared with other Member States, and only relates to the six new entrants that have concluded local loop unbundling agreements with the incumbent, while another thirteen operators that initially expressed interest in the process have dropped out of it.

## **2.4. Bitstream access**

The obligation to provide bitstream access was introduced in Spain in March 1999. In January 2001, this obligation was incorporated into the RUO.

While progress with local loop unbundling has been slow, the incumbent has been rolling out ADSL at an increasing pace and scale since it was authorised to launch a retail ADSL product (whose prices are regulated) in August 2001. In July 2001, the CMT adopted Precautionary Measures to accompany this authorisation, consisting in the setting of wholesale prices allowing for margins in the order of 40% below the incumbent's retail price. New entrants consider that these margins do not allow them to compete effectively with the incumbent due to the anti-competitive practices that the latter engages in. In September 2002, the CMT ended two proceedings, one of them concerning an alleged breach by the incumbent of the regulation governing the retail ADSL tariffs and the other relating to alleged anti-competitive practices by the incumbent in the retail DSL market, because no such breaches or practices were identified. In the meantime, a proceeding relating to alleged anti-competitive practices in the provisioning of the Telefónica Group's wholesale ADSL offers is still pending.

The Precautionary Measures of July 2001 were also incorporated into the RUO of April 2002. In addition to maintaining the abovementioned margins between the ADSL retail and wholesale products, the RUO also brought a series of other improvements to Telefónica's bitstream offer, including an obligation on the incumbent to provide information on the provisioning deadlines to companies belonging to the Telefónica Group, on the one hand, and to competitors, on the other hand, as well as procedures to avoid discrimination between operators.

Since the publication of the 7<sup>th</sup> Report, a new wholesale offer called ADSL IP (available in two forms<sup>10</sup>) has been introduced in the Spanish market. The RUO of April 2002 requires Telefónica to publish this offer, which was introduced internally within the Telefónica Group in September 2001. After a consultation of the sector, the regulator decided not to regulate this product, because it was assumed that this would have a negative impact on competition between IP networks. However, views differ among the new entrants as to whether it should be regulated or not. The question arises as to how the regulator can ascertain that ADSL IP is provided under non-discriminatory terms to the companies of the Telefónica Group, on the one hand, and to new entrants, on the other hand. No complaints or cases pointing to such discrimination have been submitted to the regulator.

Another concern of the new entrants is the possible early capturing, by the incumbent, of other emerging xDSL technologies, such as SDSL and VSDL. They have called on the regulator not to allow the incumbent to launch such retail services until it is satisfied that there are competitive wholesale offers available for new entrants.

## **2.5. Situation of the (broadband) local access market**

### *2.5.1. Status of the DSL market, position of the incumbent*

According to the Spanish regulator, there are currently 660 800 ADSL lines in Spain, of which 78% are commercialised to final users by the Telefónica Group companies (59% through Telefónica's retail products and 19% through other companies in the Group) and 22%

---

<sup>10</sup> ADSL IP "no tunelizado": ADSL line + ATM transport + IP connection to a single point; ADSL IP "tunelizado": ADSL line + ATM and IP transport + Internet termination.

are commercialised by new entrants (7% through Telefónica's bitstream offer and the rest through other wholesale offers). A total of thirty-five companies have contracted Telefónica's bitstream offer.

These figures, and the CMT's findings in the two above mentioned investigations closed in September 2002, show that since the entry of Telefónica of Spain into the ADSL market, this market has expanded rapidly, and the new entrants have also benefited from this increase in business by capturing, in some periods, more customers than the incumbent operator. They also show that in just one year Telefónica of Spain has managed to achieve a market share of nearly 60%. Part of this may be due to the fact that in December 2001 it took over the customers of Telefónica Data's retail ADSL product.

### *2.5.2. Development of alternative means of access*

Eight operators have been licensed to provide wireless local loops. Two of them, Skypoint and Neo, merged in 2001. They are operational in 72 towns and mainly serve small to medium-sized companies. The difficulties facing these operators arise from various factors such as the financial situation of the market and the public's concerns regarding the effects on human health of electromagnetic emissions emitted by operators' antennae, which are affecting the exercise of rights of way.

Wireless local loop operators were among those hardest hit by the increase in the spectrum reservation charges introduced in the Budget Law for 2001. However, they also benefited from the largest reductions in those charges introduced in the Budget Law for 2002, and in view of the difficulties they have been facing the authorities have announced a relaxation of some of the extraordinary commitments these operators made when applying for their licences (the other commitments having already been met).

There are some 200 000 cable-modem broadband customers. Even though the total operating income of cable operators remains low (some €356 million), in 2001 it increased by 184% over 2000<sup>11</sup>. As is the case with the WLL operators, these operators encounter difficulties in obtaining rights of way as they try to deploy new infrastructure. The incumbent's strong position in the xDSL market and the possible merger of the two satellite digital television platforms operating in Spain, Vía Digital and Sogecable, represent major challenges for them.

## **2.6. Leased lines**

Data received in the preparation of this Report show the prices of national leased lines (whether for 64 kb/s, 2Mbit/s or 34 Mb/s, and for all distances) to have fallen since the previous reporting period, though they remain clearly above the EU average.

National leased lines are subject to a price cap, which provided for a 16% reduction in 2001 and a 7% reduction in 2002 (and reductions of 7.5% in 2001 and 2002 for digital lines). The incumbent has met the requirements relating to 2001. In accordance with measures recently adopted by the government, the prices of 2 Mbit/s leased lines will be cut by an additional<sup>12</sup> 15% in 2003.

---

<sup>11</sup> The figures quoted here are taken from the CMT's Annual Report for 2001.

<sup>12</sup> This cut is in addition to the 7% and 4% cuts for 2003 originally planned in the context of the price cap for analogue and digital lines respectively.

International leased lines are subject to maximum prices. As mentioned in the 7<sup>th</sup> Report, after its leased lines sector enquiry, at the end of 2000, the Commission opened an ex officio procedure to investigate the competitive provision of international leased lines in Spain. As a result, the CMT has launched a thorough review of the Spanish leased lines markets and had adopted a series of regulatory measures. However, it appears that the prices of international leased lines have remained at the same level since 2000, with the effect that they are still significantly above EU average.

Data presented by some new entrants suggest that in the last year there has been an improvement of provisioning deadlines. The overall competitive situation has improved in the last two years.

## **2.7. Numbering**

### *2.7.1. Carrier selection and pre-selection*

As of the end of August 2002, 1 702 228 carrier pre-selection agreements had been concluded, of which 391 641 are for carrier pre-selection for long-distance and fixed-to-mobile calls and 1 310 587 for the combined modality (local, long-distance and fixed-to-mobile). The total number represents 9% of the incumbent's lines.

These numbers have been fairly steady for several months, and new entrants have submitted complaints to the authorities regarding anti-competitive practices by the incumbent (mainly designed to win back customers). On 8 August 2002, the CMT decided to shelve a complaint regarding alleged anti-competitive practices by the incumbent relating to carrier pre-selection on the grounds that the company's activity had not caused prejudice to its competitors. In the meantime, one case is still pending before the National Competition Authority, and on 18 April 2002 the CMT launched a sanction proceeding (which is still pending) against the incumbent for alleged practices designed to win back clients that have concluded pre-selection agreements with its competitors.

On 18 July 2002, the CMT adopted a new Circular on carrier pre-selection which provides that the incumbent may not engage in practices aimed at winning back clients within four months of the latter's request for a pre-selection agreement with an alternative operator. It also extends the availability of the carrier pre-selection facility to intelligent network services, personal numbers and paging as well as to calls generated by additional services (such as automatic dialling of the last caller's number) as from 1 March 2003. Lastly, the Circular establishes a mechanism aimed at preventing the high number of rejections of requests for pre-selection caused by lack of correspondence between the national identity document and the fiscal identification code.

This Circular was preceded, in May 2002, by a CMT decision to make carrier pre-selection available to the 2 046 500 subscribers connected to analogue telephone exchanges. The incumbent has been given a period of six months to make the necessary preparations in its network to allow for implementation of this facility from November 2002.

Finally, with a view to promoting competition, the authorities have decided to authorise new entrants to bill all telephone expenditure to the customer, including the line rental charge levied by the incumbent, when the customer has pre-selected the new entrant for carrying all of his/her calls. This measure<sup>13</sup>, commonly called "single bill" or "virtual unbundling of the

---

<sup>13</sup> This measure has not yet come into force. It is due to be approved by the end of this year.



loop”, not only strengthens new entrants’ direct links with customers, but is also designed to allow them to launch commercial offers such as flat rate and other price plans.

An obligation has been imposed on mobile operators with SMP to implement carrier pre-selection for international calls from 1 December 2000, but no agreements have been concluded as yet.

### *2.7.2. Number portability*

By mid-September 2002, 327 250 fixed numbers had been ported. As for mobile numbers, up to 531 224 have been ported since 27 November 2000, which was the deadline for implementation of this facility. These figures compare favourably with other Member States.

Fixed number portability has been implemented by devising an intelligent network solution based on a “reference entity” that houses a centralised database of ported numbers. The CMT has monitored the implementation of number portability and, in this context, a public consultation was organised earlier this year and its results published in June 2002. A series of issues were identified for further improvement and possible regulatory measures, including the review of technical and administrative procedures. Many operators supported the view that companies’ participation in the abovementioned Reference Entity should be made mandatory so that they would also bear the costs associated with its management.

On 30 May 2002, the CMT launched a sanction proceeding against the incumbent operator for alleged breach of its Circular establishing the technical conditions applicable to number portability.

## **2.8. Cost accounting and accounting separation**

### *2.8.1. Cost accounting systems in place*

The principles, criteria and conditions for the development of the cost-accounting systems of SMP-operators were laid down in July 1999.

Telefónica’s cost accounting system was approved by the CMT on 22 February 2001. On 20 December 2001, the CMT approved Telefónica Móviles’ proposal for its cost accounting system. This system is to be applied to the company’s 2000 accounts and to subsequent reporting periods. Equally, on 16 May 2002 Airtel-Vodafone’s proposal for its cost accounting system was approved by the CMT, to be applied as from the 2000 cost accounts.

### *2.8.2. Statement concerning compliance*

The 2000 cost accounts of Telefónica were verified and approved by the CMT on 13 June 2002. The scope of the audit of the company’s cost accounts is comprehensive: it not only addresses the methodology used, but also the actual figures and volumes; however, the separated accounts do not identify transfer charges. The CMT declared Telefónica’s accounts to be broadly in line with the cost accounting system. It reduced the incumbent’s estimates of its current costs by 5.5%, and the estimates concerning access services by 20%. The negative margin resulting from these modifications is, however, compensated by the surplus achieved in other services. The fact that there is equilibrium in the interconnection services provided to other operators suggests that the RIO 2000 prices adopted by the CMT were very much cost oriented. Telefónica has appealed this CMT decision in respect of aspects such as depreciation plans and labour costs.

The CMT has not yet issued any statement as to the verification of the cost accounts of Telefónica Móviles and Airtel-Vodafone as it is still studying their 2000 and 2001 data, which were submitted on 31 July 2002.

## **2.9. National roaming and access to mobile networks**

In March 2002, a new Regulation (CTE/601/2002) was adopted that replaced the previous regime (in which only the 2G licensees that obtained a 3G licence were obliged to grant national roaming to the 3G licensees) with a general roaming provision (based on commercial negotiation, with the regulator arbitrating disputes). No such agreements have been concluded so far.

A new Order establishing a new category of licence for mobile virtual network operators (MVNOs) was adopted on 14 March 2002. Conditions of access are set based on commercial negotiations. No agreements have been notified to the regulator.

## **3. AUTHORISATIONS**

### **3.1. Conversion of the pre-1998 licences**

The process of converting licences granted prior to the 1998 General Telecommunications Act has been completed with the exception of the following: Telefónica of Spain (fixed telephony) and Retevisión Móvil (DCS 1800 mobile communications). Regarding the former, issues such as collocation and access to the local loop are being assessed in the light of Telefónica's request that its real property (*activos inmobiliarios*) be transferred to a new company. As concerns Retevisión Móvil, a series of changes have been requested by the licensee that are also being examined by the authorities. Both draft new licences are currently before the State Council and can be formally approved once the latter has issued its opinion on them.

The Spanish authorities do not expect difficulties with the adaptation of these two licences, or indeed any other licences, to the new regulatory framework as from July 2003, since the new draft telecommunications law provides that their adaptation be automatic.

Operators claim that the conditions for new licences entail fewer investment obligations than those applicable under the previous licences granted under the previous (non-liberalised) concession regime. In particular, cable operators are still bound by investment and other obligations dating from the previous regime. The new Minister has announced<sup>14</sup> that the licence conditions of the existing cable operators will be reviewed.

Telefónica Cable has been authorised, in the context of the transformation of its licence, to provide services (telephony, television and internet) in an integrated way using different technologies (xDSL and others) over local loops, nearly all of which are owned by Telefónica. The measure allowing for this authorisation has been appealed by the other cable operators, which have made significant investments in building cable infrastructure in fulfilment of their licence investment requirements. Investments made by Telefónica to provide access to Telefónica Cable are considered by the Spanish authorities as investments made by Telefónica Cable (carried out by a third party) and attributable to the licence of Telefónica Cable.

---

<sup>14</sup> See press release of the Ministry of Science and Technology dated 2 October 2002.

### **3.2. Integration of Sogecable and Vía Digital**

A new challenge for new entrants is the intended integration of the two satellite digital television platforms operating in Spain, i.e. Sogecable and Vía Digital (which is controlled by the Telefónica Group), which the Spanish competition authorities are currently assessing under national competition law. Prior to the case being referred to the national competition authorities, the European Commission reviewed the case and concluded that the concentration threatened to create or strengthen a dominant position in the Spanish pay TV market, as well as in the markets for the acquisition of exclusive rights for premium films, football matches involving Spanish teams, other sports and sale of TV channels. The Commission also noted that the creation of a structural link between the dominant operators in pay TV (and audiovisual content) and telecommunications is liable to strengthen Telefónica's dominant position in a number of telecommunications markets.

The only licensed operator of terrestrial digital television (Quiero TV) discontinued its operations during 2002.

### **3.3. Spectrum charges**

When the 3G licences were awarded through a beauty contest, each of the licensees paid a once-off amount of approximately €130 million. Some €5 million was paid in spectrum reservation charges, which are payable on an annual basis. The Spanish Budget Law for 2001 substantially increased the spectrum reservation charges that are levied on all operators using radio frequencies. The largest increases affected the mobile operators, and the 3G licensees in particular: the charges that the latter had to pay in 2001 were more than thirty times higher than the charges for 2000 set in the licence specifications. In view of the heavy investment commitments made in the context of the beauty contest, the magnitude of these increases and their negative impact on business plans, the licensees have appealed the measure.

The 2002 Budget Law provided for an average reduction in spectrum reservation charges of 65% compared with 2001 as far as the GSM, DCS and UMTS technologies are concerned, and the introduction of more stability and predictability in that these charges may not increase by more than 5% on an annual basis until 2006. Operators find these reductions insufficient and are demanding that the charges be lowered to their 2000 level (i.e. the level set in the license specifications). They also stress that the authorities should ensure the stability and predictability of charge levels for the whole duration of the relevant licences. The new Minister, for his part, has indicated<sup>15</sup> that the charges could possibly be frozen at their 2002 level in 2003.

### **3.4. Rights of way**

Obtaining rights of way is an increasingly critical problem for Spanish operators. There are major differences in the numerous regulations affecting rights of way in different regions and localities. According to the incumbent's estimates, there are currently more than 500 municipal regulations governing the installation of antennae, all of them laying down different conditions.

The Spanish Government's adoption of Royal Decree 1066/2001 of 28 September 2001 establishing limits for exposure to electromagnetic emissions (which implements the Recommendation of the Council of the European Union of 12 July 2001) was welcomed by

---

<sup>15</sup> Mr Piqué's address of 25 September 2002 to the Congress' Science and Technology Commission.

the operators, but has not done much to allay public concern regarding the effects on human health of the electromagnetic radiation emitted by operators' antennae.

ASTEL has made estimates which show the situation worsening to the point where it is extremely difficult to obtain permits to erect antennae: while 85% of the antennae for which permits were applied for were effectively installed in 2000, only 45% were installed in 2001 and the figure for 2002 is expected to be 20%. Some 2 000 antennae are currently waiting for the authorities to grant the relevant permit.

Local authorities have also levied different fees, and operators are concerned at the possibility that a fee corresponding to a certain percentage of their revenue might be introduced by local administrations throughout the country in the near future.

The problem, as in other parts of the Community, is that several bodies are involved in the regulation of rights of way and that there is a lack of coordination between central, regional and local administrations and a general lack of coordination between urban planning and telecommunications legislation. It is exacerbated by the fact that under the Spanish Constitution, relations between the various administrations (national, autonomous and local) are not hierarchical.

The draft telecommunications law intended to transpose the new Community regulatory framework reaffirms and strengthens the general principles that all public administrations must comply with in order to guarantee operators' rights of way, including those (objective justification, proportionality, etc.) governing administrative fees and charges.

Within the limits of their competence, the telecommunications authorities have made considerable efforts to improve coordination between the authorities. As mentioned in the 7<sup>th</sup> Report, the regulator has, for example, been investigating the content of municipal orders and regulations affecting rights of way with a view to avoiding the imposition of conditions contrary to the General Telecommunications Act and Royal Decree 1736/1998, which regulate rights of way in Spain.

In January 2002, a Regulation was adopted which establishes the conditions for installing new antennae and for the certification that operators must present when taking yearly measurements of the level of emissions produced by their antennae. Pursuant to this Regulation, the operators have had to certify all of their installed antennae, which number over 23 000. The estimated cost of this exercise is in the order of €20 million.

The SETSI has also worked with the Spanish Federation of Municipalities and Provinces to prepare a standard Municipal Ordinance regulating the installation and functioning of radioelectric infrastructure. Furthermore, with the support of the College of Telecommunications Engineers it has organised information campaigns for local authorities and experts on relevant issues of telecommunications regulation.

These efforts by the regulator to remedy problems are appreciated by the operators, who are nonetheless calling for a broader political pact and more cooperation between authorities and market players as the existing networks are approaching saturation and these problems also have implications for their ability to meet their 3G licence obligations.

The General Telecommunications Act provides for the possibility of operators sharing public domain infrastructure. To this end, there is a special procedure governed by the principles of transparency and non-discrimination. The regulator arbitrates disputes in this area. As to rights of way in the private domain, operators must present a technical project whose approval

by the regulator requires that the good that is expropriated be declared of public utility or social interest.

Some problems have arisen with regional/local authorities granting exclusive rights of way to some operators. For example, in May 2002 the CMT issued a decision establishing that an agreement concluded between Airtel-Vodafone and Metrocall regarding the network installed by the former in the Madrid metro includes provisions or may encourage practices contrary to free competition; the agreement was therefore prohibited.

The SETSI has cooperated with those operators that have contested agreements providing for exclusive rights of way and has issued certificates providing for rights of way to the operators prejudiced by such agreements.

#### **4. UNIVERSAL SERVICE/CONSUMERS**

##### **4.1. Retail tariffs**

The last amendment of the price framework for the services provided by Telefónica of Spain dates back to the Order of 10 May 2001, which established a new regulatory framework for prices and new efficiency factors for fixed telephony services and fixed-to-mobile call services in each of the years from 2001 until the end of 2003.

The Spanish price framework is stringent: it requires that increases in line rental be offset by cuts in the prices of long-distance and international calls. As a result, Spanish tariffs have fallen by some 35% (on average) since liberalisation, and the margins available for both the incumbent and its competitors have steadily decreased.

In September 2002, the Spanish authorities indicated that they would review the price cap to make it more flexible. The review will consist in removing the monthly line rental from the price cap basket (which according to some estimates would allow it to increase by more than 8% in 2003). For 2003, call tariffs are expected to decrease by at least 2%.

The announcements regarding the review of the price cap system<sup>16</sup> have been welcomed by the whole of the telecommunications sector. However, there is an outstanding concern voiced repeatedly by the new entrants (most recently at the hearing on the status of the Spanish telecommunications market held in Brussels on 20 September 2002) and which relates to several price plans implemented by the incumbent operator, in particular outside the price cap. Some of them result from regulation (e.g. the incumbent's flat-rate internet service and local calls discount plans). According to the new entrants, a serious price squeeze results from the combination of these plans (applied to Telefónica's retail tariffs) and the level of the interconnection charges. The new entrants expected the introduction of the new capacity-based interconnection model to remedy this problem, but the implementation of this model has encountered significant obstacles, as mentioned above.

The authorities have indicated in the context of their announcements regarding the review of the price cap that they will carefully scrutinise the incumbent's future proposals for price plans and only authorise them if they include innovative offers.

---

<sup>16</sup> See press release of the Ministry of Science and Technology dated 2 October 2002.

New entrants are also concerned about the developments regarding public procurement for the provision of telecommunications services to public administrations. At the end of 2001, the regulator opened a proceeding regarding a contract awarded to Telefónica by the regional government of Catalonia (Generalitat de Catalunya). In a recent decision, the CMT concluded that some provisions included in this contract did not comply with the current regulatory framework.

#### **4.2. Funding schemes**

Telefónica is required to provide universal service until 2005. On 31 January 2002, the CMT set the net cost of USO for 2000 at €268 million. However, it indicated that Telefónica had not suffered a competitive disadvantage by virtue of its universal service obligation and that, therefore, no Fund needed to be established. This came as a relief to the new entrants, which remain concerned, however, about the results of the calculation of the cost for 2001 and that the latter could trigger the establishment of a Fund. They call for the cost of universal service to be covered by the general State budget rather than through a funding mechanism drawing from new entrants. Both possibilities are provided for by the Interconnection Directive 97/33/EC and Directive 2002/22/EC on Universal Service.

As mentioned in the 7<sup>th</sup> Report, Telefónica refutes the CMT's arguments regarding the absence of a competitive disadvantage based on the evolution of the company's market shares and has appealed the CMT's decision. For 2001, it has presented estimates ranging from €271 million (using the CMT's methodology) to €770 million.

#### **4.3. The replacement of the analogue wireless rural telephony service (TRAC)**

In July 2002, a new Law on information society services and electronic commerce was adopted which incorporates the notion of "functional access to the internet" embedded in the new Universal Service Directive 2002/22/EC in the current definition of universal service. In this context, the government is pushing for the replacement of the so-called TRAC system (i.e. an analogue wireless rural telephony network that supports only 2 400 bps and serves some 250 000 subscribers) operated by Telefónica using technologies permitting functional access to the internet.

Given that the new Law provides for a replacement plan to provide all subscribers of fixed public telephone services with the option of obtaining functional internet access, to be completed by 31 December 2004, the preparatory work for the replacement of the TRAC has had to be started swiftly. The Spanish authorities' intention is to co-finance the project (in the order of 30%) through European regional development funds, and Telefónica has organised an invitation to tender to subcontract the deployment of infrastructure. The conditions of the invitation to tender have been discussed with the Ministry, which is controlling the process. However, the European Commission has expressed concerns about Telefónica's role in the tender as it may act as judge and party, and has insisted on strict compliance with the relevant Community law (on competition, telecommunications, ERDF<sup>17</sup> project funding).

#### **4.4. Other universal service issues**

A series of measures have been adopted to complete the regulation applicable to universal service in Spain. Regulation PRE 68/2002 of 16 January 2002 concerns the pricing of various

---

<sup>17</sup> European Regional Development Fund.

parts of the universal service which fall within the competence of the Government's Executive Committee for Economic Affairs.

In December 2001, a Regulation was adopted which establishes *inter alia* the criteria for the production, up-dating and content of the data that must be included in the universal directory and the directory information services. In March, another Regulation was adopted that opens these services to effective competition. The Regulation implements the 118 number recommended by ECTRA, which is to be followed by two numbers identifying the operator chosen to provide the service.

It appears, however, that there is as yet no effective competition due to the way the provision of subscriber data has been organised. The Regulation of March 2002 provides that operators must submit their subscriber data to the CMT, which will make them available to those operators that are licensed to produce directories or manage directory information services. A CMT decision dated 27 June 2002 further develops the method of data submission (procedures, deadlines and format) and the content of the data to be provided. This decision provides for a very cumbersome process: on a monthly basis, operators must duplicate their subscriber data on diskette and make as many copies of these data as the number of requests submitted to the CMT. Operators are also concerned that the content of the data that must be provided for each subscriber is not restricted to the strict minimum for identification purposes. These obligations generate costs (both financial and administrative) which donor operators cannot recover. They have been appealed by several operators, in particular the incumbent operator, which has so far been responsible for these services, but also other operators, given that these obligations weigh particularly on the smallest operators.

It is understood that the CMT is currently working to remedy the problem of interchanges of subscriber data, which would require the construction of a centrally managed common database.

## **5. DATA PROTECTION**

The State Secretariat for Telecommunications and the Information Society is responsible for supervising the obligations placed on telecommunications operators, particularly those relating to the confidentiality of communications and the adoption of measures aimed at guaranteeing the protection of personal data in matters such as those covered by Directive 97/66/EC (traffic and billing data, non-solicited calls, calling line identification, etc.) It coordinates its activities with the Agencia de Protección de Datos, an independent data protection authority.

### **5.1. Traffic data retention**

Traffic data must be erased upon termination of the call and only certain data may be processed for the purpose of subscriber billing and interconnection payments. Such data may be stored during the period in which the bill may be lawfully challenged or payment pursued (five years). Exceptions to this general rule are provided in Royal Decree 1736/1998 and are limited to measures aimed at ensuring public security, the application of penal law and the lawful interception of communications.

Article 12 of the recently adopted Law on information society services and electronic commerce (which guarantees the confidentiality of electronic communications and the protection of personal data in the context of information society services) establishes a maximum period of retention of traffic data of twelve months for the purposes of criminal

investigations and the protection of national security and defence. This provision is restricted to those information society services that relate to access to telecommunications networks and hosting.

## **5.2. Unsolicited calls and e-mails**

Regarding unsolicited calls, e-mails and other similar electronic communications tools (such as SMS) used for purposes of direct marketing, an "opt-in" regime (informed prior consent of the called party) has been adopted in relation to both natural and legal persons.

## **6. MOBILE ISSUES**

### **6.1. UMTS and 2.5G roll-out**

In 2001, the Spanish authorities officially postponed the 3G launch date from 1 August 2001 to 1 June 2002. Following serious concerns among mobile operators about the difficulty of meeting the strict 3G licence conditions in the face of the market situation, the Spanish authorities decided, on 8 April 2002, to allow operators to roll out the networks in cities of more than 250 000 inhabitants (in accordance with the licence conditions relating to the initial phase of launching the service) on 1 June 2002 on an experimental basis only. No specific date has been set for operators to start the commercial launch; this decision is left to the licensees' discretion. Licence conditions relating to coverage obligations remain unchanged, but only start to run as from the date of the commercial launch of the service.

This pragmatic approach has provided a welcome "breathing space" for operators, who are nonetheless calling for further relaxation of the licence conditions, such as the gradual release of the guarantees paid by each 3G licensee (more than €8 billion) to back their investment plans. At the end of September 2002, the Ministry announced that these financial commitments would be relaxed in the near future. In the meantime, Xfera, which is one of the four 3G licensees and a new entrant in Spain, has announced a *sine die* freezing of its plans.

In the meantime, GPRS services are fully operational in all areas of the country covered by 2G networks and these services had some 350 000 customers at the beginning of July 2002. Operators have stressed that the implementation of GPRS will lead to increased traffic on 2G networks and that the authorities should therefore act immediately to give them the entire DCS1800 band (2x13.4 MHz) reserved in their 1998 licences before the end-of-2002 deadline for full assignment laid down in the licence specifications. In the light of the needs stemming from the implementation of GPRS, the authorities have increased the number of frequencies available to the 2G licensees to 2x20 MHz.

### **6.2. Infrastructure sharing**

There are no obstacles to network infrastructure sharing in the legislation. However, infrastructure sharing has proved difficult in practice, and even though operators are in favour of it, they want clarification from the authorities regarding the extent to which such sharing is permissible without breaching the licence conditions and, in particular, their investment commitments. The regulator has specified that the physical elements of the networks such as the sites, masts and energy, as well as the control and switching centres, can be shared insofar as there is a logical separation that allows for separate control of customers and of the frequencies assigned to each operator and without prejudice to the coverage obligations contracted by each licensee.



## **7. PREPARATION FOR THE TRANSITION TO THE NEW FRAMEWORK**

Transposition of the new framework has already started. A new draft telecommunications law that will replace the existing law was submitted to the Consejo Asesor de las Telecomunicaciones on 26 July 2002.

The draft law does not alter the division of competence between the authorities associated with regulation and supervision of the sector, and operators have expressed concern about the fact that it does not make it clear how the latter will coordinate their action, especially when it comes to the National Competition Authority's role in the new framework. However, the recent attachment of the CMT to the Ministry of Science and Technology is expected to assist such coordination, and the draft telecommunications law provides for a Regulation to be adopted setting out the respective competencies of the SETSI and the CMT.

## 3.6 FRANCE

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authorities

In these circumstances there is continued pressure on the *Autorité de Régulation des Télécommunications* (ART) to intervene to improve the situation either on foot of a request for intervention or on its own initiative, and this has meant that there is continuing attention being paid to the effectiveness of the ART's procedures.

The Seventh Report identified the problem caused by the necessary emphasis placed on procedure and the motivation of a decision in order to ensure that it is fully substantiated and is not unduly exposed to appeal on procedural grounds. Nevertheless these requirements can have the effect of delaying intervention and inhibiting the rapid enforcement of sanctions in case of non-respect of ART decisions.

In February 2002, a ruling of the *Cour d'Appel de Paris* demonstrated that the ART's detailed procedures were not a guarantee against the substance of its decisions being brought into question. In a case brought by the incumbent against the ART's decision on third party billing, the Court ruled that there appeared to be grounds for suspecting an error in the substance of the decision as regards tariffs, and appointed an outside "expert" to review the details of the decision.

The ART have always held the view that it is essential to build up a solidly reasoned analysis before reaching a decision, including respecting all the procedural issues in order to avoid even more legal challenges. At the same time, all parties involved in the sector accept the need for full judicial review and that the above ruling was a confirmation of the French administrative law in regard to independent regulatory authorities. The *Cour d'Appel's* decision, however, tends to suggest that a party seeking intervention or redress from the ART in regard to a market opening measure not only has to put up with lengthy and elaborate procedures but now has no guarantee that these procedures will protect the substance of any subsequent decision from substantive legal review, giving rise to further delays and uncertainty.

In the case referred to, following the failure of negotiations with the incumbent during 2000, a new entrant launched a request for ART intervention in January 2001, but the experts' report to the Court on the decision is not expected to be ready until March 2003, nineteen months after the ART's decision. While that decision remains in force pending the Court's decision, this lengthy delay gives rise to great uncertainty and effectively inhibits the development of competition through the use of shared-revenue services.

#### 1.2. Management of Numbers

There have been no complaints or issues raised concerning the management and distribution of numbers over the last year; there has been some discussion about the need to make more short codes available given the apparent success of carrier preselection.

#### 1.3. Frequency Management

The ART is responsible for the attribution of frequencies to telecommunications operators and radiocommunications operators, and the *Conseil Supérieur de l'Audiovisuel* (CSA) is in charge

of the management and attribution of radio and television frequencies. They work in close co-operation with the *Agence Nationale de Frequences* (ANFr) which is responsible for managing the national frequency plan. There have been no reports of problems in this area.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offer*

Until last year the ART did not have the power to intervene on its own initiative in interconnection negotiations. Instead the ART had developed quite detailed procedures requiring one party to request intervention – only after negotiations have failed – putting a greater burden on new entrants to justify the need for regulatory intervention and delaying an effective resolution of disputes. But while this has now changed in theory, there has been no corresponding change to the ART's internal rules of procedure allowing it to intervene on its own initiative. The growing experience of the ART in intervening in unbundling matters does however show the usefulness of such an intervention under specific circumstances.

The authorities point out that the ART has always had the power to intervene when there was a breakdown in negotiations or when an interconnection agreement was notified, and that intervention at an earlier stage may interfere with commercial negotiations. However, the ART does not exclude the possibility of using such a power and that it is not strictly necessary for it to transpose it into the ART's internal procedures.

New entrants want the ART to have full powers to be able to intervene in interconnection, and not just in a reactive manner following a request for intervention. However, they also criticise the current system for drawing up the annual RIO as inappropriate and lacking transparency. Their main concern is that the incumbent's original offer tends not to reflect the needs or wishes of new entrants, and that there is very little visibility in how the final version is agreed between the incumbent and the ART once new entrants have given their views on the draft (preliminary) offer. Certainly there does appear to be a clear problem concerning the relevance of certain elements of the reference offers to the actual needs of the market, as it has sometimes taken a long period of negotiation, and also further intervention by the ART, before services such as FRIACO, third-party billing or partial circuits become effective.

As regards the 2003 reference offer, there have been attempts this year to modify the manner in which it is prepared. The ART requested the incumbent to present a draft RIO for mid-August, following discussions with other operators, and hopes to have the RIO adopted before the end of October. In preliminary discussions it did not appear that many new services were being requested, apart from collection of traffic for third parties.

#### *2.1.2. Interconnection charges*

The RIO 2002, adopted in December 2001, introduced further reductions in the incumbent's interconnection charges to other operators. The per minute interconnection cost for single transit was set at 1.07 cents [when calculated using the EU norm of a three minute call plus call set-up costs], which was a reduction of 13% and brought France below the EU average.

In a parallel exercise to the 2003 reference offer, the ART is working on a price cap system with the incumbent. The system was signalled by a public consultation last year, following which the ART drew up a system model that they are now trying to put into practise. Apart from its

potential usefulness under the future regulatory framework, the price cap should underpin the annual exercise of forward-looking cost calculation and will provide some predictability and greater visibility for operators while allowing for a more rapid adoption of reference prices. However, new entrants insist that the annual reference offer must be continued for both tariffs and interconnection conditions. The ART have assured operators that the obligation to publish an interconnection catalogue will continue, and that 2003 will be seen as a transitional year. The incumbent feels that it is not useful to have the two systems in place and that the RIO should cover only the interconnection conditions.

### *2.1.3. Fixed to mobile call termination*

There have been significant developments in regard to fixed to mobile call termination over the last year. In November 2001 the ART adopted a decision obliging the two mobile operators with SMP in the national market for interconnection, to reduce their tariffs by approximately 40% over a three year period, starting in March 2002. So while France was one of the more serious cases of apparent overcharging when benchmarked against other EU countries, there have been improvements.

The fixed to mobile termination rate now applied by the two SMP operators is now €0.18223 per minute, which is just below the EU average for SMP operators, while Bouygues Telecom applies a rate of €0.2238 per minute. The next reduction will take place in January 2003 when the two SMP operators will reduce their rates by 15%.

Nevertheless, there appear to be certain shortcomings to the ART's decision, particularly as it calls for a series of reductions over three years rather than identifying what is the cost oriented figure and mandating that directly, as would be the case for interconnection prices. Furthermore, the cost calculation is based on historical costs, and the ART's decision appears to have the effect of allowing the SMP operators not to develop a LRIC cost model for termination.

### *2.1.4. FRIACO, third-party billing*

The system of FRIACO finally appears to be working well technically, but there has been limited demand given the price levels. In June 2003, however, the ART issued its decision in a dispute resolution concerning the method of calculating the average revenues of Internet communications, which will have a direct effect on the revenues of operators availing of this interconnection product. However, the development of new retail ADSL products, including an offer for a cheap 128 Kbit/s service, may make the FRIACO service unattractive as it is less attractive technically while being very similar in price.

Third-party billing (for "shared revenue services") was included in RIO 2001, but was not availed of because of the original conditions which were the subject of appeals to the ART. An ART decision last year set a lower tariff but also removed the obligation on the incumbent to offer debt recovery to operators using the service. However, the incumbent was also obliged to place its own downstream services (e.g. Wanadoo) on a separate page of the bill together with those of other service providers.

Neither the incumbent nor the other operators were happy with the decision, which the incumbent subsequently challenged and which was the subject of the Cour d'Appel decision referred to above, which effectively calls into question the calculations carried out by the ART in setting the tariffs. In the meantime, while the Court's decision does not have a suspensive effect, there appear to be problems in applying the decision and with the system of debt collection when a customer does not pay the part of the bill relating to the OLOs services.

## **2.2. Interconnection leased lines / partial circuits**

### *2.2.1. Availability*

As part of the outcome of a dispute resolution procedure between a new entrant and the incumbent, the ART issued a decision in February 2002 on a number of leased line issues in dispute. More importantly, at the same time it obliged the incumbent to introduce interconnection leased lines, into its RIO, and to modify the conditions for delivery including the penalty clauses applicable.

These decisions should alter substantially the leased lines market in France and have a direct impact on the cost of high-speed access services. The ART also introduced a mechanism to be followed to allow operators to migrate from their existing leased lines to interconnection leased lines, setting down the timing and limiting the set-up costs to be applied, and applying a temporary reduction in leased lines prices of 27% until operators have had the opportunity to migrate to the new products. The interconnection offer applies to all the main data rates, starting with all lines up to 2 Mbit/s and subsequently for 34 and 155 Mbit/s lines. According to the ART's own calculation, for a typical range of distance and data rates that would be used by a new entrant, the interconnection offer represents a price reduction of approximately 40% from the standard leased lines offer without taking into account the discounts offered to operators at the moment.

While new entrants are experiencing problems with the practical implementation of the new offer, it is close to what they were requesting and provides much greater scope for tailoring the use of leased lines more closely to the operators network and the needs of their clients. Operators had to wait for a final offer from the incumbent until late July 2002, and this has caused problems in the timing given that the ART established a window during which certain price reductions and the conditions for transfer would apply.

## **2.3. Unbundling**

### *2.3.1. RUO*

Since the Unbundling Regulation entered into force in January 2001, the ART has intervened actively in order to obtain effective implementation, primarily in terms of the tariffs and conditions offered by the incumbent to other operators in its Reference Unbundling Offer (RUO). Nevertheless, progress has been slow, and while 9 unbundling contracts have been signed very few lines have been unbundled (576 according to the ART, 750 according to the incumbent as of June 2002). Because of the complex market entry conditions, and the apparent delaying tactics of the incumbent, the development of unbundling in France has been quite disappointing.

On 16 April 2002, the ART took the latest in a series of decisions requiring the incumbent to modify its RUO, and reducing all the main tariffs. It introduced sub-loop unbundling, and modified a number of technical issues concerning collocation. At the same time, the ART blocked tariff proposals by the incumbent in regard to ADSL access, showing its awareness of the interplay between the two service markets.

The Decision appears to set the conditions for proper competition in local access, as the tariff for full unbundling is very competitive compared to other EU countries (€10.5) and the tariff for shared access is now one of the lowest in the EU (€2.6 or €2.9 with the necessary filter). The incumbent has formally appealed the tariff aspects of the decision to the Conseil d'Etat, but the decision stands in the meantime and on 14 June the incumbent published its modified Reference

Unbundling Offer in conformity with the ART's decisions. Nevertheless, even with this decision, OLOs feel that the ART has not exercised all its available powers in relation to the deliberately complex price structures applied by the incumbent for bitstream access.

The original RUO from the incumbent did not contain an offer for the elements necessary for sub-loop unbundling. As part of the horizontal approach to infringement proceedings, the Commission opened a case against France for this omission. The ART decision in April required the incumbent inter alia to introduce sub-loop unbundling into the RUO, which it has done. The prices are very similar to those for unbundling at the local switch and appear to be dissuasive, but one of the largest new entrants is now developing a VDSL product.

### *2.3.2. Collocation conditions and effective implementation*

Until the end of last year, new entrants made it clear that the technical and tariff conditions for collocation were an effective barrier to any real opening of competition in local access.

The revised RUO published by the incumbent in June contains a series of changes to the collocation and access conditions for unbundling. The ART's decision in April to modify the RUO was actually timed to coincide with a parallel decision in the context of a dispute resolution procedure on technical and tariff conditions for collocation. The most important element of this decision was the introduction of cageless collocation and unescorted access where previously operators were forced to pay for the creation of a separate room with independent access.

However this solution does not resolve the problem of the 'legacy' collocation rooms that have been ordered and built and which are, not surprisingly, located in the most important or popular switches in high density urban areas. These rooms are being maintained and those operators who have taken space must continue to pay. In reality, four of the five operators who are actually testing or operating unbundled lines have paid half or less of the costs for which they are liable under the RUO, and this situation has gone unchallenged by the incumbent until recently. The question arises as to what happens if an operator, who had not ordered bays at a particular switch where separate collocation space has been constructed, makes a request subsequent to the new collocation offer and is forced to install his equipment in the collocation room.

While there are clear positive developments with regard to collocation, new entrants complain about continuing problems, particularly the fact that the incumbent will not allow them to run a cable from their equipment in the collocation site directly to that of another operator or to the termination point of a leased line, for example. The ART may be called on to arbitrate on this point in the coming months, but showed itself to be unsympathetic to the arguments put forward by operators before the dispute resolution decision in April.

## **2.4. Bitstream access**

### *2.4.1. Non-discriminatory access*

The new conditions for unbundling will have only limited success if the French authorities cannot also deal successfully with the alleged price squeezes and predatory pricing that appears to exist in the market of DSL access, as this will directly affect the business case for operators contemplating unbundling. This issue of competition in bitstream access was the key concern expressed by new entrants – ISPs and operators alike – in the course of the preparatory meetings in June.

While the authorities have slowly come to terms with the complex interplay between at least four different wholesale and operator tariffs, the incumbent has continued the development of its own products and customer base (mainly through Wanadoo). The latest figures supplied by the incumbent to the ART show that the incumbent and its ISP have 482 000 DSL lines and 44 000 DSL lines provided by other ISPs using their resale product, while there are no bitstream access lines and only the 576 unbundled lines on which other operators are providing a competing ADSL service. The incumbent also announced in July new products (i.e. improved data rates and service parameters) that will be introduced at the same time as the new tariffs and that will present a new challenge to new entrants on the retail market.

In response to an administrative letter sent to all Member States on this subject, the French authorities responded that apart from the clear legal obligation placed on the incumbent in French law, the application of the principle by the incumbent was guaranteed by the intervention of the Competition authority (in February 2000) and the ART (in March 2001) in response to specific complaints. However, this indicates that there is no method whereby non-discrimination can be systematically checked. And although the incumbent's offer has been subject to periodic checks (particularly by the intervention of the ART in the price 'homologation' (prior approval) in April 2002) the fact that the the incumbent's offer is constantly evolving means that intervention is often ex-post. One particular example is the fact that in the new offer for operators, the incumbent have removed the possibility of access/connection at the regional ATM switch, which disadvantages certain operators and not others.

The range of wholesale offers available from the incumbent include ATM access, in a product that new entrants accept as being technically complete and attractive.

#### *2.4.2. Tariffs*

On 11 April, in anticipation of the ART's decision on unbundling, the incumbent announced a series of wholesale and retail tariff reductions for DSL that would effectively have cut the ground from under competing operators in local access. Operators and ISPs made it clear that they found the package anti-competitive, although it actually provided some breathing room for pure ISPs. The the incumbent's offer included a 45% price reduction for ISPs ("option 5"), and a 20% reduction of the consumer price for the retail ADSL product ("Netissimo"). It included only a 30% reduction of wholesale offers for alternative operators with the result that they would have been unable to match the incumbent's price reductions for wholesale ISP customers.

As different tariffs are regulated differently (the regulated tariffs are subject to approval by the Ministry subject to an Opinion by the ART) there was a delay in the response of the authorities. The ART issued a conditional opinion on the retail tariff, but issued a negative opinion on the main tariff for ISPs while making it clear that this was because of the effect it would have on other operators, and called on the incumbent to revise its proposal for the main wholesale operator tariff (referred to as 'Option 3'). While the incumbent insisted that this tariff was not subject to prior approval and that therefore the ART could not impose changes, the Ministry effectively decided the matter by suspending its decision on prior approval of the ISP and retail tariff until the incumbent eventually brought forward a revised offer for other operators in July. The ART then gave a favourable opinion on the revised package of ISP tariffs for ADSL, and these will come into effect on 15 October. Meanwhile, the incumbent was to put in place the revised technical and tariff conditions for Option 3 by 15 September in order to allow competing operators the time to prepare their own offers to ISPs.

When making their new tariff proposals in April, which were subsequently approved in modified form as described above, France Télécom also introduced some new retail products, including ADSL at 128 K/bps through its subsidiary Wanadoo at a price of €30 per month. This could become a very crucial market segment as it could effect the development of FRIACO in France because it is similar in price but superior in quality, and where several new entrant ISPs are beginning to compete at the moment.

## **2.5. Situation of the (broadband) local access market**

### *2.5.1. Status of DSL market, position of incumbent*

At the same time, the incumbent has continued to use its market position to roll out retail high speed Internet services (especially DSL products). This makes it more and more difficult for new entrants to develop a business case for competing on the broadband access market, either through unbundling or through competing DSL products (“bitstream access”). There appear to be a serious problem in ensuring the non-discriminatory provision of wholesale access and special access on the DSL market (such as ATM access at the regional switch) that would allow other operators and ISPs - to compete.

The ART has been active in seeking to address this double lock on the local access market and to develop competition in the market for broadband access, the high-speed data market for Internet to the home and to small businesses.

### *2.5.2. Development of alternative means of access*

The roll-out of wireless local loop (WLL) has run into serious difficulties, with one of the two national licence holders going out of business, and at least two of the multi-regional licence holders having their authorisations suspended for failure to comply with their scheduled roll-out. In fact only 7 of the original twelve operators licensed for WLL services are left in the market and, in practice, WLL is limited to a number of small areas in the larger cities and some other experimental sites, with 870 access lines in place on 31 December 2001. In October 2002, the ART launched a new consultation on the use of the frequency blocks that are unused or have been released (in the 3.5 and 26 GHz bands) as well as frequency in the 28 and 32 GHz ranges.

Cable tv networks are quite well developed in France. The upgrading of this network to allow cable modem access has been quite successful in certain areas in France. But the overall situation is disappointing because of the considerable barriers to development due to the heavier regulatory burden facing cable network operators and the limitations on individual operators’ network size, in contrast to telecom network and satellite operators. Nevertheless there are some 208 500 cable modem lines in France, of which 161 000 are in the hands of new entrants.

The French NRA has been quite active in clarifying the specific rules and conditions for the use of Radio Local Area Networks (RLANs) in France. Following a public consultation and an action plan for the opening up of regulatory conditions for the use of WiFi technology on the 2.4 and 5 GHz frequencies, on 7 November 2002 the ART published decisions allowing their use of RLAN networks for high speed internet services to the public in public hotspots. It also issued guidelines for experimentation in the more general use of RLAN in areas poorly served by high-speed networks.



## **2.6. Leased Lines**

### *2.6.1. Pricing*

The most significant development in pricing have come about as a result of the ART's decisions on interconnection leased lines (see above). Tariffs for most retail leased lines have remained unchanged from last year with the result that France remains above the EU average for most types and lengths of leased line, with the exception of short distance high capacity lines (140/155 Mbits/s).

### *2.6.2. Delivery periods and quality of service; non-discrimination*

While there are some delays in regard to the supply of international leased lines, France compares well with the EU average in terms of the supply times for most categories of leased line. However, operators are not satisfied with the unilateral modifications made by the incumbent to its supply conditions and contracts, and they contest the accuracy of the data concerning repair times. In particular there is a dispute with regard to the 'premium' service that the incumbent offers to its own clients covering repair times and guarantees on downtime, and which is not available for other operators.

## **2.7. Numbering**

### *2.7.1. Carrier selection and preselection*

CPS for local calls was finally introduced in January 2002. Given the methodology for conversion, where existing users of CPS for long-distance calls were informed of the change and were subsequently preselected for the other operator unless they objected, there was an immediate impact on market share for local calls, and the system was deemed a success. There are still some technical problems due to delays in replacing some older generation switches that cannot support the preselection process.

However, there have been complaints by both the incumbent and new entrants about certain underhand or illegal practices by other parties in regard to new or potential CPS customers, and some of these complaints have now been brought before the French courts. Two operators are reported to have instituted proceedings against the incumbent for an alleged "win-back" commercial strategy, including the possible use of interconnection data by the incumbent's commercial arm. The incumbent is reported to have instituted proceedings against another operator for the alleged improper use of marketing tactics, including the possible use of falsely procured requests for carrier preselection.

### *2.7.2. Number portability*

An ongoing problem has been the implementation of the portability of fixed non-geographic numbers. While there appears to have been a genuine attempt to implement this requirement it was apparently technically unworkable, and work started over a year ago on an alternative approach. A system is now in place for toll-free numbers and shared costs numbers, but France is extremely late for shared revenues numbers (value-added numbers). The date for effective implementation is still uncertain for some operators, but for others the ART now state that the target date is December 2002. These value-added numbers represent a significant volume of traffic and turnover.

## **2.8. Cost-accounting and accounting separation**

### *2.8.1. Cost accounting systems in place, statement of compliance*

The ART have developed with the incumbent a relatively sophisticated system of current cost accounting based on the LRIC model. The system is well structured and takes into account the main requirements for transparent and coherent identification of costs. The incumbent has full accounting separation, the cost accounting audit is carried out by independent auditors chosen by the ART and then appointed by the incumbent and who are not responsible for the company accounts.

While certain improvements have been made, a rectification of the interconnection accounts for 2000 is being prepared and this has given rise to a lengthy delay in the certification of the 2000 accounts, despite the fact that they have been ready for some time. The system has required relatively little adjustment subsequently but the audit for the 2001 accounts only began in July 2002. The cost accounting model developed for interconnection is a LRIC current-cost approach which was, for the 2002 RIO, based on reconciling the results of two different models – a top-down model designed by the incumbent and a bottom-up model which was designed by the ART in co-operation with the sector.

## **3. AUTHORISATIONS**

### **3.1. Licence conditions**

While previously a source of some contention, there have been no complaints about the procedures for awarding or modifying licences over the last year, reflecting no doubt the fact that very few new operators have entered the market or extended their business activities over the last year. In fact, compared to last year, there are 11 fewer voice telephony licences and 4 fewer licences to provide public networks and network services.

### **3.2. Rights of way - role of local authorities in infrastructure development**

Before the legislative elections in France, the previous government announced separate initiatives to support the completion of mobile coverage of the national territory, and to support the roll-out of broadband infrastructure to the regions and less densely populated areas. Both initiatives were to involve the local authorities, both in part financing the projects but also in playing a direct role in, at least, the construction of the infrastructure.

The French authorities had previously prepared a study and report on the extent of mobile coverage in France. It showed that approximately 8.4% of the national territory was not covered, most of it mountain and forest, but including 1500 communes that did not have effective coverage of the village centre by at least one GSM network. This amounted to 0.7% of the French population without effective mobile coverage.

It appears that the new government maintains the same priorities in terms of the development of communications infrastructure. There have been several announcements, including a declaration by the three mobile operators and subsequently confirmed by the Ministry, of an agreement on the modalities for extending mobile coverage to the “white zones” where no mobile operator currently has coverage. This appears to involve a mixture of passive infrastructure sharing and the introduction of local roaming on a common network infrastructure. Very recently the Senate adopted a draft law, which must now be debated in the Assemblée, and which would allow local authorities to oblige the three mobile operators to cover

all zones of temporary or occasional residence with the necessary infrastructure for the installation of local roaming in these areas.

For these initiatives, as well as the suggestion of state financing for the development of high speed networks in the regions, the question arises of how to reconcile local authorities' role in relation to rights of way, and any conflict of interest relating to their financing or part ownership of high speed networks, particularly where these may be in competition with other networks.

At the same time there have been independent initiatives in the French Senate to oblige mobile operators to construct and pay for the necessary infrastructure themselves to ensure coverage of these white zones, which would go beyond the coverage obligations established in their licences.

As the date of application of the new regulatory framework approached, cable operators claim that they suffer from discriminatory treatment compared to other providers of electronic communications services. Cable operators require the prior approval of local authorities for the construction of their networks, and are sometimes subject to much higher fees for rights of way than telecommunications network operators, but they do also enjoy priority access to households.

#### **4. UNIVERSAL SERVICE/ CONSUMERS**

##### **4.1. Retail tariffs**

In the Court ruling on the universal service financing mechanism (see below) there is an implicit suggestion that tariff re-balancing has not been achieved in France, despite claims to the contrary, and it is not clear how the relatively small increases in the subscription charge since 1998 have caught up with the costs related to maintaining the local connection. However, in July 2002 the subscription tariff was raised slightly (to €13; €10.87 excl. VAT) which corresponds to an increase for inflation.

Above and beyond this increase, there appears to be little appetite for a more detailed analysis of the real cost of the subscription, because of the political implications of a further increase and because new entrants may not consider it to be to their advantage. In theory, given the recent introduction of bundled tariffs ("forfaits"), further increases in the subscription paid to the incumbent should clear the way for greater competition in local calls and make unbundling more attractive to other operators, as well of course as reducing the total cost of the universal service to be paid by other operators. For its part, the ART has conducted detailed analyses of the average cost of a line but does not consider this to be relevant as the subscription rate should be in line with costs in high density areas where average costs are lower.

Following court cases taken by one of the main consumers' group, the three mobile operators were condemned separately for breaches of consumer law regarding misleading publicity and lack of transparency of tariffs. These cases concerned particularly the conditions applying to 'forfaits' and the billing method for the first minute of calls or billing for set unit of time. All three operators have recently moved to per-second charging for most of their products.

In the course of this transition, however, Orange has introduced a higher charge for calls off-net (to other mobile networks) compared to on-net calls. Following a complaint to the competition authority by another operator, and a separate complaint from the same consumers' organisation for breach of dominant position, Orange removed this surcharge.

## **4.2. Funding – implementation of the ruling of the Court of Justice**

On 6 December 2001 the Court of Justice ruled on the Commission case against France (C-146/00) concerning the financing of the universal service and the method of calculating the costs to be paid from the universal service Fund by new entrants. The Court found in favour of the Commission on all six grievances and ruled that France was in breach of the Liberalisation Directive and the Interconnection Directive, particularly on the grounds of transparency and non-discrimination.

Following the Court ruling, the French authorities decided to repay the amounts charged for 1997 and to reduce the amounts for 1998 and 1999. These repayments have been made in the form of a reduction of the provisional payments for 2002 which were confirmed by an Arrêté in July 2002. These repayments and provisional contributions were based on a revised method of calculation in the light of the Court ruling, but this has yet to be notified to the Commission. The alternative operators, represented by AFORST, have quickly made known that they are extremely unhappy with the new amounts and the basis of the revised calculations, and it has been announced that they have appealed to the Conseil d'Etat. In the meantime, the government has adopted an arrêté settling the definitive amount to be paid for the year 2000, based on the ART's revised calculations.

## **4.3. Universal directory**

Despite the obligation of the Voice Telephony Directive, a universal directory containing information of all numbers irrespective of operator does not exist in France,. This is because no system for making available the relevant databases has been developed due to disputes between operators. The French authorities have indicated that a decree (promised last year) will soon be implemented to set up the necessary database. The directory will not be available before the end of 2002 at least, and the Commission has already instituted infringement proceedings against France for this failure to respect the existing framework.

## **4.4. Dispute resolution**

Another clear implementation failure in France is the lack of a conciliation body for disputes between users and operators. While the ART technically has the power to settle disputes this is not used, and the authorities were tempted for a long time to rely on a mechanism set up and financed by the operators. But various plans have always run into the problem of how to ensure that the dispute is effectively resolved, and the relevant implementing Decree has yet to be published.

# **5. DATA PROTECTION**

## **5.1. Implementation / Traffic data retention**

Following the adoption of the Ordonnance to resolve a series of transposition problems last year, the French government introduced a Decree to complete the implementation of Directive 97/66 on data protection, following a ruling of the Court of Justice condemning France for its failure to transpose the Directive fully. However, the measures to implement Art. 6 on data retention were dealt with in a separate Law on Security, and both measures were notified in March 2002. While this law appears to fulfil the requirements of Article 6 of the Directive to limit the time during which data may be retained and processed, it in turn requires a further Decree to complete its provisions, and to specify the data that may be retained in accordance with the annex of the Directive. At the same time the Law on Security deals with the issue of

data retention. The law aligns the period during which traffic data must be retained, one year, with that applying to the retention of data for customer billing purposes and the deadline for contesting a bill.

## **5.2. Unsolicited calls and faxes**

The Ordonnance brought French law into conformity as regards unsolicited calls and faxes. The system for rejecting calls is an opt-out one, while that for faxes is an opt-in system, with active (or express) written consent required.

## **6. MOBILE ISSUES**

### **6.1. UMTS**

In December 2001 the French authorities published a new call for applications for the allocation of the two 3G licences not issued in the first round. As expected, the price of the licences was altered to a once-off charge of €619m as well as an annual charge levied on the basis of 1% of turnover arising from 3G mobile activities. The duration of the licence was also extended from 15 to 20 years. Nevertheless, only the third existing 2G operator, which had not applied for the first round, applied and in September 2002 the ART recommended that their candidature be accepted and the licence has now been issued.

The only change to the licence conditions was the addition of an accounting requirement to allow the annual levy on turnover to be calculated. All the above modifications apply retrospectively to the two existing licence holders.

There have been no changes to the theoretical requirements for geographical coverage, but these will take effect later than those applying to the two existing operators given that the third licensee received its licence 14 months later than the first two. In reality there is considerable slippage in the probable date of effective roll-out of services by any of the operators. The *cahier des charges* of licence holders accepts the possibility of slippage when equipment is not available, and the original two licensees have already announced delays from their original starting dates.

### **6.2. Infrastructure sharing**

As part of the work carried out to alleviate the problems being experienced by the 3G license holders, but also in conjunction with the regular studies carried out by the ART on mobile coverage, the issue of mobile infrastructure sharing has become more and more pertinent. The ART issued a statement clarifying its position in December 2001, ostensibly in relation to the 3G authorisations, but closely related to the discussion of possible solutions to problems of incomplete coverage.

## **7. PREPARATION FOR THE TRANSPOSITION OF THE NEW FRAMEWORK**

France has been slow to transpose the current framework, but the authorities have stated their intention to transpose the new framework on time. The Industry Ministry launched a public consultation on the economic and legal implications of implementation of the new framework on 30 April, which closed on 15 July, and the ART also published a detailed analysis on the passage from the existing to the new framework. There was then a second consultation

launched at the end of July, in co-operation between the Industry Ministry and the Culture and Media Ministry who have responsibility for audiovisual law and cable television networks.

This second consultation ended on 20 September, the French authorities hope to draw up implementing legislation that would be presented to the French parliament by the end of the year. In October 2002, the ART produced the results of enquiries into the competitive situation in three key markets: interconnection (voice and internet traffic), internet transport, and high speed fibre optic access. The results of these enquiries will serve in drawing up the relevant market analyses that need to be in place when the new framework is applied

## 3.7 IRELAND

### 1. REGULATORY FRAMEWORK

#### 1.1. National regulatory authority

The Communications Regulation Act 2002, which was passed by the Oireachtas (Irish Parliament) earlier this year, provides for the establishment of the new Commission for Communications Regulation and will repeal most of the Telecommunications (Miscellaneous Provisions) Act of 1996. The 1996 Act will remain in force only for tariff regulation and related offences. The new Commission will consist of three Commissioners and the current Director of Telecommunications Regulation will automatically become a member. The Minister for Communications, Marine and Natural Resources has announced that he will appoint the chairperson of the Commission on an annual basis and that the first chairperson will be the current Director. On 'establishment day', the functions of the Office of the Director of Telecommunications Regulation (ODTR) will be transferred to the Commission. This is expected to happen before the end of 2002.

The new Act does not alter the existing regulatory powers. Some changes are, however, proposed on enforcement, with the introduction of higher fines on criminal conviction of up to €4 000 000 or 10% of annual turnover, increased fines on summary conviction (€3000) and a system allowing a small fine (€1000) in place of instituting criminal proceedings. It seems, though, that new entrants agree with the ODTR that the new enforcement powers are still limited. In particular, the ODTR does not have the power to impose administrative fines.

The ODTR points out that in the fast moving electronic communications sector, it is necessary to be able to react with speed and appropriate remedies to issues that arise on the market. For the more serious indictable offences, the ODTR must rely on the Director of Public Prosecutions to prosecute. The Ministry (Department of Communications, Marine and Natural Resources) points out that the criminal and civil enforcement procedures which are available to the ODTR are in line with those which are available to public bodies generally in Ireland and that the imposition of substantial administrative fines by public bodies has not been an established feature of the Irish legal system. The introduction of such a provision for the electronic communications sector would have to be considered further. On the other hand, it seems that the power of suspending the licence of operators as an enforcement measure cannot be easily used and has never been exercised in practice.

Regarding consultation procedures, it seems that past concerns continue to exist amongst operators, some of whom allege that the ODTR takes little notice of their responses to consultations. The ODTR refutes the allegations that its consultation procedures are inadequate, claiming that it always takes into account the views submitted to it before reaching conclusions. By way of example, the ODTR cites its WLL consultations, where the proposal was not adopted after the operators had shown a lack of support, or the review of the CPS framework or the current review of Eircom's price cap, etc. The ODTR must balance the need for sufficient time to respond to issues against the necessity to act quickly in step with market needs while taking into account the views of all interested parties.

Since the 7<sup>th</sup> Implementation Report, the ODTR has been quite active in handling consumers' complaints. In the first six months of 2002 ODTR dealt with 660 complaints and 855 queries.

Most complaints relate to billing disputes, mainly regarding calls to premium rate services (although these do not fall within the ODTR's remit). Speedier resolution of complaints was reported since the introduction of informal 'Inter ODTR-Operators Complaint Management Procedures' in April. The ODTR is planning to publish an information note outlining its role in the resolution of disputes between consumers and operators.

Under the new Competition Act 2002, provision is made for a formal cooperation agreement between the ODTR and the Competition Authority covering, amongst other things, exchange of information and general cooperation issues.

## **1.2. Management of numbers**

The management of numbers falls under the responsibility of the ODTR. No complaints were reported in this connection.

## **1.3. Frequency management**

The Department of Communications, Marine and Natural Resources is carrying out a review of the framework for radio spectrum management in Ireland with a view to reforming the legislative framework. The ODTR published a document on "Strategic Management of the Radio Spectrum in Ireland" in May 2002, following public consultations on the current and future demand for spectrum and its use. The paper is largely about allocation issues, i.e. the allocation of spectrum to particular uses, rather than about assignment of spectrum to specific users. It describes the objectives of the ODTR, the intended strategy to be followed to achieve these objectives, and the key issues for spectrum use. It also presents the framework within which radio spectrum can be used and outlines the current uses.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference interconnection offer*

The ODTR has examined complaints by new entrants regarding an alleged misalignment between the RIO and the interconnection agreements finally reached by the new entrants and Eircom. In particular, the ODTR has introduced a new process to allay concerns on the part of the new entrants about any changes made by Eircom in the text of its RIO without the ODTR's approval. Public consultations will follow to seek the views of the industry on the review of the RIO and a decision will subsequently be adopted.

#### *2.1.2. Interconnection charges*

The ODTR follows a procedure consisting of setting interim interconnection charges and later deciding whether they are final after reviewing the relevant cost data. The accuracy of the interim charges is reviewed in the light of actual costs incurred. The ODTR uses this method because costs incurred by an operator over a certain period can only be established with certainty by compiling the accounts at the end of the period. From time to time there are delays in obtaining adequate information from Eircom on which to base decisions and for this reason the ODTR also takes interim decisions.

This system has been criticised by new entrants who claim that the complex set of LRIC-based accounting and cost models only results in delays. While the ODTR recognises the need for balance between the opposing forces of certainty and cost orientation, it considers



that, to date, the industry has been well served by retaining the point of balance where it presently lies – i.e. by setting interim prices on the basis of the best available forecasts, but retaining the process of reviewing these charges once actual costs for the period are available. However, ODTR states that it may be possible that, as its knowledge of the incumbent's costs improves over time and interconnection charges approach efficient levels, this issue could be revisited. In this context, interconnection charges for the period from March 2000 to March 2001 were finalised in April 2002 with a resultant reduction. This reduction continues the downward trend in the charges over the last few years. On the other hand, the incumbent considers the level of interconnection charges too low to allow it to receive a sufficient return on the capital invested in provision of the service.

### *2.1.3. Fixed to mobile call termination*

Fixed to mobile termination charges have been reduced by an average of 10%. Although new entrants and users welcomed such reductions they consider that they are still not sufficient since, according to them, charges remain above LRIC and are therefore not cost-oriented. They also complain that call origination charges continue to be completely inconsistent between mobile operators and are above cost, thus representing a huge cost to industry and consumers. The incumbent estimates that mobile termination charges are eighteen times higher than fixed interconnection charges. In October 2002 the ODTR issued a consultation paper proposing the introduction of separate accounting for SMP mobile operators so as to provide costing information which will in future be used for a review of the cost orientation of these charges.

### *2.1.4. SMP designation*

Following the conclusions of the review on SMP status announced by the ODTR, Eircom remains designated as having SMP in the public fixed telephony services, public fixed telephony networks and leased lines markets. In the mobile public telephony networks and services market Vodafone and O<sub>2</sub> remain designated as having SMP.

In the national market for interconnection the two mobile operators, Vodafone and O<sub>2</sub>, remain designated as having SMP. Their SMP status was based on their market share of call termination revenues. The incumbent is not designated as having SMP in this market since, according to the ODTR, it holds only approximately 20% of the market.

### *2.1.5. Other issues (SMS, international roaming, FRIACO)*

On the mobile side, SMS appears to have been removed by operators from interconnection agreements that previously existed and the ODTR is currently reviewing whether it is appropriate for SMS termination and origination to be considered an interconnect product.

A report was published by the ODTR on mobile international roaming aiming at increasing consumer awareness of international roaming costs and options available to consumers to reduce these costs. A second report gave advice to consumers outlining options to reduce their international roaming costs, particularly the potential savings available to Irish consumers roaming in the UK. The reports were considered useful by the industry.

At present, two new entrants have made requests to Eircom for a wholesale FRIACO (flat rate internet access call origination) service and the service is expected to be offered in January 2003. Pricing proposals have not yet been submitted by Eircom but are expected in December.

## **2.2. Interconnection leased lines/partial circuits**

The ODTR recently completed a review of the Eircom reference interconnection offer (RIO) providing, amongst other things, timelines for exploring the development of partial private circuits as an interconnect product which will allow more efficient provision of wholesale leased lines for operators. This should result in improvements in the terms on which operators can avail themselves of such services from Eircom. New entrants welcomed this development and expect to see the service introduced on the market.

## **2.3. Unbundling**

### *2.3.1. RUO*

A new entrant has now launched a retail DSL service based on full and shared LLU lines and will be rolling out this service to 40 main population areas this year. As of 1 October, 26 fully unbundled lines and 62 shared access lines were available to this operator. At the end of October an increase in the number of ordered lines (49 full unbundling and 134 line sharing) was reported by the ODTR.

SLAs for LLU are currently in place in Ireland; however, one new entrant has requested an enhanced SLA. The LLU process has been underway for a number of years but to date no agreement has been reached between Eircom and new entrants for a fault repair SLA which would be satisfactory for both sides. This is, however, expected to be resolved by the end of the year.

LLU prices were finalised for the period from 1 April 2002 to 31 March 2003 and the sub-loop prices were also finalised for the period from 1 April 2002 to 31 March 2003. An Industry Advisory Group has been set up to develop a bottom-up LRIC model of the access network. A report with conclusions will be completed in December.

Availability of sub-loops has been resolved now by the publication by Eircom, in May 2002, of Service Schedule 104 which offers both full and shared sub-loops. The ODTR has been examining the charges for sub-loops and on 1 July directed Eircom to amend the charges set out in its RUO regarding sub-loops. Eircom's RUO was revised by the ODTR in April 2002. It is reported that no access seeker has expressed any interest in sub-loop unbundling.

### *2.3.2. Collocation conditions and effective implementation*

The ODTR has been working with the industry to review the LLU access reference offer (ARO) from Eircom and a number of collocation sites have now been rolled out with a plan to have forty in place by October 2002. This plan is now completed and new entrants have access to over 400 000 lines. New entrants claim that charges for collocation sites are significant. The ODTR has reviewed the cost models for these sites following claims made by new entrants regarding the level of prices and the appropriate (downward) revisions to prices have been put in place.

## **2.4. Bitstream access**

### *2.4.1. Non-discriminatory access*

Launch of DSL services was originally planned for April 2001 but a review of supplier and platform change by Eircom resulted in a delay of the launch date for bitstream access. At that time, the ODTR review of pricing proposals raised concerns that the charges were not cost-

oriented and gave rise to a margin squeeze, which led the ODTR not to approve Eircom's pricing proposals. Eircom submitted its revised wholesale offer to the ODTR which was accepted and removed the margin squeeze. Prices have now been approved and Eircom is offering a retail DSL service.

## **2.5. Situation of the (broadband) local access market**

### *2.5.1. Status of DSL market, position of the incumbent*

The provision of DSL services has been slow in Ireland. In April 2002 Eircom published a revised wholesale bitstream offer and this was approved by the ODTR. Retail service was launched by Eircom in May 2002 and within the same month 619 customers were reported while at present the service is offered to 1700 customers. Following the launch, an access seeker requested revision of the pricing model. There had been a requirement to order in quantities of twenty-four ports and following discussions this was reduced to single units. This was done in order to address what the ODTR understands to have been the main concern for new entrants, i.e. non-discrimination in relation to this product offering. At present there is no alternative operator providing Eircom's wholesale DSL product. According to Eircom, demand is low while the cost of investment is high and therefore costs cannot be recovered. Users' groups are of the opinion that the high level of prices has made the service unattractive to customers.

### *2.5.2. Development of alternative means of access*

The ODTR has conducted consultations on wireless local loop (WLL) with a view to licensing further WLL spectrum (expanding opportunities in the radiocommunications market for wireless access). Based on the conclusions of such consultations, the ODTR introduced further measures to encourage and stimulate the provision of wireless access to broadband services. The fee structure for WLL broadband licences has also been reviewed and the ODTR intends to reduce the fees in the light of the changed market circumstances since the licences were first issued.

So far, six wireless local loop licences have been issued in Ireland - four broadband and two narrowband. One new entrant who received a broadband licence launched its service in late 2000 but then went into voluntary liquidation in March 2001. The ODTR has decided to revoke the licence granted to it and proposes to offer a new national broadband WLL licence.

## **2.6. Leased lines**

A round of consultations focusing on the revision of the service level agreement (SLA) regime offered by Eircom was completed in March 2002. Timeframes for the provisioning of leased lines have been improved substantially since last year. In particular, average delivery time has fallen from approximately 54 days in 2001 to between 20 and 29 days in 2002 and is in line with the timeframes set out in the current SLA. Such performance improvements have been driven by the SLA and its associated penalties, more stringent reporting requirements and a sharper focus on due date delivery performance. According to the ODTR, Eircom committed itself to achieving 95% due date performance for 2002 compared with a target of 80% for 2001. For the first four months of 2002, Eircom achieved an average of 91.5% due date delivery performance.

Orders are classified as either standard or non-standard (involving an element of infrastructure build). While Eircom published actual average delivery timeframes for both categories of

circuits, new entrants are still concerned about the uncertainty surrounding the provision of non-standard leased lines since according to them a high proportion of orders are classified by Eircom as non-standard. The classification of non-standard orders was discussed as part of an industry-wide review of operational procedures and processes and agreement has been reached on the classification criteria. It is reported that in many cases classification as non-standard does not result in the circuit being delivered outside the SLA provisioning timeframes.

Regarding pricing, the new entrants consider that the current retail price minus eight percent is wholly inadequate and not transparent. The ODTR is currently undertaking an extensive review of leased line pricing.

## **2.7. Numbering**

### *2.7.1. Carrier preselection*

Regarding CPS, the service was launched in Ireland in January 2000. While customer numbers grew rapidly in the initial period, the latest figures show that numbers were on a downward path but are now stabilising. In particular, the number of CPS lines has declined from 160 000 in 2001 to 140 000 in 2002. However, despite a period of consolidation within the industry that has resulted in a high level of churn, CPS subscriber numbers appear to have stabilised and the ODTR expects subscriber numbers to resume an upward trend.

The ODTR has set CPS provision as a major priority and has made efforts to ensure that operators are not engaged in anti-competitive practices while further developing the CPS regulatory framework. According to the ODTR, one of the main contributory factors to the fall in CPS numbers was the exit from the market of a major CPS provider, a large percentage of whose customers returned to the incumbent. The ODTR took notice of all these developments and initiated a complete review of CPS, covering many different strands of activity. The review did not identify any areas where the regulatory, commercial or operational framework is inferior to other countries and quality of service was shown to be satisfactory. In addition, the ODTR conducted consultations on the technical and operational framework for CPS. Finally, arising out of this consultation, the ODTR is planning to introduce some changes to further improve the CPS product for the customer. The ODTR has also directed Eircom to introduce amendments to the CPS service specification to deal with another factor possibly inhibiting growth in the CPS market. These amendments will allow new entrants to issue bills for both calls and line rental, which is expected to remove Eircom's billing relationship with the customer.

The ODTR decided to review CPS charges and the method of calculating order-handling charges to address the concerns of some operators who consider that the CPS charges currently in place are excessive. The review is expected to be completed before the end of October 2002.

It is reported that some CPS customers are exploiting the openness of the service and are moving from operator to operator leaving the losing CPS operator with significant bad debt. The ODTR is cooperating with the incumbent and other fixed operators to address this issue and is encouraging them to participate in a relevant industry forum. New entrants expect a credit management facility currently used by Eircom for its own customers to be made available to other operators.

### 2.7.2. *Number portability*

In relation to mobile number portability (MNP), fixed line non-geographic number portability has been available since January 2000 and geographic number portability since November 2000 although it has been available from the incumbent since July 2000. A limited form of mobile number portability, known as subscriber mobile number portability, has been provided for the past six years. This system allows subscribers to retain their subscriber numbers but not the network code part. In January 2001 the ODTR decided to introduce full MNP by the fourth quarter of 2002. A two-hour port has been set while both pre- and post-paid customers are covered. Mobile operators favour its introduction in early 2003, arguing that earlier introduction would fail to take into account the inherent technical difficulties, thus jeopardising successful operation. The ODTR considers that it is in the best economic interests of the country to proceed with this service as soon as possible and any delays would reduce the cost-benefit ratio.

### **2.8. Cost-accounting and accounting separation**

A statement of compliance was published by the ODTR in May 2002 in accordance with the Telecommunications Tariff Regulation (Modification) Order, 1999. The ODTR has carried out a review of information supplied by Eircom to confirm Eircom's compliance with the price cap in 2001 and is satisfied that Eircom complied with the Telecommunications Tariff Regulation (Modification) Order, 1999 during 2001.

The ODTR carried out a comparison between the industry bottom-up LRIC model and Eircom's top-down LRIC cost model in respect of the financial year ending 31 March 2000 and published a report on the main issues. The main purpose of the review was to identify any weaknesses and to recommend any necessary changes in both models. In its report the ODTR concluded that there are no substantial differences arising from fundamental differences in modelling approach or in the application of engineering rules in the two models. The ODTR may direct Eircom to make changes and modifications to its top-down model through further engagements with Eircom.

The ODTR also reported on the reasons for the differences in the costs produced by the two models in terms of differences in input assumptions. Having explained why the costs produced by the two models differ, the ODTR concluded that it is possible to produce consolidated results from the bottom-up model. The Andersen study conducted on behalf of the European Commission reported that the reconciliation between the Eircom's first year top-down model and the ODTR's bottom-up model revealed several key differences. The ODTR commissioned the consultants NERA to cross-compare Eircom's top-down LRIC model of its core network and the ODTR's bottom-up model of the same network. It reported a difference of 2% between the two models. Nonetheless, between ten and twenty minor points were identified as being treated differently in the two models. Half of these have now been resolved and talks are continuing on the remainder between the ODTR and Eircom.

## **3. AUTHORISATIONS**

The licensing regime currently in force is simple, to encourage new entrants to the market. At present, the ODTR is in the process of consulting the industry regarding the impact of the new Authorisation Directive on regulation of the communications sector. Transposition of the Authorisation Directive would mean the transition to an even more simplified framework for authorisation than the present arrangements in force in Ireland. As of 1 July 2002, 42 basic

licences have been granted, of which 19 are currently operational, plus 45 general licences, of which 24 are currently operational. The majority of operating companies are positioning themselves as full, or near to full, service.

The time taken to process licence applications for standard radio links has been improved from, typically, three months in 1998 to one week in 2002.

#### **4. UNIVERSAL SERVICE/CONSUMERS**

##### **4.1. Retail tariffs**

The ODTR is reviewing the current price cap that it has applied to a range of services provided by Eircom since 1 January 2000. For this purpose, the ODTR launched consultations, to be concluded in three phases, on the services to be subject to a price cap, the methodology to be used for setting the level of price caps for relevant markets and the level and structure of any price caps to be applied. A final tariff regulation amendment order is expected after consideration of responses to the consultations. The ODTR has not ruled out the possibility (subject to market reviews) of introducing a price cap on mobile services and wholesale fixed line services by next year. However, at this stage the ODTR is giving priority to the retail fixed line markets since this is the third year of the current cap of CPI minus 8% on those services. The key change in PSTN tariffs over the last year was the increase in Eircom's line rental charge in April 2002.

The ODTR submitted draft regulations to the Minister for consent, amending the regulatory framework for cable and MMDS systems. Concern was expressed by operators that if the proposals provided for imposition of ex ante price controls without carrying out an assessment of the relevant market to determine whether it was competitive or not this would be inconsistent with the new Community framework. Under the existing regulations, prices for the basic analogue service in the programme services distribution market were subject to prior approval by the ODTR while the period of exclusivity was in effect. The operators consider that in the absence of exclusivity there is no reason for maintaining price controls. The draft regulations are being considered by the Minister.

##### **4.2. Universal service**

Regarding the provision of universal service, Eircom continues to be the designated USO operator. However, it has requested funding to recover the cost of provision of the service. The ODTR is currently reviewing whether the costs associated with the universal service justify the activation of a funding mechanism. This review is expected to be concluded shortly.

##### **4.3. Universal directories, itemised billing, quality of service**

A national directory database is provided by the universal service provider in Ireland and includes all subscribers who agree to be included in it. Providers of directories and directory enquiry services have access to the database to enable them to provide their services. Specific measures have also been taken for users with visual and hearing impairments. Itemised billing is provided by the incumbent and the main new entrants and mobile operators.

In relation to consumers and users, the ODTR undertook an initiative requiring the publication of detailed performance statistics on how telecommunications operators perform against a set of defined parameters which include order, fault and complaint management. The

principal benefit of such a programme to consumers and users is the availability of clear indicators of quality of service performance that can assist them in making an informed choice on the market. The first quarterly report was published in March 2002 and the second report covering the following quarter was published in early July 2002. However, it seems that both Eircom and other fixed operators did not collect all data in the manner defined although the ODTR considers that this problem will be rectified in the near future. Users' groups favour this initiative while fixed operators consider it an effort employing a large amount of their resources. At present the ODTR is considering the extension of a similar initiative to mobile operators.

#### **4.4. Consumers**

The ODTR has established frameworks on the codes of conduct for the handling of consumer complaints by cable/MMDS and telecommunications and other operators (television providers). In particular, the codes set out how operators will respond to a customer's complaint and include target resolution times. All operators were required to inform their existing customers of the code's existence. All new customers have to be provided with a copy of the code.

A consumer group campaigning for unmetered and broadband internet access in Ireland representing home users and small to medium-sized businesses expressed concerns on the provision of flat-rate or affordable broadband services. In particular, no narrowband flat-rate internet access (only per minute) is offered by the incumbent at present, broadband (ADSL) was only recently introduced while the entry level product is capped (3 gigabytes per month) by the incumbent and costs €1700 a year. Another operator offers uncapped services over ADSL through the use of local loop unbundling and two operators offer 'off-peak' flat-rate services although at a wholesale level these operators purchase capacity on a 'pence per minute' model. On the other hand, operators are concerned about 1892 access and a possible launch by Eircom of the service. The ODTR made decisions to introduce special internet codes but according to operators the conclusion of interconnection agreements required to use these codes has not been successful. The other licensed operators who had originally shown an interest decided not to pursue interconnection negotiations with Eircom at this time but Eircom retail may launch an 1892 service independently, provided a wholesale offering is put in place prior to that launch.

#### **4.5. Rights of way**

The recently enacted Communications Regulation Act of 2002 contains specific provisions on obtaining access to public land to build infrastructure. The Ministry considers that, following the adoption of the Act, the regulatory framework for obtaining rights of way is much clearer than under the old legislation and ensures fairness and non-discrimination between operators.

It seems, though, that some operators are concerned that local authorities can apply inconsistent approaches and unjustified costs. In particular, it is claimed that local authorities have adopted different approaches to imposing costs on operators and on granting written permission to operators to carry out works. Operators would favour a uniform policy applicable across all local authorities. A working group bringing together industry, government and the local authorities has been formed to tackle problems in obtaining permission and implementing it.

## **5. DATA PROTECTION**

### **5.1. Traffic data retention**

Time required for the retention of data by operators has tended to follow the general rules of the statute of limitations in case a bill is challenged (six years). Since the transposition of Directive 97/66/EC into Irish law operators are obliged to comply with the requirements of Article 6 of that Directive. The issue of data retention requirements is being considered in the context of the transposition of Directive 2002/58/EC into Irish law.

### **5.2. Unsolicited calls and e-mails**

The opt-out approach was chosen for unsolicited calls only for direct marketing while for unsolicited faxes and automated calling machines the opt-out approach was chosen for businesses and opt-in for individuals, once again only for direct marketing.

## **6. MOBILE ISSUES**

In the mobile sector, the selection process for the granting of 3G licences, which was conducted by means of a comparative selection ('beauty contest'), has been completed. One class 'A' licence and three class 'B' licences were offered based on a differentiation model that allowed potential bidders to apply for the licence that best suited their market strategy. On completion of the licensing process one 'B' licence is still available. The ODTR is awaiting developments in the 3G mobile markets before taking any further action on that licence. The ODTR is now in the final stages of the process to award the licences and will issue the licences shortly. The successful bidders are Hutchison Whampoa Europe for the 'A' licence and O<sub>2</sub> and Vodafone for the 'B' licences.

The 'A' licence requires a phased roll-out with coverage of 53% of the national population by the end of December 2005 and 80% by the end of December 2007. Bidders for the 'A' licence were also invited to offer access for mobile virtual network operators (MVNOs). The 'B' licences also require phased roll-out but on a less stringent basis, covering 33% of the population by the end of June 2006 and 53% by the end of June 2008.

Bidders and licence-holders made representations to the ODTR to express their concerns regarding the structure of the procedure applied for the award of 3G licences. The concerns focused mainly on the additional marks awarded to new entrants. The ODTR considers the procedure the best available to facilitate the introduction of competition in this market. In order to level the field, the ODTR designed a marking system to overcome the disadvantage which new entrants faced in bringing more competition into the market. The marking scheme was such that new entrants and incumbents with strong bids could each achieve similar marks.

## **7. PREPARATION FOR TRANSPOSITION OF THE NEW FRAMEWORK**

### **7.1. Status of transposition and timetable for adoption of necessary legislation**

Preparations are currently being made within the Ministry for transposition of the EU Directives into Irish law. The Ministry is expected to issue drafts of statutory instruments for consultation in November 2002. The ODTR intends to issue a response to this consultation. An ODTR consultation on the Authorisation Directive was launched on 11 June and a



response to this consultation was recently issued. An information note on the Access and Interconnection Directive was issued by the ODTR in July 2002 and further consultations/information notices from the ODTR are expected in late 2002 – in particular a consultation on market reviews. A further consultation on the terms and conditions of authorisations was launched in August 2002 and will be reported on shortly.

## **7.2. Prospects for market assessments and notification of measures by NRAs**

The ODTR has started the market review project and it is expected that the reviews will be completed, where possible, by 25 July 2003, the date of entry into force of the Framework Directive. The process may be delayed pending the publication of the final recommendation. Due to the scope and nature of the project the ODTR will be hiring consultants to assist with the process and lend resources.

In order to commence data collection before transposition of the Directives, the Department of Communications, Marine and Natural Resources is drafting a statutory instrument to ensure that the ODTR has the capacity to request relevant data. The ODTR plans to consult industry on the process of data collection on the relevant markets.

Where there are markets that differ from those in the recommendation, the ODTR will prepare the case for notification under the Article 7 procedure. The ODTR will also set up a procedure for examining Article 7 cases from other NRAs.

On completion of market analyses, the ODTR will designate the relevant operators with SMP and decide on the appropriate remedies. These will be notified through the Article 7 procedure.

## 3.8 ITALY

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

The Ministry of Communications is responsible for policy issues, the scope of the universal service, frequency allocation, and awarding licences and authorisations. The NRA (*Autorità per le Garanzie nelle Comunicazioni - AGCOM*) is an independent body responsible for implementation of the regulatory framework in most regulatory areas, as well as for press and audiovisual matters. In performing its tasks, AGCOM is free to take its own decisions independently of the Government. In 2001, in the context of a general governmental re-organisation, responsibility for issuing licences was given back to the Ministry. AGCOM has remained in charge of monitoring compliance with public service licensing conditions, while the Ministry is in charge of monitoring compliance with the technical and administrative conditions of licences. The legislative measures transposing the new framework may clarify the distribution of regulatory tasks. Lack of clarity in the assignment of regulatory tasks has necessitated coordination between the two bodies. The reform of Italy's constitutional framework in 2001 resulted in legislative tasks in the field of 'communications' being assigned to the Regions. The scope of this measure is being discussed in the Parliament. Wide delegation of legislative powers at local level will require further coordination between the central and regional/local authorities to ease market players' concerns regarding the number of authorities involved in the regulatory process.

AGCOM currently has the powers prescribed under EC law, granted to it in Italy through national legislation. It has made extensive and effective use of its own-initiative powers in interconnection and access matters, as acknowledged by market players. The legislative framework provides for dispute/complaint procedures involving AGCOM and for AGCOM to act as mediator between the parties. Between May 2001 and April 2002 the conciliation mechanism was used in 13 cases of disputes between operators. AGCOM's intervention was successful in nearly half the cases (five out of thirteen); in only one case concerning access to the local loop did AGCOM issue a binding decision to resolve the dispute.

AGCOM's first years of activity have been marked by the difficulty of striking the right balance between, on the one hand, exercising its powers in an effective way to allow competition to develop and new technologies to be introduced and, on the other hand, adopting rapid yet complex decisions. Delays sometimes occur in completing procedures and inquiries, though the resulting measures are pro-competitive. The transparency of AGCOM's activity is ensured by administrative law and by AGCOM's own Regulations on access to documents, which define the range of documents to which access is granted (draft measures are not available to the public) and the Regulation on public consultations.

While the situation has improved as regards the putting in place of instruments aimed at preventing anti-competitive behaviour (e.g. AGCOM's Decision on equality of treatment and non-discrimination), effective enforcement of legal obligations has proved difficult and has still to be partially addressed. In some cases (e.g. implementation of changes to the RUO/RIO), AGCOM's intervention has involved long discussions with the incumbent and the new entrants, though this has helped reduce the number of court cases with the incumbent. Where operators fail to comply with its decisions, AGCOM can impose penalties under administrative law and under the terms of its Regulation. AGCOM has exercised its powers cautiously, and its decisions are not made public. Following the adoption of the dispute

settlement Regulation, AGCOM increased its activity (ten penalties imposed during the period May 2001 – April 2002).

The competent courts for hearing appeals are the *Tribunale Amministrativo Regionale* (TAR) and, in a second stage, the Council of State. Judicial review by the TAR is usually confined to verifying the legality of AGCOM's decisions; following the reform of the administrative judicial review system, the TAR can change the substance of a decision, as can the Council of State. The TAR can grant an injunction suspending disputed measures. It can take up to two years for the TAR to reach a final decision (as confirmed by the high number of cases still pending), a period which is considered too long. Between May 2001 and April 2002, 13 appeals were filed with the TAR in the field of telecoms. The TAR has delivered rulings in only half of these, in most cases rejecting them. Almost all the cases filed with the Council of State over the same period are still pending.

AGCOM currently has a staff of 225 people. Its budget is financed mainly from the State budget. Cooperation between the NRA and the national competition authority (*Autorità Garante della Concorrenza e del Mercato*) works well in practice. On the one hand, AGCOM regularly consults the NCA for non-binding opinions on key measures affecting the competitive conditions of the market (e.g. designation of operators with SMP) and on possible anti-competitive effects of bundled offers. Since September 2000, the NCA has been asked eight times to provide comments on draft AGCOM measures. At the same time, the NCA seeks AGCOM's advice in all merger cases in the telecoms and audiovisual field (AGCOM provided about forty opinions between October 2000 and June 2002).

The Ministry and AGCOM are legally and functionally independent of all operators in the telecommunications sector. The State's holding in the incumbent is limited to 3.46%. National and local utilities, directly or indirectly owned by the State, hold a significant interest in a number of players.

## **1.2. Management of numbers**

Under the law of 2001 which restored responsibility for issuing licences to the Ministry, it is the latter which assigns numbers to operators; AGCOM retains responsibility for producing the national numbering plan. There have been no complaints about the management or assignment of numbers.

## **1.3. Frequency management**

While the allocation and assignment of spectrum is dealt with by the Ministry, the management and regulation is dealt with by AGCOM. In the course of last year, additional frequencies were temporarily assigned to the 2G mobile operators. Further frequencies became available following the collapse of the fourth mobile (2G) operator and others have been freed by the Ministry of Defence; more frequencies will become available during the phasing out of the analogue service (TACS). Relevant criteria to be followed in future frequency assignment were adopted by AGCOM in September. Each operator will be entitled to use a maximum of 25 MHz. Frequencies will be assigned by the Ministry. At the end of September the Ministry set the spectrum charges for the additional 2G frequencies according to the criteria laid down by AGCOM.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offer (RIO)*

The RIO has been adapted yearly to evolving market needs and is now very comprehensive. The latest version, published in April 2002, is currently being reviewed by AGCOM, which is about to issue a Decision requesting some changes. On the positive side, we may note AGCOM's exercise of its own-initiative powers and an approach which has fostered service-level competition by providing access to a wide range of services over the last few years (first CS and CPS, then FRIACO, internet access numbers, etc.). Shrinking margins in the voice telephony market have shifted most discussion towards the introduction of measures to regulate the provision of new value-added services. In this respect, access to premium services provided by the new entrants remains an open issue, involving fixed and mobile operators (AGCOM has just started an inquiry concerning possible discriminatory practices in respect of the economic conditions offered by mobile operators to the new entrants), TI (concerning charges for billing and bad debt) and content providers. The legal uncertainty arising from the lack of precise regulatory measures (including a clear distribution of tasks between AGCOM and the Ministry) should be dealt with by a Regulation that the Ministry is about to adopt under national law. This should be supplemented by AGCOM's Decision on the RIO, regarding, *inter alia*, billing and bad debt charges.

In April 2002, Parliament adopted Law No 59/02 regulating access to the internet and made provision for AGCOM to identify operators with SMP in this market, which is not identified as such in the current EC framework. AGCOM has identified two markets (retail access to internet from fixed networks and wholesale dial-up call termination on internet) and has designated two operators as having SMP (and therefore subject to regulatory obligations). The measure could fall within the scope of application of the new framework and be notified to the Commission. AGCOM indicates that this measure will be reviewed following the market analysis due for the application of the new framework.

#### *2.1.2. Interconnection charges, fixed and mobile*

Since 2001, interconnection charges have been based on current costs. They are below the EU average for all three levels of termination, this difference being particularly marked at local level (16% below EU average) where reductions imposed by the regulator were designed to foster increased competition in this market segment. The cost of interconnection services has fallen since last year for most services. New entrants claim that TI's strategy is designed to increase the cost of intermediate services corresponding to retail services subject to competitive pressure. AGCOM's assessment (currently being adopted) - based on implementation of the principle of equal treatment - should address the problem.

Meanwhile, with regard to the RIO for 2003, AGCOM has decided to introduce a price cap system to be applied to TI's interconnection charges. Furthermore, regulatory accounts for the year 2002 will move to the LRIC system. Detailed arrangements for the 'network cap' are now being worked out, following the public consultation which ended in September 2002. The system should provide greater predictability of interconnection charges and swifter adoption of the RIO. Although the offer and its modified version have retroactive effect from the beginning of the year, the RIO was published late and then modified, after long discussion, towards the end of the validity year, complicating the cost-planning activities of the new entrants.

### *2.1.3. Fixed to mobile call termination*

Call termination on mobile networks has been regulated since December 1999, when AGCOM introduced an upper benchmark for the weighted average termination charges of the two mobile operators with SMP in the national market for interconnection. Following competitive pressure, termination charges have been voluntarily brought below the upper benchmark; the termination charges of the two notified operators are just above the EU average (peak calls) of operators notified as having SMP in the national interconnection market. This represents progress since the period covered by the 7<sup>th</sup> Report, which singled out Italy as one of the EU Member States with the highest termination charges. Nevertheless, the level of mobile termination charges and the regulatory regime remain the subject of much discussion, with fixed operators contesting the level of 'on-net' call charges applied by the mobile operators, which they believe point to clearly discriminatory practice.

AGCOM has begun a process to orient termination charges more closely to costs. A price cap system on the termination charges of the notified operators is about to be introduced. This should progressively bring down mobile termination charges and reduce the upper benchmark for termination charges. This system will be applied from 1 January 2003. AGCOM's forthcoming decision has been preceded by the creation of an accounting system for mobile operators (FAC, historic costs) and the assessment of the mobile operators' past accounting data (2000). A working group has been set up to formulate guidelines for producing current accounts for the year 2001 and a methodology based on LRIC for the year 2002.

### *2.1.4. FRIACO*

FRIACO has been available since January 2002. TI's initial offer was reviewed by AGCOM in March 2002, then included in TI's RIO for 2002. The service is available at different levels, and traffic overflows are allowed. The monthly prices for provision of the service appear to be in line with comparable offers in other EU countries. Except for the price, no complaints have been reported regarding the implementation of FRIACO, demand for which appears to be low. Four contracts have been signed.

## **2.2. Interconnection leased lines / partial circuits**

In general terms, the monthly rental of partial circuits up to 5km is considered to be set at reasonable cost-oriented prices. AGCOM stipulated their inclusion in TI's RIO from 2000, establishing the monthly rental at the price ceiling set in the Commission's Recommendation for all capacities and distances. The only exception is 64kbit/s circuits of up to 5km in length, which are 20% more expensive than the corresponding price ceiling. The offer applies to all main data lines, from 64kbit/s up to 155 Mbit/s. However, in the recent past AGCOM has been called on to clarify the definition of the service (e.g. regarding the location of interconnection points) so to ensure the effective availability of the service in TI's RIO, in accordance with its decisions. While new entrants are still experiencing problems with the practical implementation of the offer (e.g. prices for circuits longer than 5km, inclusion of other costs relating to additional devices, application of SLAs), TI's RIO now provides access to a facility where there is limited competitive pressure.

## **2.3. Unbundling**

### *2.3.1. Reference Unbundling Offer (RUO)*

AGCOM has put much effort into providing an effective framework for unbundling and into defining rules for collocation. The latest version of the RUO, dated April 2002, is currently

being reviewed by AGCOM. In the last two years, AGCOM has intervened actively to obtain effective implementation. As a result, 31 agreements have been signed for local loop unbundling, and only two for shared access.

The price of full unbundling has fallen since last year, to well below the level of the line rental for both residential and business customers. TI's offer included significant cuts in the monthly charge for several services (shared access, sub-loop, etc.). In mid-September, TI further reduced the charges for other services (e.g. verification/conformity of the copper line, -74%) and for shared access, which is now set at €2.8 per month, the lowest price in the EU (against €7.33 offered last year). Also, the charge per full unbundled loop and the monthly average total cost are below the EU average and appear to set the conditions for competitive offers by new entrants in local access.

### *2.3.2. Collocation and effective implementation*

As a result of the work described above, local loop unbundling has progressed significantly, notably in terms of the number of unbundled lines and the sites made available. There were about 82 000 unbundled lines at the end of September 2002 (compared with about 1 000 in the same period the previous year), the second highest number in the EU. Shared access and sub-loops have been available to new entrants since the end of 2001, and the above mentioned price reductions could encourage a breakthrough for these services, which have yet to become popular (only 19 shared lines). The characteristics of sub-loop unbundling, which on the one hand requires wide network coverage and on the other has a significant impact from the technical point of view, have led operators to concentrate their efforts on full unbundling. At present, therefore, no sub-loops are controlled by new entrants.

By the end of September 2002, 981 sites had been made available to other operators (and others are being prepared), 513 sites had been taken over by the new entrants, and only in 321 sites had lines been activated. In practice, this means that some 50% of TI's clients could be targeted by new entrants' offers. AGCOM has carried out two rounds of inspections, visiting about 30 locations, without reporting major problems. The initial phase of the process was marked by significant delays in delivery of sites and quite a high number of rejected orders; at present, due to the difficult economic situation, new entrants are not always able to take control of the sites prepared and the number of operators effectively active is likely to be lower than the number of agreements signed. While there are clear positive developments and the service has been effectively implemented, new entrants still complain about some specific aspects, currently being discussed in the unit monitoring the implementation of ULL, CPS and NP (e.g. the criteria used for cost sharing, the information system, penalties, daily activation, total cost of the service).

## **2.4. Bitstream access**

### *2.4.1. Non-discriminatory access*

Non-discriminatory practice and equality of treatment between TI's retail division and the wholesale conditions offered to new entrants remain the key issue in the bitstream access market. TI has been rolling out ADSL at an increasing pace since being authorised to launch a retail service at the beginning of 2000. AGCOM (and the NCA) has intervened in several cases to set wholesale offers which offered a level playing field for new entrants (e.g. a wholesale offer for flat HDSL was included only at a later stage in TI's wholesale offer, while TI was already providing a semi-flat offer for this service and new entrants alleged possible anti-competitive practices). Under a mechanism put in place in 2000 to prevent possible

abuses and market pre-emption by the incumbent, TI is not authorised to launch a new offer on the retail market until a wholesale offer comparable to the retail one is available and has been approved by AGCOM. The economic conditions are based on the retail minus principle. AGCOM successfully applied this mechanism in July 2002, when it blocked a new retail offer by TI (volume-based price, complementing the existing 'flat' offer). The offer was authorised in September following AGCOM's intervention after TI reduced its wholesale and unbundling rates. TI was asked to lower some prices in the RUO for the provision of ADSL services and the provision of individual lines, since the lots mechanism placed an unnecessary burden on new entrants. The wholesale offer therefore includes quite a few features (flat, volume-based price; ADSL, HDSL, SDH, ATM transport, etc.) and several discounts to allow the development of the service. Moreover, AGCOM's June 2002 decision on equality of treatment established the main criteria, including strict accounting separation rules, to ensure that non-discriminatory conditions are applied to the new entrants and to TI's retail division. Nevertheless, new entrants systematically complain that wholesale offers do not allow them to compete with TI on an equal footing and express concern at TI's provisioning practice.

The latest figures supplied by AGCOM show that at the end of September 2002 TI had 475 000 DSL lines, most of them, surprisingly, on the consumer market, reflecting the success of broadband with consumers; 105 000 lines were offered on the retail market by the new entrants via TI's wholesale offer. Furthermore, new entrants are offering DSL via unbundled loops (about 60% of ULL lines activated are used to offer DSL services) and are thus offering another 42 300 DSL lines on the retail market.

#### 2.4.2. *Tariffs*

Most of the issues referred to above regarding the principle of non-discrimination and the replicability of TI's offer apply to tariffs, reflecting the importance of price competition for market players. The regulatory regime and the legislative provisions on equality of treatment include some price tests to verify the existence of margins allowing the new entrants to compete on the retail market. However, new entrants have called on the regulator to stop TI's new ADSL wholesale offer, authorised in September, pointing out that the retail offer ("*Alice Time*") was based on a different pricing scheme (per second of connection, still not available at wholesale level) and alleging possible price squeeze and bundling of services.

### 2.5. **Overall (broadband) regulatory situation**

#### 2.5.1. *Status of DSL market, position of the incumbent*

TI has continued to use its market position to roll out retail high-speed internet services. The total number of ADSL customers, estimated at 623 000, shows demand take-off. The incumbent still enjoys a dominant position and has a large market share (over 75%), mainly built up in past years when new entrants did not have access to comparable wholesale offers, something which the NCA has penalised. Implementation of local loop unbundling is providing an effective way to compete for the provision of broadband access, since 60% of unbundled lines are used for the provision of DSL services. Thus, according to some estimates, TI's market share has fallen slightly since last year. As described in the previous section, AGCOM has been active in seeking to prevent anti-competitive offers and ensuring the replicability of offers at the wholesale level.

#### 2.5.2. *Development of alternative means of access*

The cable TV network has still limited deployment and cannot be considered an alternative means of access. One operator is deploying an extensive access network, reaching about one

million potential subscribers. This is to be added to 12.5 million potential subscribers connected to main distribution frames already opened to local loop unbundling. In total, it is estimated that 0.5% of subscribers are now using a provider of direct access other than the incumbent operator. Furthermore, there are some 60 000 broadband (asymmetric) connections via satellite, offered by one operator. Even though this technology might not be considered a competitive challenge to the incumbent, it represents an important alternative for customers living in remote areas (mountains, rural areas) commercially less attractive to fixed operators.

Other services have yet to take up. WLL services were licensed in July 2002, mainly at regional level. Four operators have just started to offer the service. The provision of R-LAN services to the public is being tested by two operators (see “Authorisations” section), which means the service is not yet commercially available to customers.

## **2.6. Leased lines**

### *2.6.1. Pricing*

AGCOM has intervened to regulate the pricing, quality and provision of TI’s leased lines service (retail, wholesale, partial circuits). As regards national leased lines, a wholesale offer was introduced in October 2001 and revised in March 2002 with a view to ensuring effective competition in the offer of circuits or data services to end-users. The wholesale offer is based on a retail minus principle and is available for both ISPs and telecommunications operators. Despite the fact that the structure of the wholesale offer is the same as for the retail offer, new entrants have drawn the regulator’s attention to the fact that TI’s retail offer differs from its wholesale offer, particularly in terms of the prices and discounts TI offers on the retail market. Part of the wholesale offer may therefore be further reviewed by AGCOM. While the regulatory measures described above are viewed positively by new entrants, the market for long distance leased lines is still characterised by competition focusing on certain destinations only (lines between the major cities) while only the incumbent and its major competition have installed capacity connecting other destinations/routes.

AGCOM considers that the market for international leased lines is characterised by a higher level of competition. This is also partially reflected in TI’s latest offer (end of 2001), which reduced tariffs for most routes. In the light of the above, AGCOM has launched a public consultation to assess whether the regulatory regime in place needs to be adjusted in the light of increasing competition in the market.

### *2.6.2. Delivery period, non-discrimination*

Regarding delivery times and the provisioning process, there appears to be a mixed picture. According to the data provided by Italy for the Commission’s 2001 Leased Lines report, the mean delivery period for leased lines is 61.3 days for lines with a capacity of 34Mbit/s or higher, 36.5 days for 2Mbit/s lines and 24.4 days for 64 kbit/s leased lines. The AGCOM decisions referred to above have also concerned SLAs and provisioning. However, new entrants have expressed concern to the regulator regarding delivery periods, the transparency of the process (status of the order, activation date, etc.), and the effectiveness of SLAs. Indeed, in 2002 AGCOM has completed an inquiry concerning TI’s compliance with the SLAs, observing that TI did not pay the penalties in the event of late delivery and assurance.



## **2.7. Numbering**

### *2.7.1. Carrier selection (CS) and pre-selection (CPS)*

The spread of these services shows the degree of market openness (CS and CPS lines are respectively over 25% and 10% of the total number of lines). New entrants have filed a complaint with AGCOM regarding TI's tactics for winning back the new entrants' CPS customers, referring to a possible exchange of information between the retail and network divisions. AGCOM has carried out a specific inquiry on the matter, penalising TI. A new inquiry was started in June 2002 following complaints by some new entrants concerning the disconnection of pre-selected customers. Generally, AGCOM has received thousands of complaints from customers concerning unsolicited activation/deactivation of CPS services by telecommunications operators; as a result, it opened an inquiry in September 2002.

### *2.7.2. Number Portability (NP)*

As regards fixed portability (NP), the total number of ported numbers is growing only slowly and few numbers have been ported so far. However, progress with unbundling is having a positive effect on the number of ported numbers. No major complaints have been reported in this respect.

MNP was introduced on 30 April 2002 anticipating the application of the new framework, although some operators fully implemented MNP from 1 July only. One 3G operator has not signed the framework agreement for divergences in service cost and duration of the procedure. These have been progressively reduced, although the procedure still takes longer than the five days stipulated by AGCOM. AGCOM has intervened in those cases where off-net tariffs were still applied after the change of network and where procedures were not effective. At the beginning of October, only a fraction of mobile numbers had been ported (156 000 out of a total of 54 million, including non-active SIMs).

## **2.8. Cost accounting and accounting separation**

Progress has been made in formulating an accounting policy for both fixed and mobile operators. The key criteria were laid down in AGCOM's May 2002 Decision on equality of treatment, including the adoption of current costs for all services from the 2001 accounts (local loop charges are based on historic costs) and the introduction of LRIC from 2002, although AGCOM will be laying down detailed principles in this respect in a future decision. Furthermore, detailed principles for accounting separation have been introduced to prevent possible discriminatory practice in respect of the conditions offered by TI's network and retail divisions.

Progress has also been made in AGCOM's monitoring of TI's accounting system. The scope of the audit has been comprehensive; accounting separation has been implemented and the preparation of separate accounts includes all key elements (transfer charges, costs, etc.). AGCOM has published the compliance statement and extensive information on TI's costing and accounting separation models for the 1999 accounting year. However, the delay in appointing the auditor has hampered the verification of TI's accounts. The audit for 2000 did not start until August 2002 and is due to be completed in January 2003. Accordingly, infringement proceedings have been instituted against Italy in respect of the verification of TI's accounts for the year 2000 and the publication of the compliance statement.

The two leading mobile operators have delivered the accounting data (based on historic costs) for the years 1999 and 2000 so that the NRA can check their compliance with the principle of

cost orientation. The results of the audits for the 2000 accounts are not expected until March 2003. According to the accounting policy set out by AGCOM, the 2001 accounts of the two mobile operators will be based on current costs, while the 2002 accounts will have to be based on an LRIC model.

### **3. AUTHORISATIONS**

#### **3.1. Licence conditions**

In general terms, the regulatory systems for granting authorisation and licences are fully in place. The Ministry has been the granting authority since last year (licences and authorisations were previously issued by the NRA). Authorisations and individual licences have been awarded for the provision of all services, except public use W-LAN, currently undergoing trials. The duration of all individual licences has recently been extended from 15 to 20 years, following the adoption of a Decree in August 2002, so as to allow longer amortisation of operators' investments. It has been confirmed that the TACS licence will not be extended beyond the deadline for phasing-out. The tax on the turnover of telecommunications operators has been referred to the European Court of Justice for a preliminary ruling.

The conditions and the fees set by national legislation have allowed market entry, and for all kind of services the number of licences awarded far exceeds the number of operators actually offering services in the marketplace. The total number of licences granted for fixed services at national or local level (voice telephony, network services, etc.) is around 200; about 60% of these licences are for the provision of voice telephony services (in some cases over self-operated networks), while the rest are for the provision of network services only. However, the number of operators actually active in the market is significantly lower: 75 operators in total offer voice telephony services, most of them providing international and long-distance services only. As regards network services, the total number of operators actually active on the market was estimated at around twenty in August 2002, most of them offering trunk connections.

As regards mobile services, one licence has been withdrawn following the collapse of the fourth mobile (2G) operator, reducing to three the number of GSM operators active in the market. As a result, there are five mobile network operators in total (three authorised to provide both 2G and 3G services, two authorised to provide 3G services). In practice, the 3G licensing process produced two new entrants in the mobile market.

About seventy licences were awarded in July 2002 for the provision of WLL, fewer than were available. Almost all the awarded licences were for the provision of services with regional coverage; none of the licences was granted to the incumbent (TI has been prevented from providing services for the next four years). Four operators are active on the market.

The granting of authorisation to provide W-LAN services to the public is still an open issue and a clear regulatory framework has yet to be established. Though currently formulating a set of rules, the Ministry as yet only allows private use of W-LAN; it has authorised testing of the services to the public in October. Several steps are envisaged: a modification of the National Frequency Plan, the adoption of regulatory measures (including a public consultation) and the award of general authorisations. The Ministry intends to take into account the possibility of site and infrastructure sharing and to ensure that W-LAN services will not hinder 3G service. However, concerns have also been expressed that in so doing it may discriminate against W-LAN technology to protect the investment of 3G network operators.

Satellite operators are calling for a further simplification of the licensing conditions, particularly as regards the awarding of individual licences for satellite operators providing the same service to different customers/networks, and the fees charged. Also, the Italian authorities plan to review fees when transposing the new framework.

### **3.2. Rights of way**

Obtaining rights of way (for both fixed and mobile networks) has been an area of concern for Italian market players since the liberalisation of infrastructures. However, the Government has adopted (August and September 2002) two important texts designed to meet most of the concerns expressed by the new entrants, who have appreciated its efforts in this respect. The new legislative provisions are a significant step forward as they harmonise the different regional laws in this matter (concerning antennas, fixed networks, backbone networks), simplify the procedures for deploying infrastructure, reduce the time it takes to obtain an authorisation, harmonise the level of digging fees imposed by the local administrations prohibiting the charging of other fees, and provides for the construction of vertical ducts in new buildings. The installation of antennas (UMTS and with power below 20 volts) is greatly simplified. These legislative provisions are particularly timely given the financial difficulties of many operators and the consequent fall in investment in new broadband networks reported at the end of 2001.

Few aspects of the complex issue of rights of way remain unresolved at the date of application of the new regulatory package. Some problems have arisen regarding the possible granting of discriminatory rights where local authorities retain control or ownership of undertakings operating telecommunications networks and services. In addition, new entrants have found it difficult and costly to obtain rights of way from ANAS, the State department maintaining national roads.

One specific aspect of the general issue of rights of way is access to civil infrastructure (ducts), which should also be seen in the light of the absence of an extensive cable network covering the country. In the context of the TI-SEAT-TMC merger case, TI was required by the NCA to provide access to its civil infrastructure. A few contracts have been signed between TI and other network operators in this specific context. However, there is no specific provision in Italian law providing certainty regarding the rights of all players in this respect, although - according to TI's licence - guidelines for civil infrastructure sharing should have been issued by March 2001.

The effective implementation of mobile site and mast sharing has been seriously affected by the Italian legislation on electromagnetic emission, especially in urban areas. The Ministerial Decree of September 1998 laid down, on a temporary basis, exposure limits significantly stricter than the limits indicated by the relevant Council Recommendation of 12 July 1999. Moreover, some local authorities (regions, municipalities, etc.) have introduced stricter target limits for electromagnetic emissions than those set at national level, further complicating the situation. Further legislative measures have been introduced since then and more are expected in 2003. However, it remains difficult to see whether these legislative provisions will produce the right balance between the powers of local authorities, which aim to establish strict requirements to protect the health of their populations, and the interests of mobile operators. In this respect, the introduction of federalism following the modification of the Constitution appears to leave further discretion to the local authorities.

## **4. UNIVERSAL SERVICE/CONSUMERS**

### **4.1. Retail tariffs**

The regulatory regime for retail tariffs is based on a price cap system, which, according to the data published in AGCOM's annual report, has brought about a general reduction in average consumer expenditure. In practice, the substantial increase in the line rental and the activation fee has been offset by more than proportionate reductions in call prices. In this context, AGCOM's approval of TI's voice telephony tariffs is based on the price cap, which will be applicable until the end of 2002. The price cap was last amended in 2000, notably as regards the sub-cap on the monthly rental (set at 6% plus inflation), which was confirmed in 2001. This amendment has ensured significant progress in the rebalancing of retail tariffs towards costs and the process is almost complete. TI still considers there to be an access deficit, albeit a fraction of the one reported at the beginning of the process. The margin between the unbundled loop and TI's line rental for residential customers is around 12.5%. AGCOM will review the existing price cap system in the light of the introduction of the price cap on network services.

An important regulatory development is the systematic introduction of price tests to verify TI's retail tariffs, in the context of the principles laid down in the Decision on equality of treatment. AGCOM's decision has been welcomed by market players, given their concerns regarding possible anti-competitive practices by the incumbent in the retail market, notably concerning discounts and offers to large customers. AGCOM penalised TI on this count in 2001, following a complaint filed by a large group of new entrants.

However, the above mentioned tariff trends only partly reflect the actual fall in tariffs as they are based on the tariffs of the incumbent operator, which are constrained by the restrictions of the price cap. The actual dynamic of retail tariffs would show a far sharper fall in price as a result of competitive offers and the wide range of tariff options (flat, discount packages, semi-flat, etc.). Average voice telephony tariffs in Italy have fallen by some 33% since liberalisation, while sharper reductions have been reported in some specific markets. Market players are of the opinion that the possibility of competing on price is in conflict with the obligation for all operators (fixed and mobile) to communicate retail offers in advance to AGCOM (the period of public notice before the implementation of tariff changes is set at 30 days).

Regarding the special tariff scheme for disabled and social needs customers, AGCOM set out a targeted tariffs scheme in 2000 for the provision of voice telephony services to disabled customers and customers with special social needs. This framework was integrated and amended in the course of 2001. By August 2002, more than 100 000 customers had applied for this tariff scheme. AGCOM has launched a campaign to inform the public about this opportunity by displaying a notice on the application procedures in 1 000 postal offices.

### **4.2. Funding schemes**

National legislation provides for the establishment of a scheme to fund the compulsory provision of universal service. The mechanism for calculating and verifying TI's net cost has been in place for two years. In April 2002, TI filed its evaluation of the net cost for the year 2001. The details of TI's estimate, which is being verified by an external auditor, are not available; however, TI's request is lower than that made for 2000. For 2000, AGCOM estimated the net cost to be €58.9m, 5% down on the previous year. The sharing mechanism, which includes fixed and mobile operators, has not been a barrier to the entry of new entrants,

which are exempted from contributing to the fund. One operator successfully appealed to the Court against AGCOM's Decision concerning the calculation of the USO net cost for the year 1999. The appeal concerned the transparency of the procedure AGCOM followed in assessing the net cost of the USO. As a consequence, AGCOM has adjusted the procedure for calculating the net cost, providing wider access to the methodology and analysis of the auditor, postponing the July deadline previously set for its estimation of the net cost. For the time being, TI has received no compensation from the other operators (except from TIM). The operators are calling for the cost of universal service to be covered by the general State budget.

A recent AGCOM Decision introduced the possibility of allocating universal service obligations concerning directory services and directory inquiry services via a competitive selection procedure, a possibility mentioned in the new regulatory framework. However, this possibility has not yet been put into practice.

#### **4.3. Universal directories**

In 2002, the NRA laid down the criteria for creating general directories, pursuant to the general provisions of Presidential Decree No 77 of January 2001. Fixed operators are finalising an agreement on the establishment of a logic database interconnecting each operator's numbering databases. The logic database will replace the current system whereby the numbers allocated to new entrants – quite a few before the effective implementation of ULL and NP – are inserted in TI's database. Arrangements for protecting subscribers' privacy during the collection and management of numbers have been worked out jointly by AGCOM and the Data Protection Authority. Access to TI's database is provided free of charge, in accordance with measures laid down by the NCA in the context of a merger case. The numbers of mobile operators should be included in the logic database by the end of 2002, i.e. later than required by Community law. The database will also include mobile pre-paid numbers, which represent about 90% of total customers. According to AGCOM, this makes it harder to establish the operational modalities of the database and requires a longer implementation period; the opt-in system provided for by the new Data Protection Directive has further complicated the inclusion of mobile operators' numbers.

#### **4.4. Itemised billing and quality of service**

The key provisions concerning itemised billing and quality of service were transposed into national law in January 2001. AGCOM established the detailed implementation arrangements in May 2002; the service is available at no extra charge to customers and is offered by TI as well as by the main fixed and mobile operators. No concerns have been raised in this respect. As regards quality of service, the NRA has the power to set parameters and performance targets. AGCOM is currently carrying out an evaluation. However, no problems are reported in this regard.

### **5. DATA PROTECTION**

#### **5.1. Implementation / Traffic data retention**

Data protection is the responsibility of the Data Protection Authority. The adoption of a Decree in December 2001 substantially completed the transposition of Directive 97/66/EC, thus finalising the arrangements for the presentation of calling line identification and calls to emergency services.

The December 2001 Decree enhances telecoms service providers' use of alternative methods of payment allowing anonymous access to public telecommunications services (such as calling cards). The effective availability of alternative methods is important, as it would allow the user to make telephone calls which would not be listed in itemised bills. In practice, this measure is complementary to the deletion of the last three digits from called numbers in itemised bills, currently provided for by Italian law, a measure contested by both consumers and operators. The Data Protection Authority has carried out an inquiry aimed at verifying the effective availability of the alternative methods of payment referred to above. Pre-paid cards are offered by most fixed and mobile telecommunications operators. It is also possible to receive non-itemised bills.

Data may only be stored for billing purposes as long as the bill can be challenged. The Civil Code stipulates that this period may not exceed five years, which is therefore the maximum period permitted for the storage of data. The Data Protection Authority and AGCOM have jointly drawn up arrangements to ensure the privacy of personal subscriber data contained in subscriber directories. Subscribers will have to be informed of the use and the purpose of the directory and new subscribers will have an opt-in mechanism (old subscribers will remain in the public directories unless they request deletion).

Lastly, the December 2001 Decree furthers the possibility of a regulation based on codes of conduct. The Decree requires the Data Protection Authority to encourage the adoption of a code of conduct for communication and information services, including those provided for on the internet. The codes will be published, under the responsibility of the Data Protection Authority, in the State Gazette.

## **5.2. Unsolicited calls, e-mails and faxes**

In transposing the relevant legislation, Italy has implemented an opt-in approach. The Data Protection Authority has had to intervene regarding unsolicited sms and spamming. For the three kinds of communication referred to above, the opt-in approach is applicable to both natural and legal persons, with written consent.

## **6. MOBILE ISSUES**

### **6.1. Roll-out of 3G**

The regulatory system for the provision of 3G services is in place. This includes licence obligations and asymmetric regulatory measures to enable new entrants to compete with 2G operators with a 3G licence. According to the licence conditions, 3G mobile operators must cover 20 regional capitals by the end of June 2004 and all the main provincial capitals by the end of 2006. In practice, these obligations are in line with the network deployment plans of an operator wishing to offer services on a relevant national basis in a reasonable period of time. Besides coverage obligations, AGCOM has set out some regulatory measures aimed at facilitating the market entry of 3G operators not active in the 2G market. These measures include the obligation for mobile operators with SMP in the 2G market to provide cost-oriented roaming to new entrants in the 3G market. This obligation is linked to the new entrant's deployment of its network and is valid for a limited period of time. In this respect, two national roaming agreements have been concluded between the new entrants in the 3G market and 2G operators, but none of them has become operational yet. No agreement has yet been reached concerning the sharing of network infrastructure. 3G to 3G roaming is allowed on a commercial basis only.

The duration of all individual licences, including 3G licences, has been extended from 15 to 20 years, a decision which has been welcomed by the market players. There has been no change in the geographical coverage requirements. Testing of 3G services is being carried out. One 3G operator not active in the 2G market has given back to the Ministry the additional frequencies which the Ministry had made available to new entrants. However, it appears that health and environmental concerns are making roll-out difficult (see section on “rights of way” for developments in this regard).

## **6.2. Analogue phase-out**

As regards analogue phase-out, in September 2002 AGCOM set the timetable for the progressive freeing of the spectrum band allocated to the analogue service (TACS). Once available, the band formerly used by TACS will be allocated for the provision of GSM services. The deadline for phase-out (31 December 2005) is confirmed.

## **7. PREPARATION FOR TRANSPOSITION OF THE NEW FRAMEWORK**

In August 2002, the Government was required by law to transpose the new regulatory framework. The Government is aiming to prepare one act unifying all existing legislation in the field of electronic communications networks and services. A first draft of the new legislation was prepared in August. Opinions on the draft will be required firstly from the Committee created by the Ministry to set out policy in the field of broadband, digital TV, interconnection and internet, and then from the relevant authorities. Interested parties (NRA, NCA, operators, users) will be invited to take part in a public consultation.

AGCOM has already adopted a plan concerning the analysis of the relevant markets. Collaboration with the NCA is considered a key part of the process and could be detailed in an *ad hoc* protocol

## 3.9 LUXEMBOURG

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

As set out in previous reports, regulatory tasks in Luxembourg have been split between the Ministry of Communications and the “Institut Luxembourgeois de Regulation” (ILR). The Ministry of Communications is responsible for the award of licences and for establishing the list of operators with significant market power, in both cases on the basis of a proposal from the ILR, as well as for adopting the frequency allocation plan and assigning frequencies, supervising their use and defining any compensation for universal service. All other regulatory tasks are assigned to the ILR.

The independence of the regulatory authority from the incumbent, including the Ministry of Communications, has been ensured since a government reorganisation which took effect on 11 August 1999 and a reorganisation of the Board of Directors at the end of 1999.

Although the ILR has a total staff of 30 persons, it has only a very limited staff equivalent to 5 full-time employees performing tasks in the telecommunications sector. It has relied on the assistance of external experts to examine the incumbent’s cost accounting system and data. However, very limited progress has been made to date in assessing the incumbent’s cost accounting practice.

At the hearing of 1 October 2002 on the status of the telecommunications market in Luxembourg, consumer organisations were also in favour of an increase in staff at the ILR, in particular with a view to enabling the ILR to establish a consultation procedure for consumer groups.

Appeals do not appear to lead to delays in the implementation of the ILR's decisions. Under the Law on administrative organisation (*Loi du 7 novembre 1996 portant organisation des juridictions de l'ordre administratif*), operators can appeal against the ILR's decisions to the administrative courts.

#### 1.2. Management of numbers

The ILR adopted the national numbering plan on 19 April 1999 and is responsible for its application. Under the plan, all newly attributed numbers were to have 8 digits, while the shorter 6-digit numbers previously used were not changed to the new format.

#### 1.3. Frequency management

The frequency allocation and assignment plan (Regulation of 10 March 2001) was published in the Official Journal on 12 July 2001. Responsibility for frequency management is split between the ILR and the Ministry of Communications, with the Ministry responsible for the award of the licence, including frequency assignment. The ILR laid down procedures for the assignment of frequencies (Decision of 16 June 1999 on frequency assignment; Decision of 28 June 2001 on the procedure applicable to the granting of a licence for radio-messaging) and organised the public tender for the award of 3G licences (published in the Luxembourg Official Journal of 2 February 2002).



Only three of the four available 3G frequency blocks have been assigned. One DCS 1800 block was offered in a public tender but could not be assigned for lack of a bidder.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference interconnection offer*

EPT's RIO comprises interconnection at two national and three regional points of interconnection.

In its decision of 19 July 2002, the ILR decided to approve the technical elements of the RIO 2002 proposed by EPT in December 2001, but required EPT to modify certain other aspects. EPT was ordered, for example, to offer regional interconnection to non-geographical numbers, thereby addressing new entrants' previous concerns that the RIO had limited regional interconnection to geographical numbers only. The conditions and tariff offered for interconnection to provide internet access are those of the general interconnection charging system.

However, interconnection tariffs for 2002 have not yet been approved (see next paragraph).

#### *2.1.2. Interconnection charges [cost-orientation; cost standard]*

The incumbent filed its RIO 2002 to the ILR at the end of December 2001. However, the ILR considered the cost accounting data submitted insufficient to enable it to approve the proposed interconnection tariffs. In its decision of 6 May 2002, the ILR set out the points with which EPT had to comply with regard to cost separation, the cost accounting system and the data submitted for tariff approval. The ILR also concluded in its decision that the cost accounting data submitted were insufficient to enable it to examine whether the proposed tariffs were cost-oriented and that it was therefore not in a position to decide on the interconnection tariffs. The incumbent subsequently submitted additional information. However, after a study by an external consultant, the ILR stated in its decision of 19 July 2002 that the documentation provided was still not sufficient to approve the 2002 interconnection tariffs and issued a warning ("avertissement"), the first sanction provided for by the Telecommunications Law for non-compliance with the ILR's decisions.

Pending the approval of the RIO 2002 by the ILR, the tariffs proposed by the incumbent in its RIO 2002 are applicable. The current tariffs at peak hours are 1.02 cents/min plus a call set-up charge of 0.42 cents at regional level, and 1.32 cents plus a call set-up charge of 0.55 cents at national level, which represents a reduction compared to the 2001 tariffs. Those tariffs, however, are still among the highest compared to other Member States

The current tariffs are subject to revision by the ILR with retroactive effect from 1 January 2002.

The fact that the 2002 interconnection tariffs have not yet been approved creates uncertainty on the market. However, the ILR has made clear its commitment to implementing cost-oriented interconnection tariffs, backed by cost accounting data complying with the principles set out in its decision of 6 May 2002. In its Recommendation of 22 February 2002 (OJ L 58 of 28 February 2002, p. 56), the Commission also proposed reliance on cost accounting data rather than a benchmark.

Furthermore, a complaint was filed to the ILR concerning a price squeeze between the incumbent's retail tariffs and the applicable interconnection tariffs. In its decision of 27 September 2002, the ILR concluded that the RIO 2002 interconnection tariffs did not leave a sufficient margin for operators to enter the market, that the retail tariff was unreasonably low compared to the interconnection tariff and that EPT's retail tariffs must therefore be regarded as predatory. The ILR ordered EPT to reduce the interconnection tariffs from 1 January 2003 by 20.06% and to include this reduction in its (forthcoming) RIO. The ILR based the reduction on a margin calculation. The decision does not, however, constitute approval of the RIO tariffs.

### *2.1.3. Fixed to mobile call termination*

The peak-time mobile termination rates of the two mobile operators, LuxGSM and Tango, are in the lower band, with four countries having lower termination rates (Austria, Finland, Sweden and the UK).

### *2.1.4. SMP designation*

EPT Luxembourg has been designated as having SMP in the fixed wired market.

In its decision of 21 June 2000, the Ministry of Communications decided that the two mobile operators have SMP in the mobile market. No mobile operator has been notified as having SMP in the national interconnection market.

This decision was taken following an opinion issued by the ILR on 17 December 1999 based on the market share ceiling of 25% and further criteria set out in the Interconnection Directive. The ILR did not, however, communicate the market shares of mobile operators in the national interconnection market.

### *2.1.5. FRIACO*

The incumbent does not currently offer competitors flat-rate internet access. Flat-rate offers for customers are available from the incumbent and alternative operators.

## **2.2. Interconnection leased lines/partial circuits**

### *2.2.1. Availability*

The RIO also includes interconnection leased lines (half links).

In its decision of 19 July 2002, the ILR also approved the technical part of the RIO concerning interconnection leased lines, while requiring ETP to include certain information in its RIO (on the capacity of certain lines and on access points).

In its decision of 28 June 2001, the ILR had, on a provisional basis, approved the tariffs proposed by EPT for interconnection leased lines. The level of those tariffs is comparable to the average for the other Member States, with five countries (Denmark, Germany, Ireland, Finland and Sweden) having lower tariffs for partial circuits (2km 64 Kbit/s and 2 Mb/s).

## **2.3. Unbundling**

### *2.3.1. RUO*

The conditions in the RUO for full unbundling appear to be complete. Unbundling is still in its early stages. One operator has concluded an agreement for full unbundling. Shared access does not appear to fully correspond to market needs, in particular with respect to the relatively high level of one-off fee charged by EPT. No agreement had been concluded as of 1 October 2002.

In its decision of 28 June 2001, the ILR approved the RUO without a time limit, subject to future changes being made where necessary. In its decision of 28 June 2001, the ILR also set the monthly rental for full unbundling at €13.26 for voiceband usage and €15.79 for broadband usage, and asked EPT to include in its RUO conditions for shared access.

The RUO also contains an offer of shared access at a monthly charge of €7.54. This tariff was fixed by the ILR in its decision of 28 June 2001 (Decision 02/43/ILR).

### *2.3.2. Collocation conditions and effective implementation*

The RUO contains an offer for collocation at all Main Distribution Frames (MDF) in Luxembourg. Some EPT collocation sites do not have sufficient space and alternative solutions are provided in those cases. EPT does not offer co-mingling.

One operator initiated an interconnection dispute settlement procedure to obtain the right to sub-let collocation rooms and to obtain different air conditioning conditions in collocation rooms for interconnection than for unbundling. In its decision of 19 September 2002, the ILR stated that new entrants can sub-let collocation rooms and ordered EPT to provide proof of air conditioning costs.

## **2.4. Bitstream access**

### *2.4.1. Non-discriminatory access*

Since October 2000, EPT has been offering users DSL (LuxDSL). EPT does not offer interconnection at the ATM level, arguing that this would be technically impossible owing to its voluntary network organisation. At the hearing of 1 October 2002 on the status of the telecommunications market in Luxembourg, new entrants stated that they had first requested bitstream access in 2000 and that EPT had the technical capability to offer it. They have not launched a dispute settlement procedure, however (which was not available at the time, see under NRA).

### *2.4.2. Tariffs*

EPT offers LuxDSL on a resale basis to ISP, with a discount on the tariff charged to users. A limited number of ISP linked to EPT offer DSL on this basis. At the hearing of 1 October 2002 on the status of the telecommunications market in Luxembourg, new entrants stated that they do not consider the resale offer corresponded to EPT's obligation to offer non-discriminatory access.

## **2.5. Situation of the (broadband) local access market**

### *2.5.1. Status of DSL market, position of incumbent*

The incumbent's monopolisation of the broadband market appears to have intensified during the reporting period.

EPT has been marketing its DSL offer to its own customers since October 2000, while ISP can only resell EPT's DSL offer. One other operator currently offers its own DSL package to customers, but there are no data available on the number of the incumbent's DSL lines marketed by ISP.

EPT has also acquired a major share of broadband access via cable modem. On the basis of an agreement with cable operators, EPT has created a media platform "Image" together with cable operators, which allows it to market internet access via cable (TV surf). Two other cable operators currently offer broadband internet access to customers on a local basis. During the hearing of 1 October on the status of the telecommunications market in Luxembourg, new entrants stated that they do not have access to the platform organised by EPT and the cable operators. The conditions of the launch of the TV-surf offer and the underlying acquisitions and agreements between cable operators and EPT have not been examined by the competition authorities.

The tariffs charged to customers for ETA's two broadband offers, DSL and internet access via cable modem, are considered to be high. Broadband internet connections appear to be underdeveloped in Luxembourg compared to the high internet penetration (55%).

One operator currently offering broadband access via WLL plans to offer DSL via the fully unbundled local loop. As of 1 October 2002, no data were available on whether it had started offering DSL.

### *2.5.2. Development of alternative means of access*

One operator offers broadband access via WLL and has gained about 1% of total broadband access lines (cable, DSL and WLL). However, even though tariffs for DSL and cable access are high in Luxembourg, WLL is not an economically viable alternative to cable and DSL broadband access except for the business sector. An offer for internet access via cable TV launched by a cable operator in autumn 2002 is now available in certain areas of the City of Luxembourg.

## **2.6. Leased Lines**

### *2.6.1. Pricing*

Rebates offered by EPT to its customers on the tariffs set by the ILR still appear to be a problem. The ILR has not received a formal complaint about this, however.

### *2.6.2. Delivery periods and quality of service; non-discrimination*

There have been no complaints regarding discriminatory delivery of leased lines.

## **2.7. Numbering**

### *2.7.1. Carrier selection and pre-selection*

Carrier pre-selection (CPS) had to be available from 1 July 2000 for all calls (international and national together), and separately for national and international calls from 1 July 2001.

### *2.7.2. Number portability*

Number portability was introduced as from 1 July 2000 for geographical numbers. However, non-geographical numbers cannot be ported.

Introduction of mobile portability is planned together with the move to the new framework in July 2003. It is widely expected that acceptance of mobile number portability by users will be much higher than for fixed number portability.

The ILR is currently preparing the transition to mobile number portability, but discussions are not very advanced. At the hearing of 1 October 2002 on the status of the telecommunications market in Luxembourg, the two mobile operators stated that they will provide mobile number portability (only) together with the marketing of 3G Services in Luxembourg. It is not clear, however, whether both mobile operators will market 3G services from July 2002. They therefore appear to accept possible delays in the introduction of mobile number portability. The discussions at the hearing showed that the ILR will most probably have to coordinate and supervise the development of mobile number portability in Luxembourg. An agenda for this project has not yet been fixed.

## **2.8. Cost accounting and accounting separation**

### *2.8.1. Cost accounting systems in place, statement of compliance*

On 6 April 2000, EPT presented its cost accounting model to the ILR in respect of interconnection and based on LRIC, which it updated in 2001. In its decision of 6 May 2002, the ILR specified the requirements for separate cost accounting in all areas, with which EPT had to comply. The purpose of the requirements is to enable the ILR to examine interconnection, local loop unbundling and retail tariffs with regard to non-discrimination and cost-orientation.

The ILR's decision of 6 May 2002 requires EPT to produce cost accounting data for the activities related to the core network, the local access network, retail activities and other activities, in accordance with Commission Recommendation 98/322EC, and specifies the services falling within each of the above areas. The cost accounting system must show current cost and LRIC.

EPT considers that those requirements go beyond what is necessary to prevent cross-subsidisation and constitute an excessive burden. EPT has not provided the ILR with a description of such a cost system. It acknowledges, however, that it will have to modify its cost accounting system.

The ILR has not yet been in a position to supervise any of EPT's tariffs on the basis of the existing cost accounting system. In its decision of 19 July 2002, as explained above, the ILR stated that the information provided by EPT was insufficient to approve the tariffs for interconnection, and announced that it would impose sanctions in the event of lack of compliance with the cost accounting requirements. A statement of compliance of the

incumbent's cost accounting system has not been issued so far. The Commission has opened an infringement proceeding against Luxembourg for not having carried out the verification EPT's cost accounting system and for not having published a statement of compliance.

### **3. AUTHORISATIONS**

#### **3.1. Licence conditions**

The ILR's operational budget for 2001 is €3.5 million, 4% of which is financed by licence fees of new entrants, 20% by the incumbent and 58% by frequency fees (see Regulatory Annex). Those figures are not suited, however, to show whether or not the principle of coverage of administrative costs is observed, as the budget also includes ILR activities which are not related to the issue, management, control and enforcement of licences in the telecommunications sector, as well as activities in the energy sector. The ILR plans to present administrative costs related to its telecommunications activities separately in its annual report for 2002.

#### **3.2. Rights of way - role of local authorities in infrastructure development**

Concerns about discrimination with regard to granting rights of way have been addressed by the Luxembourg authorities in a number of legislative measures, but have not been fully allayed.

Discrimination in granting rights of way for the roll-out of fixed infrastructure arose from the fact that in so-called "zones non edificandi", i.e. in areas where construction was not permitted (along highway), new entrants were unable to obtain rights of way, while the incumbent had rolled out its infrastructure. Furthermore, there was a lack of coordination of the granting of rights of way in the municipalities in particular, with the result that, unlike the incumbent, new entrants could not obtain rights of way. The Commission decided to take an infringement proceeding to the Court of Justice on the basis that this legal and factual situation represented a discrimination of new entrants (ECJ Case C-97/01). In his conclusions of 4 July 2002 the Advocate General stated, inter alia, that procedures for granting rights of way must be transparent and clear, that a definitive answer must be given within a reasonable period and that sufficient guarantees must have been given to ensure that discrimination in the process of granting rights of way or its implementation is prevented (conclusion 25), and in the absence of those procedures concluded that Luxembourg had failed to implement the non-discrimination principles for granting rights of way.

In the meantime, Luxembourg adopted a Regulation of 8 June 2001 on the conditions of use of public roads and railways, defining the content of the right of access to public land and setting out the procedure for filing a request to the competent authorities. Under the Regulation, the infrastructure manager (gestionnaire du réseau) has been mandated to grant rights of way. However, this did not always resolve the problem of lack of transparency with regard to powers for granting rights of way. Luxembourg then adopted further regulations to improve access to public land. The Law of 6 June 2002 grants telecommunications operators the right to lay cable and install wireless connections along the rails of the railways, subject to authorisation by the Ministry of Public Works. No experience with the application of this Law has been reported yet and it is not possible, at this stage, to conclude whether the problem of discrimination in "zones non-edificandi" has been entirely removed by the new legislation. In practice, new entrants have been granted rights of way along highways.

As regards the lack of coordination at the level of municipalities, the discrimination has not been removed and there is still concern about lack of clarity as to the conditions and procedures applicable.

Furthermore, the framework applicable to mast building appears to be prohibitive for the roll-out of 3G, as a result of three procedures which have a cumulative effect: the “commodo-incommodo” procedure (Loi du 10 juin 1999 relative aux établissements classés), which makes the construction of radio transmitters subject to public consultation and an environmental impact assessment if emissions from the mast are likely to exceed 3V/m, while the Council Recommendation of 12 July 1999 relating to limitation of electromagnetic exposure recommends a value of 42V/m; secondly, the land-use planning authorisation procedure (plan d’aménagement du territoire), which allows for construction of masts in 5% of the territory only (business zones only) and thirdly, the authorisation procedure in the municipalities, which does not provide for clear procedures and is often applied arbitrarily. The Luxembourg authorities intend to remove those impediments by adopting a regulation on sector-specific land-use planning for mast and antenna construction. This regulation would not, however, establish procedures for granting rights of way in municipalities, and will not therefore solve the problem of unclear procedures in municipalities addressed in the above-mentioned infringement procedure. It is also questionable whether the legislative process will be in time to allow 3G operators to comply with the obligations for roll-out of their 3G networks specified in their licences.

#### **4. UNIVERSAL SERVICE / CONSUMERS**

##### **4.1. Contracts; Itemised billing;**

The Voice Telephony Directive requires the level of detail of the standard bill to be sufficient to enable users to verify and check the charges incurred.

The Regulation of 25 June 2002 amends the Regulation on network and services conditions and the Regulation on conditions for granting the ILR the powers to specify the level of detail of itemised billing. In its decision of 19 July 2002, the ILR specified the items to be set out in a standard itemised bill with regard to each call (date, time, duration, called number, charge). The Commission subsequently closed an infringement proceeding relating to itemised billing.

The Regulation of 25 June 2002 also grants the ILR powers to modify, at any time, conditions in contracts between providers and users. Following the adoption of the legislation, the Commission closed an infringement proceeding relating to the ILR's powers to supervise conditions in contracts.

In addition, all consumer contracts, including those with telecommunication service providers, can be revised if abuse is established, under the general provisions on monitoring of consumer contracts. Consumer groups have a right to seek such review through the courts. Those instruments have not so far been used.

##### **4.2. Retail tariffs**

Under the Regulation of 18 April 2001 amending the regulations on licensing conditions for network and services, the ILR must ensure that SMP operators' retail tariffs are cost-oriented. However, as set out above (cost accounting), EPT has not yet established a cost accounting system that shows the costs for retail tariffs separately. The ILR was therefore not in a

position to examine either the subscription fee or the per minute retail tariffs to establish whether or not they are cost-oriented.

EPT has not changed this tariff since the subscription fee was increased on 1 July 2001. EPT considers that it does not yet correspond to costs, but does not envisage a further increase.

Concern about a price-squeeze between the national per minute retail tariffs and the regional interconnection tariffs was largely removed by an ILR decision of 27 September 2002 (see under interconnection). However, new entrants also complained to the ILR about a price squeeze between the national retail tariff and the national interconnection tariffs, which made it impossible to offer national calls. New entrants therefore intended to focus on providing international calls. The ILR also stated in its decision that, in relation to interconnection tariffs, the per minute retail tariffs were set at such a low level as to eliminate competition.

#### **4.3. Funding – implementation of the Court of Justice ruling**

Luxembourg has not established a scheme for compensation of universal service costs.

#### **4.4. Universal directory**

The universal directory is provided by a subsidiary of EPT, Editus.

### **5. DATA PROTECTION**

#### **5.1. Implementation/Traffic data retention**

As Luxembourg has not transposed the Telecommunications Data Protection Directive 97/66/CE, there are major gaps in the protection of users with respect to almost all the issues addressed in the Directive. Furthermore, the current data retention practice constitutes a substantial burden for operators, which have to store traffic data for 10 years without compensation.

Following publication of the (General) Data Protection Law on 2 August 2002 which will enter into force on 1 December 2002, a bill has been drafted to transpose the Telecommunication Data Protection Directives 97/66/CE and 2002/58/EC. The bill is currently being examined by the government and is expected to be submitted to the Parliament and the Council of the State in October 2002. It provides for the obligation to delete traffic data with the exception of data necessary for billing purposes. It states that traffic data must be retained for security purposes for one year.

#### **5.2. Unsolicited calls and faxes**

There are currently no rules on unsolicited faxes and calls. The purpose of the above mentioned government bill is also to transpose the Communications Data Protection Directive 2002/58/EC, i.e. it proposes the opt-in solution for unsolicited calls, faxes and e-mails.

### **6. MOBILE ISSUES**

#### **6.1. UMTS**

The Government's Decision of 18 May 2000 provided for the award of four licences with comparative bidding on the basis of predefined quality criteria. The 3G Decision was



implemented by a Regulation of 14 December 2001 concerning licence conditions for mobile operators.

Following a comparative bidding procedure launched by the ILR on 1 February 2002, three licences were awarded on 22 May 2002.

In the tender procedure, operators announced marketing launch dates between January and August 2003, and coverage of between 30% and 95% of the population and 5% to 69.5% of the territory at the time of the launch. However, the licence conditions finally imposed concerning coverage have not been published.

Under the Regulation of 14 December 2001, 3G and 2G operators are obliged to offer national roaming on non-discriminatory terms (i.e. under the same conditions as between 2G and between 2G and 3G networks), but mobile operators' roaming licence conditions have not been published.

## **6.2. Infrastructure sharing**

Site sharing is to be encouraged and can only be denied if technically impossible, e.g. owing to lack of space, wind resistance of masts and radio-electric interference.

## **7. PREPARATION FOR THE TRANSPOSITION OF THE NEW FRAMEWORK**

The government plans to transpose the new framework in four sets of legislation: it is currently elaborating a “Law on Communications” to transpose the Framework, the Authorisations Directive and the Universal Services Directive. Another law will address implementation of the Spectrum Decision, together with certain aspects of the Framework and the Authorisations Directive linked to frequency management, while a further law will address reorganisation of the ILR. In addition, a bill to transpose the new Communications Data Protection Directive has been prepared by the Ministry, and is currently being examined by the Council of State.

## 3.10 THE NETHERLANDS

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

OPTA (*Onafhankelijke Post en Telecommunicatie Autoriteit*), the independent telecommunication regulator in the Netherlands, has 138 staff and an operational budget of €16.4 million, 87.2% of which is financed by the market players. Regarding resources, OPTA feels that it gets more requests from the market for intervention than it can cope with. In order to meet the most urgent problems, it prioritises in consultation with the market players. In addition to that, OPTA is putting efforts into making the procedures more efficient, especially regarding the legal deadlines, though certain difficulties remain in meeting all objectives. Attempts are being made to find a solution outside the formal process, which can be time-consuming, and are welcomed by market players. Such solutions can be problematic as they are not based on formal decision-making.

OPTA endeavours to meet deadlines for dispute resolution, which has indeed improved. Of a total of 51 interconnection disputes up to the end of September 2002 (two disputes from 2001 and 49 lodged in 2002), 40 were resolved before the end of September 2002, 35 of them within the prescribed deadline. Two disputes regarding special access, of a total of eight (five from 2001 and three lodged in 2002), were resolved before the end of September 2002, one within the deadline. Regarding cable issues, 11 disputes were investigated (four lodged in 2001, seven in 2002). In the meantime three of these disputes have been resolved, two of them within the deadline. The two issues regarding site sharing and right of way lodged before the end of September 2002 were dealt with before the prescribed deadline.

In general all formal decisions by OPTA, whether the outcome of a dispute or a (policy) decision taken on their own initiative, are appealed, usually by both parties. The legal department spends over 60% of its time on appeals (within OPTA and at the court), whereas just less than 40% of its time is spent on legal advice. Around 22% of the time spent on legal advice is devoted to giving advice on initial dispute resolution, which is usually dealt with more extensively by the relevant department within OPTA that formulated the original decision. The other 78% of time devoted to legal advice is spent on issues such as enforcement orders, reference interconnection offer, unbundling offer, CPS for local calls, retail tariff proposals, SMP issues, ONP review and so forth.

OPTA's policy guidelines are often difficult to enforce because of their nature; policy guidelines bind only the authority that has set them up. They are not material legislation which can be enforced. OPTA has all the necessary powers and legal instruments to enforce legislation and it can also act on its own initiative as well as respond to complaints and disputes. In cases where OPTA does not feel confident about the strength of the legislation, or where the legislation seems open to interpretation, it prefers to rely on its dispute resolution powers, which are clearer. It therefore occasionally needs disputes to provoke speedier solutions. In the past, OPTA has used the instrument of a periodic penalty, which means a certain amount of money needs to be paid for every day of non-compliance. OPTA has however not felt encouraged to use this instrument much, due to restrictive legal interpretations made by the court, which decides on the basis of criteria such as reasonableness, proportionality and whether there are sufficient grounds. In general, OPTA feels it lacks the power to enforce its decisions effectively. OPTA is of course free to appeal the court decision.

Last year's evaluation carried out in the Netherlands on the performance of the Netherlands NRAs showed that the relationship between the Ministry (DGTP) and the national regulatory authority was not as it should be. According to both authorities, cooperation between the Ministry and OPTA has improved in the past year.

OPTA and the national competition authority (NMa) will cooperate more closely. It is the intention that OPTA will become a chamber of the NMa once the NMa has the same independent status that OPTA presently enjoys. The legislative proposal to achieve that independent status has yet to go through the Senate, and until it does it remains uncertain whether the two authorities will actually 'merge'. The Government is currently investigating the NMa's proposed independent status, and while this investigation is in progress the legislative process is 'on hold'.

At the moment there is already a close working relationship between OPTA and the NMa based on the cooperation protocol. In practice this means that, whilst the NMa does play an active role, "forum shopping" is avoided by the agreement that the legal decisions following their analyses be left to OPTA. This was the case with the mobile termination tariffs.

## **1.2. Management of numbers**

The management of numbers is in OPTA's hands. No problems have been raised in relation to the management of numbers.

## **1.3. Frequency management**

The management of frequencies is in the hands of the Ministry. No problems have been raised in relation to frequency management.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. RIO*

There exists a Reference Interconnection Offer (RIO) in the Netherlands. Certain issues remain under appeal, though, and so it has not yet been defined as final. Generally speaking, however, it is a stable offer.

None of the operators in the Netherlands currently interconnect at the local interconnection points. For internet access, OPTA's price squeeze decision of July 2001 meant that local interconnection through the special 06760 data network had become more appealing for ISPs to use. For voice telephony there is no local interconnection at all. The reason for this is that there are over 600 local interconnection points, which is too many for alternative operators to roll out their networks to, even though the interconnection tariffs at the local level have become more attractive. For a long time there was a price squeeze for local interconnection, with local interconnection tariffs at times higher than the incumbent's retail tariffs. This was partly due to the different geographical configuration of the areas for retail and interconnection tariffs.

Local interconnection has been included by OPTA in its tariff decision of 27 June 2002. OPTA obliges the incumbent to include a viable offer for local interconnection in their standard reference offer. OPTA assessed the offer for local interconnection in September

2002. It is aware of the many different needs expressed by operators, some with their own infrastructure, some without, leading to a variety of business cases. OPTA is also investigating how many local interconnection points an operator could be requested to roll out its network to while maintaining efficiency. The results of this investigation are expected at the start of 2003, after which OPTA will publish a policy document covering costs and tariffs and also including the efficient number of local interconnection points.

### *2.1.2. Interconnection charges*

The interconnection charges for the fixed network which apply as of September 2002 for calls at local level, single transit and double transit (in peak times and based on a three-minute call) are all below the EU average, at €0.74, €0.98 and €1.28 respectively.

### *2.1.3. Fixed to mobile call termination*

OPTA set out a policy regarding mobile call termination at the beginning of 2002 in which it indicated a path of decreasing tariffs for calls from fixed to mobile networks. This policy is based on the assumption that all mobile operators have a monopoly on their own network and charge termination tariffs which are above costs. Because there is no SMP designation of any operator in the national interconnection market to whom the cost orientation principle would apply, OPTA will instead, in the event of a dispute, decide whether the termination charge of the mobile operator is reasonable. Given the high level of competition between operators on the mobile market in the Netherlands, OPTA defines reasonable tariffs as tariffs which are not above the 'European best practice' of non-SMP operators. Mobile operators are to lower their termination tariffs in two steps on 1 December 2002 and 1 April 2003.

Mobile operators oppose OPTA's policy for decreasing tariffs as it will lead to a considerable loss of income from call termination. They are challenging OPTA's competence and feel there is no economic justification for lower termination tariffs. The fixed operators did approve of OPTA's policy, aiming at a level playing field between fixed and mobile operators. This situation led to a large number of disputes between operators. By October 2002 OPTA had decided in some 44 disputes between operators. After objections from both (mobile) operators to OPTA's original decision on the first dispute, which set a timetable for the decrease of tariffs, and also taking into account the decision of the administrative court that the timetable suggested by OPTA was too short, OPTA reconsidered its decision in mid-July 2002. It decided that a first decrease of the mobile call termination charges will take place in December 2002 (instead of May 2002), with a second decrease in April 2003 (instead of December 2002). OPTA has adapted its policy guidelines accordingly. In October 2002 O2 filed an appeal against OPTA's July decision. The administrative court is expected to rule on this appeal in February 2003.

In August 2002, the national competition authority decided that regarding the termination of calls on mobile networks the mobile operators are considered to be dominant on their own networks. The competition authority has however left it to OPTA to act against the high level of termination charges.

Following investigations based on a complaint of November 1999, Competition DG has formally opened a procedure against a Netherlands mobile operator by filing a statement of objections against this company in March 2002 with regard to interconnection.

The interconnection rate for mobile call termination of the largest mobile operator is at the moment the lowest of the five mobile operators in the Netherlands. The present tariff is set marginally above the weighted average of all operators, which stands at €0.1849. The other

four mobile operators and one MVNO all have tariffs in the range of 15-25% above the EU weighted average. Following OPTA's review of mobile termination tariffs (see above), as of 1 December 2002 the 900 MHz operators' average mobile terminating tariffs may not exceed €0.1568 and those of the other operators (1800 MHz) may not exceed €0.1828. As of 1 April 2003, a further decrease will be required to levels not more than €0.1296 and €0.1648 respectively.

#### *2.1.4. FRIACO*

The incumbent offers the FRIACO wholesale service resulting from an obligation pursuant to a dispute concerning special network access. FRIACO is presently being offered by only one operator.

NLIP, the internet service providers association has indicated that its members find it problematic to get FRIACO through the operators because of the fact that the interconnection is logically offered at the regional interconnection point. To get it interconnected at the local interconnection points, where interconnection tariffs are more interesting for the ISPs, would mean a forced roll-out of telecommunications operators to a large number of local interconnection points, which would entail large investments by the operators. NLIP have expressed an interest in the solution which has been provided for this problem in the United Kingdom. There a so-called interconnection extension circuit (IEC) provides interconnection between the local and the regional levels, allowing ISPs to pay the local interconnect tariff plus the IEC. NLIP has not yet taken it up with OPTA but has requested this from different telecommunications operators. For the moment NLIP is not convinced that OPTA's policy of stimulating the roll-out of networks to the local level will allow this solution to become reality in the Netherlands.

#### *2.1.5. SMP designation*

Regarding the mobile operators, the largest mobile operator has been designated as an operator with significant market power (SMP) on the mobile market, a decision which it has appealed. Having completed a study, on 19 December 2001 OPTA withdrew the earlier SMP designation of the second mobile operator on the mobile market. OPTA concludes in its decision that although the market share of the second operator hovers around 25%, it is not consistently above 25% over time and is not significant. In the light of its guidelines concerning proportionality between the envisaged effects of designation and upcoming regulatory developments, there was insufficient ground to maintain the designation. This OPTA decision has been appealed by a group of new entrants and on 1 October 2002 OPTA decided not to grant the appeal and to maintain its original decision.

No mobile operator has been designated as an operator with SMP in the national interconnection market. The market shares of the possible SMP operators on this market were around 25% and taking into account the other possible applicable criteria, OPTA has decided not to designate an operator in the national interconnection market. However, in order to achieve the goal of reasonable mobile termination tariffs it has decided to tackle this using a policy instrument and dispute settlement (described in the section on fixed to mobile call termination)).

#### *2.1.6. 06760 network*

The 06760 prefix, which is used for dial-up internet access, was introduced in the Netherlands to enable the incumbent to detect internet traffic more easily and allow it to 'groom' the internet traffic away from its PSTN network. 06760 numbers can be requested by telecom

operators as well as ISPs. Following OPTA's decision in July 2001 to decrease interconnection tariffs, the incentive for internet service providers to switch to this new numbering system has increased. Although they are not obliged to switch, about two thirds of the ISPs have done so. Besides the use of the geographical numbering scheme and related originating and terminating models for accessing the internet under the 06760 numbering scheme, there are three different models for accessing the internet via a telephony modem. There are the 06760 MIACO and FRIACO models which are both originating models. Under the MIACO model, the ISP/telecommunications operator pays the incumbent a charge per minute whereas under the FRIACO model, it pays a flat rate each month. The ISP and/or telecommunication operator leave the originating of the call to the incumbent and pay a cost-oriented interconnection charge for the collection of traffic. Under these models, ISPs and/or new entrants send the invoice to the end-user without having to rely on the incumbent and are thus able to offer their own price structures. Under the collecting model, the end-user tariffs paid by internet users include a cost-oriented retention charge for the use of the fixed network of the incumbent and a termination charge paid by the incumbent to the ISP. By setting the level of the termination charge, the ISP can influence the end-user charges at which access to its 06760 numbers can be obtained. Under this model, the incumbent remains responsible for billing the end-users.

End-users have experienced some problems with the 06760 numbers, such as the unavailability of CPS and discounts that are available on the geographical network. In addition, calling from abroad is not always possible. It is up to the individual ISP to decide whether they want the numbers to be accessible from abroad. It is possible for ISPs to maintain a geographical number for this purpose. The forum for interconnection and special access is also discussing this issue.

## **2.2. Interconnection leased lines / partial circuits**

The issue of interconnection leased lines was one of the wholesale barriers addressed in the tariff decision of 27 June 2002 (described under heading 'tariffs'). However, the issue has not yet been settled – due to different interpretations by OPTA and the incumbent - even though OPTA had hoped to achieve this before August 2002. . New entrants could enter into negotiations with the incumbent on the preliminary offer that was on the table since January 2002 but had to deal with all sorts of problems such as bank guarantees. OPTA indicated in the hearing for this report on 24 September 2002 that should the incumbent not solve the problems very soon it will itself take the legal step to set the tariffs. In the meantime an offer made public by the incumbent on 1 October 2002, also consisting of a transition period (retrospectively to July 2002). This offer now has to be analysed, although first indications show that OPTA is relatively happy with it. The current tariffs have only been approved by OPTA for the July 2002-July 2003 period using a combination of EDC/EC benchmarking and the retail tariffs.

For the new entrants the time being taken by this dossier is very frustrating, as it impacts on their financial situation where the incumbent has probably made significant profits on interconnection leased lines. Moreover, despite the tariff deal of 27 June 2002, there is no adequate offer available yet.

## **2.3. Unbundling**

Finally in October 2002 OPTA was designated as the NRA in charge of implementing the EU Regulation on unbundled access to the local loop. Around that time some new entrants, who faced legal uncertainty and financial problems, withdrew from this market. In the preceding

months, OPTA had used its regulatory powers in relation to special access but since OPTA had not yet been designated as being the NRA in charge of implementing the EU Regulation, the decisions made could not be enforced in practice. New entrants blamed the Ministry for taking so long to act and further blamed the incumbent for exploiting this legal loophole to significantly delay the introduction of full unbundled access in the Netherlands.

Following OPTA's official designation it has taken a large number of decisions and has made formal and informal efforts to speed up competition in the local access market. Many collocation problems have now been resolved. Physical collocation is the most used collocation option. In places where there is insufficient room for physical collocation, the incumbent offers adjacent collocation. OPTA has still to decide on co-mingling. This option is not preferred by the incumbent, although there has been no proof to date to support the previously expressed fears concerning abuses of integrity systems or vandalism which the incumbent associates with co-mingling.

As a result of OPTA decisions, ULL (related) collocation tariffs have come down. The one-off charges have come down 55% and electricity costs have come down by more than 90%, due to the fact that only payment of actual usage is required. The decision on the recurring tariffs was made on 15 October 2002: the monthly tariffs for physical collocation have come down by 83-89% whereas the recurring tariff for adjacent collocation has risen by 23%. The collocation tariffs are based on cost orientation.

OPTA has also imposed system sharing on the incumbent and there is a very good SLA for the delivery of lines, which includes penalty provisions. Other NRAs consider this SLA a 'best practice'. Work is now being done on a SLA for repair and maintenance.

OPTA has also imposed so called "new line services" on the incumbent, which means that it must also offer access lines to locations that are physically connected but not operational. The incumbent does not agree with this. It feels it is not entirely in line with the Regulation.

Some new entrants think that the best solution for line sharing has not been implemented. In their preferred solution the splitter is in the incumbent's area. In the current solution the splitter is in the collocation area of the new entrant.

There are still matters which need to be resolved, for instance regarding issues such as access to the information systems, line testing and sub loop unbundling, issues which OPTA hopes to settle in November 2002 at the latest.

Regarding unbundling, in October 2002 a total of 232 768 lines were unbundled. However 206 437 of these lines were unbundled to the incumbent itself, leaving 18 240 fully unbundled lines and 8 091 shared lines to the new entrants. In the first six months of 2002, the market share of the incumbent for local access lines went down from 94% to 89% as a result of unbundling.

Following the start of an infringement procedure by the European Commission, it is said that sub loop unbundling is now included in the reference unbundling offer (RUO).

#### **2.4. Bitstream access**

The incumbent's DSL retail product has a 89% market share of the total number of DSL copper wires in the Netherlands, which of course excludes the cable operators. The cable operators have a large share of the retail broadband internet access market with approaching

800 000 lines where the incumbent has just over 200 000 lines. The number of new entrants lines (about 26 000) are mainly offered through full unbundling and shared access.

For reasons which are not clear, a wholesale bitstream access offer was withdrawn by the incumbent resulting in there not being bitstream access service until recently, but only a re-selling possibility for new entrants to use. Shortly after withdrawal of its wholesale offer the incumbent introduced a new retail product called 'epacity', offering business customers VPN-services. On the basis of a request from new entrants OPTA has issued an enforcement order ("*last onder dwangsom*") on 30 September 2002, which includes financial penalties. In this procedure OPTA has looked in detail at the tariffs, whether the non-discrimination principle has been applied and the exact services which are requested. In the enforcement order, in which it was indicated that bitstream access is both special network access and a leased line, the emphasis has been put on non-discrimination rather than cost-oriented tariffs. OPTA has decided that the incumbent may no longer offer itself and/or its subsidiaries the building blocks and underlying products it needs to provide a retail bitstream service (the retail product 'epacity'), within six weeks of making a non-discriminatory wholesale offer available on the market. As of 18 October 2002 the incumbent has complied with the enforcement order and has offered, albeit under protest, a wholesale bitstream access service to the market. The incumbent continues to dispute, however, the decision requiring it to provide such an offer. On the other hand, some new entrants have indicated that although they are pleased there is now an offer, it is not yet sufficient and specifically the tariffs on offer are not at all reasonable. Also a new entrant has strong suspicions that the incumbent's behaviour is discriminatory towards other ISPs, in comparison with how it treats its own ISPs. No formal complaint has been lodged with respect to these points.

Another incumbent DSL retail product which has been launched recently is the so-called 'DSL Light' product, which has a lower tariff than the original DSL product (Mxstream), the price of which had gone up on the incumbent's own initiative. The product is said to have a slightly different functionality. OPTA has received formal complaints regarding the retail price of this product; however OPTA and the NMa have indicated that this cannot be the case since the incumbent does not have dominant market power on the retail broadband internet access market. There is informal contact about an alleged price squeeze.

## **2.5. Situation of the (broadband) local access market**

There are about 800 000 lines offered via cable modem access in the Netherlands. With just over 200 000 lines provided by the incumbent and with over 26 000 fully unbundled loops and shared lines, there are over 1 025 000 lines available for broadband access to internet in the Netherlands. This means that in the retail broadband access market the cable operators have a much stronger position than the incumbent telephony operator. This is a different situation from that seen in most other Member States, where internet access 'via other means' has not taken up to the same extent. In the past the incumbent telephony operator has been quite slow in putting forward a retail DSL offer for copper wires, of which it has most connections, and as can be read above, there has not been a wholesale offer until very recently. The fact that it does not have a dominant position on the retail broadband internet access market may be the reason for this. In comparison to other Member States, the incumbent has started only recently to become more 'aggressive' on the retail broadband internet access market.

For the ISPs the different techniques used by the cable operators make it very difficult to access that market. This will be regulated by the legislation implementing the new –



technology-neutral - European regulatory framework. A proposal for a new law is being discussed in the Netherlands Parliament.

Wireless local loop (WLL) is non-existent because the licences have not yet been awarded, so this does not provide for an alternative to get local access.

The incumbent is of the opinion that the market for providing DSL services is as competitive as can be expected considering the financial situation. In its view enforcing further regulation will not result in a more competitive market but will stimulate reselling.

## **2.6. Leased lines**

OPTA has issued guidelines for the delivery of leased lines based on benchmarking, including fines (to be paid by the incumbent) in case of non-compliant delivery. 64 kbit/s, 2 Mbit/s and analogue lines are included in the guidelines as these are the lines for which KPN has been designated as having SMP. Considering the fact that there were no complaints in the hearing this year regarding delivery times, there appears to be a general consensus among market players that delivery times have improved. 95% of the 2Mbit/s leased lines are now delivered within 25 working days, although the Commission leased lines report on 2001 indicates a long delivery time in the Netherlands for 2Mbit/s structured lines (104 days in the first six months of the year and 45 days for the other six months for national lines). Regarding the delivery of ordinary or special quality voice bandwidth leased lines there have been significant improvements in the Netherlands but it still has one of the longest delivery periods for national lines. The improvements for the delivery of leased lines are more notable in the second half of 2001. Retail leased lines above 2Mbit/s are not regulated in the Netherlands.

The tariffs for international leased lines have come down between 5 and 30%, depending on the destination.

## **2.7. Numbering**

After a long infringement procedure initiated by the Commission, and following requests from CPS operators in the autumn of 2001, CPS for local calls was finally introduced on 1 August 2002. It is no longer necessary to dial the regional code in case of local calls to be directed to the pre-selected operator, as was described in last year's report.

An association, called COIN, has been set up especially to co-ordinate the porting of numbers between all operators (fixed and mobile). The association has been set up by operators in order to allow the process to run in an efficient and co-ordinated manner. The total number of ported numbers from January 2001 to April 2002 was 529 675, which is the sum of the ported numbers per month, and it therefore also includes numbers that have been ported back. The totals for 'mobile' and 'fixed' in the same period are 217 263 and 312 412 respectively.

New entrants still note that they have high costs due to the numerous requests for portability that fail because of mismatches with the database of the incumbent. This database requires an identical customer detail match before accepting a request. Work is underway to adapt the database of the incumbent to avoid this kind of problem in the future.

Several parties that have been awarded numbers complain to OPTA about the tariff they have to pay. These tariffs are set by the Ministry and are reported to have come down in the past year.

## **2.8. Cost accounting / accounting separation**

OPTA has launched a consultation on cost accounting in which it proposes to follow the lines set out by the Commission in its Recommendation of 1998. OPTA wants to rely on the non-discrimination principle and set up a 'purchase model'. OPTA expects this approach would bring more transparency and would make the information more accessible in general terms.

The cost-oriented charges for the incumbent's fixed terminating service are based on a BULRIC model (bottom-up long run incremental costs) and those for the incumbent's fixed originating services on a top down model based on EDC (embedded direct costs). OPTA justifies this differentiated approach by the fact that the incumbent controls a bottleneck facility for the termination of calls to its subscribers, whereas other operators can compete on the provision of call origination. In principle, EDC allows the incumbent to recover actual costs on origination. At the same time, this cost model fosters the roll out of alternative infrastructures. OPTA is not planning to reconsider the current costing models.

Based on the results of market consultation, OPTA decided in April 2002 to migrate to a multiple year wholesale tariff system. This system is aimed at providing market parties with a more predictable wholesale tariff development over a number of years, while at the same time presenting the incumbent with an incentive to improve efficiency. The system, that will be developed following a further, more detailed consultation and in co-operation with industry is planned to take effect on 1 July 2003.

## **3. AUTHORISATIONS**

### **3.1. Conditions, fees**

In the summer of 2001 an expression of interest was published giving a more definite and specific overview of the available frequencies for the wireless local loop (WLL). The results showed there was some interest and perhaps even scarcity, but the market appeared unwilling. In the beginning of 2002 the WLL project has restarted. The actual provisioning of licences through an auction cannot take place earlier than the beginning of 2003, due to the fact that some time has passed since the original plan of 1999 and considering that the market situation has changed. A new policy initiative will have to be prepared and implemented.

There are still appeals in court against a number of decisions by the Ministry in relation to the 3G licensing procedure which took place in 2000; there are appeals against the announcement of the auction including the choice of five licences and the lack of specific measures for newcomers, against the decision not to exclude one of the participating operators from the auction, and against the actual awarding of the five licences after the auction had ended. There was a court hearing at the beginning of January 2002 and both parties have been asked additional questions by the court to which they have responded. The court decision is still awaited.

In accordance with Article 17 of the new Authorisations Directive, the current licences and authorisations must be in conformity with the provisions of this directive. Considering the current system in the Netherlands that only allows for individual licences for the use of frequencies (except for those frequencies for which there is no risk of interference), problems are not anticipated. Adjustments are only needed with regard to the provision of information.

Fees to access the Netherlands market are very limited and are not a barrier to market entry. The structure of the fees for operating on the market has been changed so that fees for SMP

operators have increased whereas fees for other operators have either decreased or remain unchanged.

### **3.2. Rights of way**

The rights of way are regulated in Chapter 5 of the Telecommunications Act (“*Telecommunicatiewet*”). However, both operators and municipalities have problems with definitions which are interpreted in different ways, and with obligations which appear to be unclear. Municipalities have the obligation to draft legislation, but with all municipalities undertaking this function, there are a variety of rules for operators to comply with. The Ministry has looked into this problem and has decided that chapter 5 needs to be redrafted, a process to be done in co-operation with the interested parties. First a policy paper will be written in the second half of 2002, after which the legislative procedure will start. The objective is to devise a system which is clear and in which the interests of both the operators and the municipalities are properly balanced.

In the Netherlands the so-called “Antenna Agreement” was signed on 27 June 2002 by the Ministry, the association of municipalities and the five mobile operators. The agreement states that no building permits are required for antennae of five meters or less on top of buildings. This represents about 70% of the total number. There is also a light permit regime for antennae between 5 and 40 meters in “built-up” areas. The normal licensing regime applies to antennae exceeding 40 meters. The agreements include conditions such as the exposure limits, the setting up of a joint location map and the right to vote for occupants of the relevant area/building. The Netherlands agreement is a good example of best practice in how to deal with the problems of both operators, municipalities and consumers in a balanced manner.

## **4. UNIVERSAL SERVICE / CONSUMERS**

### **4.1. Tariffs**

In July 2001 OPTA took an important step regarding tariffs in formally introducing a price squeeze test at the same time as the new interconnection tariffs were set. To prevent retail tariffs being set too low, the price squeeze test separately assesses the spread on the set-up charge and on the peak, off-peak and weekend/night call charges. As a consequence, retail tariffs for short calls have become more expensive, medium-length calls have remained unchanged, and long calls have become cheaper. Besides checking whether tariffs are too low, the incumbent’s retail tariffs must also comply with a price cap system. The incumbent has to submit all proposed changes in tariffs for regulated services to OPTA. OPTA has three weeks to check whether or not the new tariffs are consistent with the regulations. OPTA may extend the period by an additional three weeks if necessary. The results of an evaluation of the discounts and price squeezes will be made public before the end of the year.

On 27 June 2002, OPTA took a tariff decision setting another step towards the objective of creating a better margin for new entrants. . On 1 July 2002 the first price cap period –placed on retail tariffs- ended. A new more flexible system has now been introduced, which according to OPTA is in line with the new European regulatory framework. The agreement between OPTA and the incumbent stipulates that if the most prominent wholesale barriers were eliminated, OPTA would relax the ex-ante retail tariff regulation, as competition would lead to downward pressure on the prices. The major wholesale barriers to be eliminated were CPS for local calls, local interconnection, and interconnecting leased lines. OPTA has consulted the market both on the new approach and the major wholesale barriers to market entry. The relaxed retail tariff regulation, by which the tariffs may not rise more than the rate

of inflation, has been introduced after the incumbent operator committed itself to eliminating wholesale barriers. Even though a majority of the new entrants welcomed OPTA's new pricing regulation some claim that more wholesale barriers should have been eliminated as a precondition to the new policy. They also would have preferred OPTA to relax the retail price control only after the wholesale limitations were actually deleted, not after the incumbent's commitment. New entrants also fear that as the decision is based on an agreement between the incumbent operator and OPTA, it will be difficult to enforce if the incumbent does not meet the requirements.

#### **4.2. Universal directories, itemised billing, quality of service**

The incumbent now delivers a (universal service) directory and a directory enquiry service both of which meet the legal requirements. An order for periodic penalty payments was imposed on the incumbent to ensure this obligation was met. There is still an appeal procedure ongoing against the financial conditions imposed on the incumbent regarding the directory. The incumbent wants the publication costs to be reimbursed by the information providers, but OPTA claims this should not be allowed because the incumbent has an obligation to publish the book and should therefore bear the financial burden. The incumbent could always apply for a universal service fund to be established or to charge consumers. OPTA recently imposed cost-oriented tariffs to be charged for the directory enquiry service no later than 1 July 2003.

There is an infringement procedure against the Netherlands concerning the level of itemisation of the standard bill, which in the opinion of the European Commission should be on a call-by-call basis. It has been announced that national legislation to meet this requirement will be adopted very soon.

### **5. DATA PROTECTION**

#### **5.1. Traffic data retention**

For the purpose of billing and interconnection payments, operators and service providers may retain certain traffic data for the period in which a bill can be lawfully disputed. All other data has to be deleted or made anonymous upon completion of the call. However, the Netherlands Telecommunications Act announces that only the traffic data listed in the secondary legislation needs to be deleted or made anonymous. The secondary legislation is still not finalised which means that there is no clear regime in the Netherlands regarding the retention of traffic data. For a number of years an infringement procedure has been ongoing which has now reached the Court of Justice. According to the Civil Code, bills can be lawfully disputed for a period of five years.

Regarding the retention of data for other purposes there is not yet an initiative at Government level. The action plan on terrorism and safety announces a study of the categories of data that may be retained by operators and the restrictions facing the security services due to the lack of a retention obligation for historical (traffic) data. The study is expected to be finalised by the end of 2002. Only then will the question of the need for an extension of the retention period be raised. When addressing this question, the interests of all parties involved (operators, security services, consumers) will be considered in accordance with the ECHM and the EU Directives. At present there is an obligation for mobile operators to retain the traffic data regarding pre-paid cards for three months. It concerns a very limited set of traffic data: the time of the communication, the telephone numbers that correspond with this time, and the base station at which this information arrived.

According to telecommunications operators and internet service providers the costs of tapping are borne by them. Furthermore, the national standards in the Netherlands have been set in advance of completion of the European standardisation process, which presents the risk of a change of standards in due course. This would cost operators to implement. The operators and ISPs are themselves obliged to deliver the equipment which transports the requested data to the requesting authority. According to the Ministry the legislation states clearly that the administrative costs that flow directly from a tapping request will be reimbursed. The tapping regime and its practice will be evaluated in 2003.

## **5.2. Unsolicited calls and e-mails**

For unsolicited calls and faxes an opt-in regime is in place. For unsolicited e-mails an opt-out regime is in place. The regimes are applicable to both natural and legal persons. It is not stipulated whether the consent to be obtained from the user is to be written or oral. Parties that adhere to the *Stichting Reclame Code* commit themselves to the application of codes of conduct concerning unsolicited e-mails and SMS.

## **6. MOBILE ISSUES**

### **6.1. Barriers to rollout of 2G, 3G**

Two of the five mobile operators have decided to jointly roll out the basis of a UMTS network in order to cut costs. They have set up a separate company for this – called RANN - in which they each have a 50% share. The co-operation potentially extends beyond sharing the so-called radio access network such as antennas, masts, base stations and base station controllers to sharing elements of the core network, i.e. it includes sharing of the core operations and maintenance centre, but the parties will keep independent control over their networks based on a functional separation of network elements. Both operators hope to be offering services over their UMTS network by the end of 2003.

OPTA, the Ministry and the national competition authority have published guidelines on network sharing. In the Netherlands Parliament a resolution was adopted in April 2002 in which the Government is requested to carry out a study of ways of addressing the problem in the telecommunications industry in the light of the effects of the UMTS auction. The study will look at options such as extending the duration of the licences. No follow-up action has yet been taken on this resolution.

## **7. PREPARATION FOR TRANSPOSITION OF THE NEW FRAMEWORK**

All efforts are aimed at submitting the legislative proposal to the Council of State for its opinion in January 2003, after which it will go to Parliament. To achieve this the external consultation will be finalised before the end of 2002. The texts are now at an advanced stage and there are no major problems, although some issues, such as appeal regarding the competence and discretionary powers of the regulatory authority, still need to be worked out. Considering the time a normal parliamentary procedure takes it will be very difficult to meet the 25 July deadline for transposition of the Directives. To meet the deadlines, the legislation will take the form of changes to current legislation, rather than creating a whole new national framework.

OPTA is already preparing for the market analyses to be performed under the new regulatory framework. It intends to use 2003 to determine the relevant markets in accordance with the

Commission Recommendation, which means this will not be finalised before 25 July 2003. At the moment OPTA does not have the necessary powers to collect the relevant information needed for the market analyses, but an urgent legislative proposal should overcome that temporary problem.

## 3.11 AUSTRIA

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authorities

The Austrian NRA, *Rundfunk & Telekom Regulierungs-GmbH* (RTR-GmbH), which is 100% financed by fees paid by all licensed operators, has continued to play an active role since November 2001, auctioning a frequency package of 2x1 MHz for the digital Federal radio system TETRA and six frequency packages for GSM services, establishing new interconnection tariffs for 2002 and, more recently, designating operators having SMP and analysing the new incumbent's cost accounting system.

On 15 October 2002 a new head of RTR was appointed for the next five years, as well as the members of the *Telekom-Control-Kommission*.

As of 1 July 2002 an amendment to the Competition Act established a new independent Federal Competition Authority, the "*Bundswettbewerbsbehörde*" (BWB), whose Director-General has been appointed by the Government on the advice of an *ad hoc* commission. Besides this BWB, the "*Bundeskartellanwalt*" is the authority within the Ministry of Justice responsible for competition law, while the "*Kartellgericht*" and the "*Kartellobergericht*" are still the central decision-making authorities. Under telecoms law, dispute settlement and cases related to monitoring of abusive behaviour by SMP operators fall within the responsibility of the *Telekom-Control-Kommission*.

Article 10 of the new Act provides that the BWB has to consult *KommAustria* when taking decisions in the media sector. No other reference is made to other kinds of co-operation between telecommunications regulatory authorities and the competition law authorities. Nevertheless, the new Federal Competition Authority ("*Bundswettbewerbsbehörde*"- BWB) and the *Telekom-Control-Kommission* consider that there is no overlap between their responsibilities, while the terms for co-operation between them are currently under discussion.

Although the situation seems to have been improved by putting in place effective instruments to avoid abusive behaviour by operators (abuse of SMP is now prohibited and liable to a penalty and the NRA has a right to lodge a case before the competition authorities and to be heard in any case), it is a matter of debate whether these instruments should be applied by the NRA and not by the competition authorities, especially due to their lack of telecommunications expertise.

Nevertheless, no improvements have been reported since the Seventh Report on the difficulties with effective enforcement of legal obligations and on the length of proceedings before the courts and the Telecommunications Offices ("*Fernmeldebüros*"), which leads to legal uncertainty. These problems, which have been acknowledged to some extent by the Austrian authorities, clearly remain some of the key regulatory issues which still need to be addressed.

As far as the interconnection dispute settlement proceedings are concerned, 27 have been resolved by the NRA since December 2001. The Telecommunications Act sets a maximum of six weeks for dispute settlement; an extension up to ten weeks is possible. In most cases this

deadline has not been met by the NRA, but some improvements can be reported. However, the six-month deadline stipulated in the Interconnection Directive has always been met.

As reported previously, there is wide concern about a suitable mechanism to appeal against decisions taken by the NRA, the lack of which leads to legal uncertainty. The Administrative Court, by amendment of the Telecommunications Act, has had explicit jurisdiction to deal with such complaints since 1 June 2000 only. Due to the lack of explicit transitional provisions, the Administrative Court suspended the proceedings in more than 40 cases already pending at the time of entry into force of that amendment, awaiting the outcome of a request for a preliminary ruling by the European Court of Justice, which is still pending after the Advocate General delivered his opinion on 13 December 2001 (Case 462/99). Out of more than 120 cases which were pending, only three have been decided on substance so far.

## **1.2. Management of numbers**

The December 1997 numbering plan still has not been fully implemented.

Non-compliance of some numbers/number ranges with the numbering plan remains the main source of outstanding problems in this area, especially the non-portability of numbers which are not in conformity with the numbering ordinance and the exclusive use of the online-access code 07189 by the incumbent.

## **1.3. Frequency management**

The efficiency and transparency of the frequency management by the telecommunication authorities is still to some extent a matter of debate for most operators, although the authorities point out that in areas such as radio relay links for base stations the packages of frequencies kept in reserve open the way for a flexible and unbureaucratic procedure for allocating frequencies to all operators. New auctioning proceedings for additional frequencies have been initiated recently: one for a frequency package of 2x1 MHz (40 channels) for the digital Federal radio system TETRA (on 26 July 2002), the other for 6 frequency packages for GSM services (on 19 July 2002). However, in the end the TETRA auction did not take place, since only one tenth of the reserve price was offered.

For the GSM frequencies auction, all national and international operators – especially those already holding 2G and 3G concessions – were invited. Nevertheless, only two, put in bids. The auction took place on 14 October 2002 and resulted in one frequency package being attributed to one operator and two others to the other operator.

Although no more auctions for GSM frequencies were foreseen after this, the Ministry for Transport, Innovation and Technology ("*Bundesministerium für Verkehr, Innovation und Technologie*"- BMVIT) now has to decide whether the three remaining frequency packages should be placed at the disposal of the NRA again to open a new licensing procedure.

For the moment, frequency trading is not possible in Austria, although several mobile operators have shown an interest in this possibility.



## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offer*

By decision of 20 September 2002, the NRA confirmed *Telekom Austria* (TA) as having significant market power in the markets for the provision of fixed telephone services, for interconnection, and for the provision of leased line services by means of a fixed network for 2002. As for 2001, no operator has been designated as having significant market power in the market for the provision of mobile services.

The Austrian NRA considers that the incumbent's RIO has not been brought into line with several orders/decisions which the NRA issued on 18 March 2002.

This is not, however, the case with the incumbent's "IC-contract" which was updated on 29 May 2002 and is now offered to the new entrants. This "IC-contract" can be consulted on the incumbent's website only by operators which have received an access code after expressing their interest in interconnection.

#### *2.1.2. Interconnection charges*

By decision of 9 September 2002, the NRA finally set the 2002 interconnection charges, applicable from 30 June 2002 to 30 September 2003. This decision applies the improved FL-LRAIC bottom-up model, after a ruling of the Administrative Court of 6 September 2001 declared this method legal.

As with the NRA's decisions in the past, the interconnection charges are based on peak and off-peak times, and the principle of reciprocity applies. Local and regional termination and origination charges have been reduced, both peak (to 0.85 and 1.30 cents respectively, or by more than 6%) and off-peak (to 0.50 and 0.72 cents respectively, or by less than 2%), further narrowing the gap between peak and off-peak tariffs.

Interconnection charges for national termination and origination and for transit remained unchanged (0.29 cents peak and 0.15 cents off-peak at regional level and 0.62 cents peak and 0.32 cents off-peak at national level).

#### *2.1.3. Fixed to mobile call termination*

On interconnection between fixed and mobile telecommunications networks, as a consequence of the NRA's decision of 18 June 2001, which designated only *Telekom Austria* as having significant market power in the interconnection market, since November 2001 the *Telekom-Control-Kommission* has been taking a new approach to regulate IC tariffs for call termination to mobile at "appropriate prices" by taking into account the full costs of each operator individually, thus no longer applying the principle of reciprocity. Therefore, tariffs for call termination from fixed to mobile have been highly disputed.

In a number of decisions the NRA set new interconnection charges for the different mobile operators. Termination charges for *Mobilkom Austria* were further reduced to 12.4 cents for the period from 1 August 2001 to 31 March 2002 and to 11.25 cents from 1 April 2002 to 31 December 2002, while termination to the network of *T-Mobile* continues to be set at 13.8 cents until the end of 2002, as well as to *Connect Austria* until October 2003. Finally,

termination charges to the network of *tele.ring* have been set at 19.62 cents from the beginning of 2001 to October 2003.

## **2.2. Unbundling**

Full unbundling has recently increased remarkably. While it was operational on 5400 lines by 1 July 2002, only three months later, by 1 October, the number of lines had increased by some 35% to 7300.

As reported in the Seventh Report, the NRA's rulings of 12 March 2001 introduced sub-loop unbundling, collocation area limits of 22 m<sup>2</sup> maximum, step by step reductions in monthly charges – from €12.35 to €11.63 by 31 December 2001 and €10.90 from 1 January 2002 by using an analytical bottom-up cost estimating model based on the FL-LRAIC approach – and penalties in cases where the incumbent overruns deadlines. The rulings apply indefinitely, but the charges only until 30 September 2002.

Collocation is available at any of the incumbent's main distribution sites. The ruling, however, does not allow for "open collocation" outside the incumbent's premises. Setting up of collocation areas is charged for at cost. Collocation rentals are governed by local or prevailing market rental levels for commercial premises, using the rental level guides issued by the Federal guild of real estate and asset trustees which apply at the time.

The Seventh Report referred to two problems concerning conditions for shared access: tariffs for shared access did not appear to be cost-oriented and voice telephony was excluded. Monthly charges for shared access were originally set at €30.67 which obviously did not respect the principle of cost orientation. Thanks to the NRA's intervention, the incumbent reduced these charges on its own to 50% of the monthly charges set by the NRA for full unbundling, i.e. €5.81 retrospectively until 31 December 2001 and €5.45 from 1 January 2002 onwards; these new charges were published by the incumbent on 10 December 2001. On the other hand, by decision of 17 December 2001, the NRA imposed an obligation on the incumbent to modify its RUO and delete the exclusion of the use of VoIP for telephony services from its RUO by 28 December 2001; the incumbent modified its published RUO accordingly.

Nevertheless, no shared access lines have been requested so far by new entrants from the incumbent.

## **2.3. Situation of the (broadband) local access market**

### *2.3.1. Status of DSL market, position of incumbent*

On 26 March 2002 the incumbent launched a new ADSL wholesale offer. Although some improvements have been achieved in this field, the incumbent still enjoys a very high market share on the ADSL market through a branch company. It has integrated all its subsidiaries into the parent company.

By 1 October 2002 there were 113 900 retail DSL lines supplied by the incumbent, while by 1 July 22 100 wholesale DSL lines were supplied by the incumbent.

### *2.3.2. Development of alternative means of access*

Local cable TV operators, which are sometimes subsidiaries of the local authorities, seem to be playing an increasingly important role in local access, particularly in the main cities of

Austria, even enjoying a dominant position on some local broadband markets. By 1 October 2002 a total of 88 cable TV operators were providing some 220 000 internet broadband connections, almost double the number of retail DSL lines supplied by the incumbent.

## **2.4. Leased lines**

No major improvements have been reported as far as the leased lines market is concerned, where the cost-orientation and non-discrimination obligations are imposed on the incumbent, since it has been designated as having significant market power on this market. This is not, however, the case with a subsidiary which, as a reseller of the incumbent's leased lines, has a quasi-monopoly, e.g. for access to banking terminals. By the end of last year, the incumbent was offering more than 90% of the lines of up to 2 Mbit/s, but only 20% of the lines above that threshold.

On 1 June 2001 the NRA approved new charges for the incumbent's national leased lines, which have applied since 1 September 2001, with a significant (46%) reduction in the charges for digital transmission paths at 2 Mbit/s. However, this reduction in charges for local circuits, which also applies to the links required for interconnection, was compensated by a 9% increase for longer circuits.

As in the Seventh Report, no charges for international leased lines were submitted for approval, although the NRA has requested that this be done. The administrative prosecution proceedings opened by the Telecommunications Office ("*Fernmeldebüro*") in May 2000 have not resulted in any binding legal decision so far.

## **2.5. Numbering**

### *2.5.1. Carrier selection and preselection*

After its introduction on 1 January 2002, carrier pre-selection (CPS) has proved to be quite successful in Austria thanks to the intervention of the NRA. By March 2002, 775 000 of the incumbent's clients were using CPS, 175 000 more than at the end of September 2001, as reported in the Seventh Report.

Nineteen new entrants are now offering local call services to residential customers by CPS, 22 by CS and 17 by direct access to users.

### *2.5.2. Number portability*

Number portability has become a facility of increasing importance for the purposes of competition. While by the end of September fixed number portability had been requested in 2448 cases, less than a year later, by August 2002, there were already 6707 ported fixed telephone numbers.

Some steps have already been taken in order to provide mobile number portability as soon as the new framework enters into force.

## **2.6. Cost-accounting and accounting separation**

### *2.6.1. Cost-accounting systems in place, statement of compliance*

After the legal obligation for the NRA to publish an annual statement of compliance with the provisions of the ONP Directives in the cost accounting system operated by an SMP operator

was introduced into national law on 1 June 2000, by decision of 10 July 2001 the NRA stated that the incumbent's cost accounting system was in compliance with the ONP Directives. This statement as well as the description of the cost accounting system (version BETA 1999) are available on the NRA's website.

According to the NRA's decision, no absolute value of performed data has been verified, but the NRA argues that numerous other proceedings instigated by the NRA for approval of end customer tariffs of SMP operators and a large number of interconnection proceedings looked at broad aspects of the cost accounting system of the incumbent in the form of opinions, the results of which were subjected to further plausibility checks which involved comparing them with a bottom-up cost model of the regulatory authorities.

The European Commission has opened infringement proceedings against Austria as regards the obligation to ensure annual verification of the operation of a cost-accounting system and subsequent publication of a statement concerning its compliance with Directives 97/33/EC and 98/10/EC.

By decision of 10 April 2002, RTR opened new proceedings in order to analyse the new incumbent's cost accounting system -Beta 2000-. These proceedings lasted until 21 October 2002, when a decision was taken stating that this new incumbent's cost accounting system is in compliance with the ONP guidelines, subject to certain amendments. Accuracy and completeness of the cost model, including volumes, were subject to verification. This decision is not yet available on the NRA's website.

### **3. AUTHORISATIONS**

#### **3.1. Licence conditions**

By 1 July 2002 there were 65 operators holding a national licence to provide voice telephony, only three more than reported last year.

Nevertheless, by March 2002, 43 operators were actually offering local call services, almost double the number reported last year. By then, 44 operators were offering long-distance and international calls and 5 local alternative cable TV operators were offering voice telephony, which demonstrates once again the increasing importance of these operators on the Austrian market.

There are currently four 2G operators operating mobile services on their own national network, two of them using DCS 1800 and the other two using both GSM 900 and DCS 1800 spectrum. Six licences for 3G services were awarded as a result of the auction in November 2000, two of which are new entrants to the mobile market.

#### **3.2. Rights of way- role of local authorities in infrastructure development**

The Telecommunications Act explicitly allows licence holders to use public land for installing telecommunications lines free of charge and without any particular authorisation being required. "Public lands" include roads, pavements and public places. The authorities concerned (Federal, *Länder* and local authorities) can impose charges only where the legal bases for such charges already existed on 1 August 1997. The Telecommunications Act does not prevent, however, claims being made for restitution of the former state, damages or the costs incurred in order to comply with safety requirements for the working sites, provided those claims do not exceed the costs actually incurred.

There is increasing concern about the constraints imposed by regional and local authorities on the roll-out of networks, since the procedures for obtaining rights of way, whether on public or private property, seem to be complex, time-consuming and expensive. This view is contested by the BMVIT, which states that expropriation of public ground is fairly easy, as there are no further restrictions or specific procedures for use of public property, whereas constitutional provisions protecting private property prevent simplification of the granting of rights of way on it.

Planning permission and planning procedures for deploying networks is entirely a matter for the *Länder*, which also issue the relevant regulations. New legislation has been approved as regards planning regulations, countryside and nature conservation law and local planning design standards, while measures have been taken with regard to protection against radiation, specifically as regards the deployment of mobile networks.

Specifically in the field of mobile networks, operation of mobile transmission systems is subject to an operating licence under the Telecommunications Act. Such licences also take account of protecting human life and health. The parameters to be used reflect the EU Council recommendations of 12 July 1999 on limiting exposure of the public to electromagnetic fields in the 0 Hz to 300 GHz range. Whether these limits are actually complied with in practice is monitored by the radio monitoring authorities ("*Fernmeldebüros*") on an *ex post* basis.

Since Austrians are increasingly concerned about electromagnetic radiation, a petition to set lower radiation limits has been broadly supported by municipalities and politicians. As reported last year, lower limits (<1mW/m<sup>2</sup>) are sometimes applied subject to private agreements ("*Salzburg model*") in an increasing number of *Länder* and cities, such as Vienna. However, the BMVIT reported that measurements by the Swiss regulator BAKOM in Salzburg in spring 2002 revealed that the limit of 1mW/m<sup>2</sup> was not generally met.

The BMVIT has widely informed the local authorities of the legal constraints in this field. However, no secondary Federal legislation on radiation limits has been approved so far, despite repeated requests from mobile operators, because the Ministry considers the Council recommendation as the mandatory basis for any operational approval, so as to avoid legal uncertainty. Nevertheless, a resolution adopted by the Austrian Parliament requires legislation on emission limits to reflect, on an ongoing basis, any new scientific developments or findings.

## **4. UNIVERSAL SERVICE / CONSUMERS**

### **4.1. Retail tariffs**

Under the Telecommunications Act, *Telekom Austria*, as the only designated SMP operator in the fixed voice telephony market, is required to submit new tariff schemes and any subsequent substantial modifications of its tariffs to the NRA for approval, in order to ensure their compliance with the principle of cost-orientation. The time limit for approval of tariffs by the NRA is, in principle, eight weeks; if the NRA fails to take a decision in time, the tariffs concerned are deemed to be approved.

Since the incumbent's cost accounting system is not subject to an annual verification based on actual data, cost-orientation and non cross-subsidisation of the incumbent's tariffs can be called into question.

As a result of the incumbent's discount practice, any tariff models which the incumbent submitted for approval were approved by the NRA strictly on condition that it applies only

the discounts approved by the NRA and that the discounts allowed must not lead to the relevant tariff options not covering their costs. Nevertheless it is not always clear in which cases the application of a discount leads to a modification of the tariff structure.

The proceedings opened by the NRA before the Telecommunications Office (“*Fernmeldebüro*”) because the incumbent failed to submit its "winter tariff" for approval are still pending. By judgement of 14 June 2002, the "*Kartellgericht*" declared that the incumbent had not abused its dominant position by applying these discounts.

Since December 2001 the incumbent has applied several short-term discounts, including one-day free call campaigns, while a special discount to the Federation (“*Bundesrabatt*”), which was never subjected to approval by the NRA, will not be applied any more once the newly introduced public procurement procedure operated by the "*Bundesbeschaffungs GmbH*" is completed.

A comparison of tariffs of all fixed operators is available on the NRA’s website.

#### **4.2. Funding**

On 20 December 2001 the incumbent submitted a request for funding of the provision of universal service in 1999. The NRA therefore opened a procedure to prove the relevant costs and, where appropriate, the contributions by operators to that net cost. On 4 October 2002 the incumbent withdrew its request but stated that it intends to keep open the possibility of submitting a new one, since there is no legal deadline for the submission of such requests.

#### **4.3. Directory services**

A common directory of subscribers is provided both on paper and in electronic form, on a commercial basis, by a subsidiary of the incumbent (*Herold*).

The incumbent has set up a data base containing all subscriber data. Prices for the provision of those data are fixed by contract between the parties without any intervention by the NRA in order to ensure that they are cost-oriented and provide fair, non-discriminatory conditions of access to the data.

#### **4.4. Itemised billing**

Some new entrants provide itemised billing free of charge in Austria, while the incumbent still does not, as reported in the Seventh Report. The basic accounts provided by the incumbent without extra charge are still broken down by tariff areas, listing regional calls, inter-regional calls and international calls separately. International calls in turn are broken down by different tariff zones. Calls to mobile phone networks are also broken down by operator, with added value and online services shown separately. Each section shows the number of calls, the number of charge units incurred in those calls and the costs in each case. Itemised details are available only subject to charges in accordance with the incumbent’s general terms and conditions, as approved by the NRA. Individual consumers as well as consumers’ associations, however, complain about the kind of bills provided by the incumbent.

In June 2002 the European Commission decided to bring infringement proceedings against Austria before the Court of Justice as regards the obligation to make a basic level of itemised billing available to users free of charge in order to allow verification and control of the

charges incurred in using the telephone network and/or the telephone services as well as adequate monitoring of their usage, as required by Directive 98/10/EC.

#### **4.5. Dispute resolution**

Consumer complaints relating to telecommunications services are handled by the NRA (RTR GmbH) within a special arbitration procedure. If this fails, the complainant may still pursue matters through the ordinary courts.

According to the NRA's Annual Report, published on its website in September 2002, 1 418 complaints under Article 116 of the Telecommunications Act were submitted to the arbitration body of the regulatory authority in 2001. The number of cases submitted for arbitration increased disproportionately, compared to previous years. While 412 cases were handled in 1998, 756 proceedings were initiated in 1999. In 2000 the number of cases submitted for arbitration went up to 894, while the record was set in 2001, with those 1 418 complaints. This trend seems to be continuing in 2002, when the number of cases submitted for arbitration had reached 1 208 by 16 October. Apart from complaints about telephone bills, there has been an increasing number of proceedings related to internet and SMS services.

#### **4.6. Quality of the service**

The NRA has published on its website the measurements of the quality of service offered by the incumbent in 2001, based on European standards ETSI ETR 138 and ETSI EG 201.

### **5. DATA PROTECTION**

#### **5.1. Implementation/Traffic data retention**

In the contracts with users, operators stipulate the maximum period for the storage of data for billing purposes, with a maximum of 3 years laid down by law.

Under the Telecommunications Act, operators are under an obligation, on the basis of an ordinance issued, to provide all the equipment required to supervise telecommunications traffic in accordance with the provisions of the Code of Criminal Procedure (StPO). This obligation does not justify any claim for compensation. Five complaints are pending before the Constitutional Court as regards the constitutionality of this provision.

Under the same provision of the Telecommunications Act, operators are furthermore under an obligation to assist, to the extent required, in supervising telecommunications traffic in accordance with the provisions of the Code of Criminal Procedure (StPO), for which appropriate costs will be reimbursed.

#### **5.2. Unsolicited calls and e-mails**

As far as the protection of personal data in the context of commercial communications is concerned, an opt-in approach has been taken for phone calls, faxes or e-mail alike. Oral or passive written consent is permitted.

Under Article 7(2) of the e-commerce Act ("*Bundesgesetz, mit dem bestimmte rechtliche Aspekte des elektronischen Geschäfts- und Rechtsverkehr geregelt werden*"), the RTR has compiled an opt-out list on which all not willing to receive commercial correspondence by e-mail can ask to be included. Nevertheless, this list does not affect the general opt-in regulation

and therefore has little practical relevance. Only some 60 e-mail addresses were registered on this list by October 2002.

In any case, due to data protection considerations, the RTR distributes this list only to foreign service providers and to providers of financial services, because an opt-out regulation might apply to them.

## **6. MOBILE ISSUES**

### **6.1. Barriers to roll-out of 2G and 3G**

For roll-out of their networks, operators are subject to constraints imposed by regional and local authorities (see above under "Authorisations").

Under their licence conditions, each 3G operator must offer coverage of 25% of the population from 31 December 2003 and of 50% of the population from 31 December 2005. Carrier services must be offered at a data rate of not less than 144 kbit/s. Operators must achieve the level of coverage through their own network. An operator is considered as having its own network if the main network components on the core network side (Switch, VLR, HLR) and the main mobile network elements (RNC, Node B) are operated by the licence holders themselves. Antennas and associated cables may be used jointly with other licensees. On 28 January 2002 the *Telekom-Control-Kommission* published a position paper on infrastructure-sharing in the context of establishment of 3G mobile networks.

In September 2002 two mobile operators announced that they had reached an agreement on national roaming.

At the end of September 2002 the mobile subsidiary of the incumbent began testing its UMTS network, while it and two more operators are expected to launch commercial services in 2003.

3G operators who already had a 2G licence are under an obligation to make network capacity available to other 3G licence holders with no 2G licence. This obligation applies only once the new entrant has achieved 20% coverage of the population and for a period not exceeding 4 years.

On 28 January 2002 the NRA published a decision recognising the right of a MVNO to interconnect and determining the interconnection fees applicable, which would be those applied to national roaming. On the basis of this decision, in mid-August two mobile operators announced that they had reached an agreement enabling one to share the antennas of the other in order to provide mobile services as an MVNO. Nevertheless, on 30 October 2002 the NRA rejected the request of this operator to interconnect with the incumbent and other mobile operators on the grounds that the current framework does not allow this possibility.

One 3G operator requested the NRA to permit modifications to its licence, concerning, in particular, coverage obligations and penalties, due to the delays in availability of 3G, whereas all other market players (operators and producers) had stated that it was possible to comply with these obligations. The NRA rejected the request, but stated that it would continue to monitor the situation on the market.

As reported last year, 3G new entrants complained about the difficulty in accessing spectrum needed for point-to-point connection of base stations. On February 2002 the Supreme



Telecommunications Authority reserved the relevant frequencies for them through the same procedure as applied to the 2G operators.

On 14 October 2002 three frequency packages for GSM services were assigned: one to the mobile subsidiary of the incumbent and two to other mobile operators.

Since the number of users of the incumbent's analogue D-net had significantly decreased during the last few years (from about 200 000 to 90 000), the incumbent finally phased out its analogue system on 28 February 2002, as had been announced to users in advance in October 2001.

## **7. PREPARATION FOR TRANSPOSITION OF THE NEW FRAMEWORK**

On 16 July 2002 the BMVIT opened public consultations on a draft of the new Communications Act to be approved in order to transpose the new framework into Austrian law. These consultations lasted until 16 September 2002.

Although the election of a new Parliament by the end of November might delay the legislative procedure, the BMVIT is working on the draft of the new Act in order to secure approval before 25 July 2003.

## 3.12 PORTUGAL

### 1. REGULATORY FRAMEWORK

#### 1.1. NRA

The powers and independence of the National Regulatory Authority (NRA) were increased at the end of 2001, when the Instituto das Comunicações de Portugal (ICP) became the Autoridade Nacional de Comunicações (ANACOM). Its tasks, as was previously the case for ICP, are the following: definition of the Portuguese telecommunications policy, through its advisory role to the government; regulation of the market; spectrum management and licensing.

To ensure the independence of the NRA, the members of the board are now appointed for one term of 5 years.

The reform transferred the powers previously held by ICP, and granted greater autonomy to the regulator. Appeals may be made through the administrative courts (for the time being not on merits, however, but only on their legality). The reform of the regulator was generally welcomed by market players.

Criticisms have been voiced regarding delays on the part of the regulator in adopting certain decisions and resolving disputes, for instance regarding local loop unbundling. However, ANACOM has already made 8 decisions amending the Reference Unbundling Offer since June 2001.

Application of competition law is ensured by the Portuguese National Competition Authority (NCA) (Direcção Geral do Comércio e da Concorrência of the Ministry of Economic Affairs), which handles relations with ANACOM when dealing with telecommunications cases. New entrants criticise the lack of intervention of the Portuguese NCA, which they think is due to insufficient staffing.

The telecommunications sector is now under the responsibility of a new Ministry, the Ministry of Economic Affairs, instead of Social Equipment. There is also a task force for the information society attached to the Prime Minister. In the pursuit of its tasks, ANACOM is autonomous in its decision making, and needs no “ex ante” or “ex post” approval by the Government.

At the same time, the Government has modified its role with regard to the incumbent operator, Portugal Telecom. The shares of the Government in PT are managed by the Ministry of Finance. The government no longer appoints the chairman of the company but has left this to the assembly of shareholders. It considers therefore that its "golden share" in the company is not in breach of Community law. The golden share might nevertheless be reviewed in the near future. The remaining holding of the Portuguese State in Portugal Telecom is 6.63004% (4.7% through Caixa Geral de Depósitos, 1.9% Parpublica and 0.00004% the State). There are still concerns in the market regarding the conflict of interest between the Portuguese State acting as an NRA and at the same time being a shareholder of the incumbent operator. However, it should be noted that the Portuguese State has indirect holdings in several competing players (Oniway or Optimus, for instance).

## **1.2 Management of Numbers**

Management of numbers in Portugal is dealt with by ANACOM, in line with the requirements of Article 12 of the Interconnection Directive 97/33/EC. It has not given rise to any concern so far. A reform of the numbering system took place in 1999, without any problems reported.

## **1.3. Frequency Management**

ANACOM is responsible for the management of the radio spectrum, ensuring coordination between civil, military and paramilitary use. No complaints have been made regarding spectrum management in Portugal.

UMTS licences were awarded after a beauty contest in December 2000. Compared to some Member States, UMTS licence holders have to pay relatively low spectrum fees (€ 100 million each). Due to the postponement of the launch of UMTS until 2003, the Government decided that the operators would not have to pay the annual fee associated with spectrum usage for 2002. This is seen as beneficial for the development of Third Generation (3G) mobile telephony in Portugal.

## **2. INTERCONNECTION AND ACCESS REGIMES**

The specific feature of the Portuguese situation is that the public switched telephony network is owned by the State and rented by PT. The government has indicated its intention to sell the network to PT at a fair price.

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offer*

The 2002 Reference Interconnection Offer (RIO) was only effective following a Decision by ANACOM on 23 May. On average, interconnection prices were lowered by 15,5%, but still remain higher than the EU average. According to the regulator, the new prices take account of the fact that they entered into force in May instead of January. The RIO now identifies 3 different zones (North, South, Azores), each of which includes a geographic point of national interconnection: this seems to have answered concerns voiced by many new entrants about the previous RIOs of PT. Per second billing is applied from the first second.

ANACOM adopted a decision at the end of January 2002 requiring a 4-step reduction of the fixed to mobile termination charges (€ 0.2369/min) in different stages so that they would end up to become the same as the final target for mobile to mobile tariffs fixed in a decision of May 2002 (€ 0.187/min). The new prices are now in line with the European average, whereas Portugal was previously one of the most expensive Member States as far as fixed to mobile call termination rates were concerned. However, these prices do not seem to be cost-orientated (mobile operators' prices are not subject to cost orientation principles, since they do not have significant market power in the interconnection market).

Mobile operators changed their tariff structure in order to limit the impact of the decision on their income. Indeed, the ANACOM decision regulates tariffs for calls of a 100-second duration. Both mobile operators therefore reduced the first minute charge and increased the subsequent per second charges for fixed to mobile termination. However, international call termination as well as mobile to mobile call termination on mobile networks are billed per second from the first second. Despite ANACOM's ruling, which imposed on the incumbent

and recommended to other fixed operators to pass these price reductions onto retail prices, it seems however that the price reductions achieved in fixed to mobile call termination were not completely passed by fixed operators on to their customers. The retail prices for fixed to mobile calls in Portugal are still among the highest in Europe, whereas they represent an ever increasing share of the total telephony traffic, due to the high penetration of mobile telephony in Portugal.

### 2.1.2. *FRIACO*

ANACOM took a decision in 2001 that forced PT to offer flat-rate interconnection for internet traffic. PT is implementing the ANACOM decision through a reference offer called PRAI. This offer applies to all Internet Service Providers (ISPs) and is available from PT Comunicações' website. At the same time, PT lodged an appeal against the ANACOM decision with the national courts.

Despite the decision, consumers have not benefited either from price reductions or from flat-rate pricing. All ISPs, including PT's subsidiary, have chosen not to pass on the benefits to consumers; as a result, narrowband internet traffic has not grown as it could have if a flat-rate offer had been available.

## 2.2. **Unbundling**

As of September 2002, the situation regarding local loop unbundling in Portugal showed technical availability on a large scale, at least theoretically. 100 Main Distribution Frames were offered for local loop unbundling (60% of the total, corresponding to 1 647 000 lines). 14 sites were ready for co-location (corresponding to 375 000 lines) and 4 operators were asking for co-location.

The Commission had to initiate infringement proceedings against Portugal for failure to include shared access and subloops in the Reference Unbundling Offer (RUO). These proceedings are now closed, as Portugal Telecom's RUO has been amended accordingly.

The evolution of local loop unbundling in Portugal as a whole is extremely disappointing, and puts the country among the worst performers in the European Union. Only 27 lines are fully unbundled, and there are no shared lines or subloops. The main problems seem to be the lack of financial investment by new entrants in the equipment necessary for local loop unbundling, on the one hand, and the comparatively high prices in PT's RUO, on the other. Indeed, the Portuguese fee for broadband local loop unbundling is much more expensive at €13.78/month than the monthly line rental fee at €11.85/month. Even the fee for narrowband local loop unbundling is higher than the line rental at €11.96/month. Installation prices for full unbundling are, according to ANACOM, 16.7% cheaper than the EU average.

A task force was set up by ANACOM in the course of 2001 to solve practical implementation problems. ANACOM prefers seeking consensus in the working group rather than imposing unilateral decisions. Following a Decision of the Regulator, prices fell on average by 30%. As in other Member States, local loop unbundling attracted powerful interest in the beginning, but this interest is gradually waning: whereas 26 operators had originally indicated an interest in LLU, only 7 are now actively participating in the working group set up by ANACOM on this subject.

Disputes seem to have focussed on conditions for collocation, such as the general level of prices, as well as requests for power supply, air conditioning, etc. Co-mingling is another cause of disputes between PT and the new entrants. PT admits that it could accommodate co-

mingling with one or two operators, but fears being accused of discrimination if no room is left for a third or fourth entrant. PT also made it clear that it wanted to recoup its investments in collocation rooms.

New entrants have installed equipment in collocation rooms but sometimes do not use it, arguing that they want to connect the sites via wireless connections and that PT does not allow the placing of antennas on the roofs of local switches. PT argues that the WLL licences do not allow for such usage (the bid of PT for a WLL licence was not selected because they wanted to use it for that purpose) and that the NRA must decide on the matter. In November 2002, ANACOM issued a decision which envisages co-mingling and the possibility for new entrants to use WLL.

PT does not yet offer an automatic ordering of unbundled loops. PT argues that such an information system needs to be dimensioned on the basis of the possible number of entrants. PT is still waiting for input in this regard.

ANACOM has levied penalties on PT in the case of late delivery, which new entrants regard as inadequate, however. The penalty is €7.5 per day, with a maximum of €24, which implies that PT does not really have an incentive once the delay is higher than 4 days. However, ANACOM foresees the possibility of reviewing the value of penalties taking into account the evolution of the offer and the experience acquired in the meantime.

### **2.3. Bitstream access**

There have been no requests for bitstream access so far. ANACOM stated it did not have a legal basis to impose bitstream access.

PT has only a wholesale ADSL offer, which cannot be compared to a proper bitstream access, as it does not give access either to the DSLAM or to the ATM layer.

### **2.4. Situation of the (broadband) local access market**

PT offers only a wholesale ADSL product (called Rede ADSL PT). Its subsidiary Telepac and its residential branch SAPO make the retail offers. The two main competitors of the incumbent on this market are ONI Telecom (new entrant), which offers an ADSL retail product based on "Rede ADSL PT", as well as NOVIS under the brand Clix Turbo.

PT launched its first ADSL offer in November 2000 but the take up was slow (20 707 subscribers as of 1 October 2002). In June 2002 a more attractive wholesale offer was made (512 Kb instead of 256 Kb) and the aim is to reach 50 000 connections by the end of 2002. The retail price is €30 (which according to PT is still high given that the Average Revenue Per User for a normal telephone line is around €20).

PT's ISP (Telepac) had a comprehensive retail offer the day after PT's wholesale offer was made available to other ISPs, which might lead one to think that PT's subsidiary could have had access to some information before its competitors. The Portuguese NCA does not however seem to have investigated the case. In addition, Telepac is promising a 4-day delivery period to its clients, whereas the wholesale offer to entrants guarantees only a 9-day delivery period. As a whole, the incumbent and its subsidiaries owned 73% of the ADSL market as of 30 June 2002, with 5 000 customers.

There seems to be little room for new entrants on the market between the cost of local loop unbundling (€13.78/month for broadband) and the ADSL wholesale tariffs.

New entrants also complain that the wholesale offer is bundled with the interconnect service of PT (aggregation to one point to which they have to connect), even if they could connect regionally.

PT has a dominant position in the broadband market if its cable activities are taken into account. TV Cabo, its subsidiary, had 95 000 customers for its broadband internet access offer as of June 2002, representing a 63% market share. At the moment, the only real competitor of PT on the broadband market, in the absence of a large scale ADSL market, is the cable operator Cabovisão.

PT also dominates its competitors on the internet dial-up market with nearly 800 000 customers as of 30 June 2002, giving it by far the leading position.

## **2.5. Leased Lines**

In December 2001, PT made a proposal to ANACOM regarding the tariffs of digital circuits between 64 kbps and 34 Mbps, foreseeing a significant price reduction for all circuits except national 64 kbps. The discount policy was also changed, with a general decrease of discount levels.

This tariff rebalancing was seen by ANACOM as positive, giving a better reflection of PT's actual cost structure. The actual tariff reduction, given the changes in discounts, was around 1%. The prices of 34 Mbps circuits remained higher than the EU average. However, the regulator indicated that the proposal was not fully consistent with the cost orientation principle, and that price rebalancing should be gradual in order to give customers time to adapt themselves to the new resulting costs.

In September 2002, ANACOM decided on price changes. Compared with PT's proposal of December 2001, the most important are: -9% for 64 kbps to 2 Mbps, -10% for 34 Mbps, and about -15% for international circuits.

The new offer led to a decrease in long distance circuit prices and a comparative increase in short distance circuits. This might have a negative impact on the competition (ONI, in particular, being, with Cabovisão, the only real competitors of PT on the leased lines market), as prices drop wherever competition is active. The regulator however underlines that the reductions reflect the actual costs of PT.

After analysing the incumbent's proposal in October 2002, ANACOM concluded it was not in line with cost orientation for n\*64kbit/s local end prices. ANACOM is reviewing the issue with a view to further price reductions.

In October 2001, ANACOM launched an audit regarding the quality indicators of the incumbent's leased lines service for 1999 and 2000, which was concluded in July 2002. In the past, following complaints by some new entrants regarding different delivery times between the incumbent's subsidiaries and other operators, ANACOM checked twice the situation and found no evidence of discrimination.

## **2.6. Numbering**

### *2.6.1. Carrier selection and preselection*

Carrier pre-selection (CPS) has enjoyed some success in Portugal. About 302 000 lines currently use CPS in Portugal (about 7% of the total number of lines), making CPS the first

method for competing operators to propose their services as opposed to PT's. New entrants filed several complaints about the aggressive win-back campaigns of Portugal Telecom. Indeed, in the first half of 2002, 35 000 customers stopped using CPS (more than 10% of the total number of customers), which is a source of concern for the development of competition in the fixed telephony market. New entrants are still concerned about the confidentiality of information among PT's departments ("Chinese walls"), and have also lodged a complaint with the Commission for the protection of personal data. ANACOM is investigating the 3 complaints received so far from new entrants regarding PT's alleged misbehaviour.

PT does not yet offer a wholesale product allowing carrier selection (CPS) operators to bill the customer for the monthly fee. Currently subscribers receive two bills - the bill including the monthly rental by PT and the bill of the competitor for specific calls. This is perceived by new entrants as hindering the development of CPS.

#### *2.6.2. Number portability*

Number portability is now available for both fixed and mobile customers. About 39 196 numbers have been ported until the end of August 2002 : 36 637 fixed, mainly to the cable operator Cabovisão, 2 559 mobile.

Some serious practical problems, which had previously been brought to the attention of the regulator, seem to have been recently solved. All operators now agree on the fact that number portability in Portugal is satisfactory from a technical point of view. However, entrants still complain that administrative charges for porting are excessive.

### **2.7. Cost-accounting and accounting separation**

In order to give its agreement to PT's interconnection prices, ANACOM used the following elements : expected costs and the evolution of traffic volumes for the current year, expected efficiency gains, current practice within the EU. No transition towards the use of current costs is foreseen for the time being.

For new services, ANACOM identifies the resources used and the necessary activities for the provision of the new service within PT's analytic accounting system (ABC type). Actual expenses and budgets are used to determine costs for the local loop.

The statement of compliance of PT's accounts for 2000 was published in the official journal in August 2002. ANACOM has not yet started to review the accounts for 2001.

## **3. AUTHORISATIONS**

### **3.1. Licence conditions**

An individual licence must be obtained to provide public voice telephony services, to set up and operate public telecommunications networks and to provide services using radio frequencies.

The conditions imposed on operators concern, in particular, network security and integrity; interoperability; efficient use of the radio spectrum; and compliance with the principle of non-discrimination. No complaints have been received about the time taken to grant licences. The current licensing regime is quite light (25 days on average to grant a licence), so that a transition towards the new framework should not be difficult.

As of 30 June 2002, 28 companies, 15 of which are commercially active, had a licence to operate fixed telephony services in Portugal.. Although they built a network, some operators do not offer a service to third parties.

In December 1999, eleven wireless local loop (WLL) licences were granted. None of the WLL operators have fulfilled their licence conditions regarding the roll-out of their networks, and their licences could theoretically be revoked. This is not the view taken by the regulator so far. However, it is worth noting that, according to the terms of their licence, WLL operators are not able to link the base stations of mobile operators.

A digital terrestrial television licence was granted in August 2001. However, due to some lack of definition regarding, namely, the standard to be used, which led to some delays on the provision of set-top boxes, the final date for the beginning of commercial deployment was delayed until 1 March 2003. Like in most Member States, digital terrestrial television seems to be encountering difficulties to develop at the moment.

### **3.2. Rights of way - role of local authorities in infrastructure development**

PT, as the operator of the “basic telecommunications network” is exempted from any tax related to the granting of rights of way, while all other operators are subject to administrative charges. The European Commission is currently investigating whether this is compatible with Community law.

## **4. UNIVERSAL SERVICE / CONSUMERS**

### **4.1. Retail tariffs**

A convention has been signed between the National Competition Authority and PT in 1997. This convention was applicable from 1 January 1998 to 31 December 2000 and is still valid, as an interim regime for determining prices, until the new convention, currently under negotiation, is in place.

### **4.2. Funding**

In September 2002, ANACOM indicated it would probably produce a decision on the funding of universal service. This draft decision gives clear indications: PT is not entitled to compensation via a universal service fund before the liberalisation took place (i.e. not before 2000). PT had previously requested compensation for 1996-1997 and 1996-1999. The type of costs that can be included in the Universal Service net cost calculation is clarified.

The draft decision refers extensively to the Commission Communication on Universal Service (COM 96 (608)) as well as the recent case law of the European Court of Justice on universal service.

PT is invited to submit, if it so desires, an application based on the criteria explained in the decision.

### **4.3. Universal directory**

The provision of a universal directory, including both fixed and mobile numbers, seems to be difficult to achieve, even though this is foreseen in the European legislation as well as the



Portuguese legislation. ANACOM produced a Deliberation in June 2002, which clarified considerably the steps towards such a directory.

## **5. DATA PROTECTION**

Called parties have the right to refuse unsolicited marketing calls, faxes or e-mails. There is no prohibition on unsolicited calls, an opt-out system is in place for e-mails, and, for faxes, Portugal has chosen the opt-in approach.

## **6. MOBILE ISSUES**

### **6.1. UMTS**

The four UMTS licences were granted in January 2001.

#### **Barriers to 3G roll-out**

As in other Member States, environment and health concerns have slowed down the deployment of 3G networks in Portugal.

One of the licensed operators has officially requested another postponement of the launch of UMTS services, due in particular to the lack of availability of handsets.

### **6.2. Interconnection and roaming dispute between mobile operators**

The new entrant in the mobile market, which has only an UMTS licence, requested roaming with the existing three mobile operators. So far, agreement has been reached with only one of the GSM operators. At the beginning of 2002, the new entrant repeatedly tried to negotiate interconnection and roaming with the other two GSM operators. The matter was referred to the regulator, which, on 20 June 2002, decided that the parties should reach an agreement by 1 July.

The two operators refusing interconnection argued that they are not obliged to provide roaming to the new entrant as long as the latter does not operate its 3G service.

In September 2002, ANACOM decided to oblige the two GSM operators on their side to provide interconnection to the new entrant for services accessed through GPRS handsets within 15 days. This included call termination, customer service, information services, voice mail, SMS and MMS termination. On its side, the new entrant will have to migrate its customers to its own 3G system within 12 months of the launch date of its commercial activities.

## **7. PREPARATION FOR THE TRANSPOSITION OF THE NEW FRAMEWORK**

Portugal intends, in order to transpose the new framework, to adopt a new basic law followed by decree-laws transposing the 5 directives.

All the draft measures have been forwarded to the government, which will then submit the basic law to Parliament for approval. The Portuguese authorities have indicated that they expect to meet the deadline of 25 July 2003 for the transposition of the package.

## 3.13 FINLAND

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

As highlighted in previous Implementation Reports, Finland has a light regulatory regime as compared with other Member States, and the Finnish authorities have traditionally relied more upon market forces than detailed regulation.

The large number of SMP operators, some of which are very small, represents a particular challenge in terms of workload to the FICORA, which has yet to ascertain that all SMP operators comply with the regulation relating to open network provision, in particular regarding the cost orientation of interconnection charges. The staff of FICORA increased by twelve posts in 2001, but not all of these resources were devoted to the supervision of cost orientation and cost accounting systems. At present, there are nine experts in the Economic Supervision Unit, of which two to three are working on cost accounting systems.

Concerns expressed by the new entrants in the past regarding the hands-off approach of the authorities and the absence of ex-ante detailed regulation and efficient implementation of existing rules remain, even though they welcome the efforts made by the NRA in the last year to verify the cost accounting systems of eighteen SMP operators.

The NRA has also investigated the interconnection charges of some of the biggest SMP operators. However, in many cases, its investigations have been protracted. In several cases, its decisions have been appealed by the incumbent operators. Also, the fact that the NRA's and the appeal bodies' decisions do not have retroactive effect is detrimental for the new entrants.

In these investigations, the NRA has concluded that in many cases, the interconnection charges of SMP operators were not cost-oriented (and sometimes by tens of percentage points above the so-called "reasonable" level referred to in national legislation) and that the operators' cost accounts were not in compliance with the telecommunications legislation. These findings suggest that the concerns repeatedly expressed by new entrants regarding the lack of accountability on the part of incumbent operators are not unfounded. They also cast more light on the new entrants' long-standing demand that the NRA act resolutely and swiftly to prevent and remedy the problems identified, and monitor compliance with its decisions.

The draft Communications Market Act strengthens the remedies at the NRA's disposal: it establishes an economic fine in case of non-compliance with the obligations imposed on the operators. Also, to remedy the problems encountered in the past regarding lengthy appeal procedures, the draft Act provides that some of the NRA's decisions (e.g. those relating to market definition and analysis, as well as to the imposition of obligations on operators) may be appealed directly to the Supreme Administrative Court. As provided for in the Framework Directive 2000/21/EC, the decision of the NRA will stand pending the outcome of the appeal; the draft Act however requires that the NRA specifically order that the operator concerned complies with its decision.

The new entrants welcome these future remedies at the NRA's disposal, but stress that, as is the case today, effective implementation of regulation requires that they are used to their full extent.

In the summer of 2002, following Sonera's decision to write-off the 3G licence that it acquired in Germany, a debate took place in the Finnish Parliament on the Government's role in the purchase of the German 3G licence. Even though the conclusion (supported by the State prosecutor) of the associated investigations (including a Communication of the Government on the State's ownership policy vis à vis Sonera) was that the Government could not be held responsible for this investment decision, a majority view (supported by the Government) emerged that the State's holding in Sonera and other companies be exercised by one dedicated entity rather than sectoral Ministries.

## **2. INTERCONNECTION AND ACCESS REGIME**

### **2.1. Interconnection**

#### *2.1.1. Level and cost orientation of interconnection charges*

According to data collected during the preparation of this Report, the charges levied by Finnish SMP operators for terminating calls on their fixed networks are among the most expensive in the EU for all levels (local level, single transit and double transit).

In this context it should be noted that while operators are obliged by law to offer interconnection to their network at any technically feasible point requested (including local level interconnection), the price lists of the operators belonging to the Elisa Consortium duly include local level interconnection charges following an instruction addressed to Elisa by the NRA, but this is not the case with the price lists of other SMP operators.

New entrants continue to express concern that interconnection prices are high as compared with retail tariffs, and that there is a price squeeze, in particular for local level interconnection internet traffic. To determine whether there is such a price squeeze, the cost orientation of the SMP operators' interconnection charges should be established. In the last eighteen months, several investigations by FICORA have indicated that non-cost oriented interconnection charges are levied by SMP operators, some of which have been supported by court decisions.

The decision of the NRA of April 2001 that established that Sonera's mobile interconnection charges (the termination fees were scrutinised following a submission from a new entrant, and the origination fees were scrutinised at FICORA's own initiative) were not cost-oriented led the company to reduce its access charges by 12% and its termination charges by 20% on average (with effect from 1 September 2001). Sonera appealed the decision to the Helsinki Administrative Court. The court proceedings lasted a whole year, and a ruling was given on 27 September 2002, which dismissed Sonera's claims. Sonera has announced that it will further appeal to the Supreme Administrative Court, which means that FICORA's decision cannot be enforced until this appeal proceeding has been concluded. The matter has been pending since November 1998, i.e. the date on which Telia submitted its complaint to the NRA.

FICORA considers that the ruling of the Helsinki Administrative Court establishes an important precedent in that it confirmed its authority to investigate mobile interconnection charges and to force operators to set these charges at a cost-oriented level. This authority had been challenged by some operators. The ruling is of substantial value for the NRA's on-going investigation of Radiolinja's mobile interconnection charges. During the course of this investigation, Radiolinja has effected structural separation of its network and service operators and decreased its termination charges from €0.2052 (peak) to €0.1312 (peak and off-peak).

In January 2002, FICORA closed the investigation of the cost orientation of Elisa's interconnection charges<sup>18</sup> after the company had lowered its charges by 20% on average (price list applicable as from July 2001). This proceeding lasted two years and three months.

This decision regarding Elisa's interconnection charges prompted the NRA to ask, in January 2001, all the local telephone companies with SMP to submit their cost accounts for a similar verification of cost orientation. Thirty-seven operators submitted information to the NRA in the spring of 2001, but many submissions were imprecise or did not respond adequately to the NRA's request. In September 2001 the NRA closed the general investigation and announced that it would proceed with more in-depth investigations of certain operators.

In June 2001, an investigation was launched concerning the cost orientation of the interconnection charges of Soon Communication Oyj (now Soon Net Oy, part of the Elisa Group). In the course of the investigation, Soon reduced its interconnection charges by approximately 10 to 19 % and published a new price list valid as from 1 February 2002. On 13 May 2002, FICORA adopted a decision establishing that the reduced charges were cost-oriented and closed the investigation. This proceeding lasted eleven months.

In 2001, FICORA also started an investigation of the charges levied by 49 local SMP operators for opening subscriber number digits and operator prefixes. Due to the large number of local networks and local operators in Finland, the cumulative amount of the charges levied by these operators creates a substantial entry barrier for new entrants. Approximately half of the SMP companies investigated reduced their charges during the investigation process. In one case (the Telephone Company of Vaasa), a decision of FICORA (dated 1 February 2002) establishing that the operator's charges were not cost-oriented was required before the company reduced its prices. As a result of the investigation, the fees charged for the opening of digits have dropped considerably, in certain cases by more than 70%.

New entrants consider that FICORA's investigations have contributed very little to the transparency of interconnection charges. They claim that in many cases, operators have reduced their charges during the investigation and FICORA has closed the proceedings, with the result that the new entrants do not know how the interconnection charges are calculated.

### *2.1.2. Non-discrimination*

The new entrants maintain their claim that interconnection charges are imposed upon them without any evidence of cost orientation being provided to justify their level. Moreover, they claim that the termination fees that SMP operators have been willing to pay to them are discriminatory as compared with the interconnection charges that SMP operators pay each other. As mentioned in the 7<sup>th</sup> Report, in June 2001, the Competition Authority adopted a decision that confirmed the existence of such discrimination.

However, FICORA has abstained from dealing with similar disputes relating to alleged discrimination against the new entrants on the grounds that the termination fees levied by new entrants (i.e. non-SMP operators) fall outside the scope of the telecommunications legislation. For example, in the context of the above-mentioned investigation of the interconnection charges of Soon, which was started following a submission by a new entrant (Tele2), the latter claimed that Soon had required Tele2 to offer to it services at a price (for the same service) different from what it (i.e. Soon) pays to other operators in the same numbering zone.

---

<sup>18</sup> In January 2001, FICORA adopted a decision that established that Elisa's interconnection charges were not cost-oriented.

In its decision, FICORA did not address this matter on the grounds that it has no competence over it.

### 2.1.3. *Fixed-to-mobile charges*

According to data collected during the preparation of this Report, the EU average charge for call termination on mobile networks (peak) is €0.1894 for all operators, €0.1849 for operators having SMP in the national interconnection market and €0.1875 for operators having SMP in the national interconnection market and the national mobile market.

There is no wholesale interconnection market for certain types of communications in Finland. For example, fixed operators cannot purchase termination from mobile operators. Instead, the latter levy an end-user charge. End-user charges vary as a function of the type of subscription.

In the case of calls originating on fixed networks, the (peak) end-user charges levied by Sonera and Radiolinja for terminating these calls are €0.27/min and €0.26/min respectively. In comparison, the interconnection charges levied by Sonera and Radiolinja for (peak) calls originating on mobile networks (peak) are €0.1278/min and €0.1312/min respectively.

Three mobile operators have been designated as having SMP in their relevant markets (the Finnish authorities do not use the typology provided for in the Directives; for example, there is no designation of SMP operators in the national market for interconnection): Sonera, Radiolinja and Alands Mobiltelefon. According to Finnish telecommunications law, the interconnection charges of SMP operators must be cost-oriented, but end-user charges are not regulated. This means that in FICORA's investigation of Sonera's mobile termination charges, the scope of the investigation only concerned traffic originating in other mobile networks and abroad.

The provision in the current Interconnection Regulation<sup>19</sup> that codified, in 1999, the existing practice of levying end-user prices in certain circumstances has been carried over unchanged into the new draft Communications Market Act. This has been criticised by Finnet, which would like fixed operators to keep control of the pricing of end-to-end communications and argues that under the current system, mobile operators are supported at the expense of fixed operators. The new entrants call for a wholesale interconnection market so as to promote competition between service providers and in particular to enable them to better compete with the service providers of vertically integrated operators. This requires that they be able to buy origination and termination services from fixed and mobile network operators. The appropriateness of the system in a converged market environment has also been questioned.

The Finnish authorities consider that the system of end-user charges is sound, because each operator only prices that part of the service that it actually provides and that consumers benefit from this transparency. If mobile operators reduce their charges, the effect is immediately felt by the end-user, since fixed operators cannot use these reductions to increase their margins without passing them on in the end-users prices.

### 2.1.4. *Flat-rate internet access call origination*

FRIACO is not offered by SMP operators in Finland, even though some of them have flat-rate internet retail products. The NRA has not mandated it. New entrants have previously called on the NRA to promote FRIACO. Some of them still maintain this request, while others

---

<sup>19</sup> Article 15a of Regulation 1393/1997, incorporation 1999/220.

consider FRIACO less interesting than bitstream offers (which are not systematically available either; for further details, see Section “Bitstream” below).

## **2.2. Interconnection leased lines/partial circuits**

Interconnection leased lines are generally not included in the reference interconnection offer of SMP operators. According to data collected in the context of the preparation of this Report, the charges for interconnection leased lines in Finland, where they are available, are among the cheapest in the EU.

## **2.3. Unbundling**

Full unbundling of the local loop has been mandated since June 1997. There are some 35 000 fully unbundled loops in Finland and some 7500 loops in shared use (estimates of 1 August 2002). These figures contrast with the 30 000 loops that were fully unbundled and the 500 loops that were in shared use one year earlier<sup>20</sup>.

### *2.3.1. Pricing*

In the summer of 2001, the Competition Council fined three companies for abusing their dominant position and engaging in excessive and discriminatory pricing of the local loop. In the case of the Turku Telephone Company and the Telephone Company of the Salo Region (who appealed the decision), these sanctions were maintained by the Supreme Administrative Court in 2002.

As concerns Elisa, in August 2001, the Supreme Administrative Court ruled on Elisa’s appeal against an earlier decision by FICORA regarding excessive pricing of the local loop. This ruling was largely in line with FICORA’s decision, but the Court considered that some of the methods used to evaluate the capital base (to determine a reasonable return on capital) lacked clarity, and returned the case in its entirety to FICORA. In November 2001, Elisa submitted new cost calculations as well as a proposal for the revised local loop prices, which would apply from 1 January 2002. These prices provided for an average reduction of 20 % as compared with the previous prices. In a decision issued later in November 2001, FICORA concluded that Elisa's new prices were cost-oriented.

FICORA considers that the decision of the Supreme Administrative Court constitutes a significant preliminary ruling with respect to its investigations of other incumbent operators' local loop prices. The Court stated that FICORA has the competence to investigate whether the prices set by the company are in accordance with the law (cost-oriented) and to oblige operators to bring the prices down to a reasonable level, but that it cannot set the exact level of these prices.

During the last few months, FICORA has investigated operators’ local loop prices, and some operators have reduced their prices during the investigation. The prices levied by some operators are currently under further investigation.

---

<sup>20</sup> In this regard, it should be noted that the figure of 40 000 fully unbundled lines mentioned in the 7<sup>th</sup> Report also included leased lines.

### 2.3.2. *Provisioning and collocation*

New entrants state that there are problems with discriminatory provisioning deadlines. On 23 September 2002 FICORA issued a decision following a complaint relating *inter alia* to differences in the provisioning deadlines of the upper band for competitors by Elisa as compared with the provision of ADSL connections by companies belonging to the Elisa Consortium. One of the key issues that have an impact on provisioning deadlines is access to information and operational support systems. During the investigation launched by FICORA, differences in provisioning deadlines were identified, but the NRA declared that they were unintentional, and was satisfied with Elisa Network's commitment to create a special access regime to its databases for competitors by 30 June 2003. As the other allegations in this complaint were also considered unfounded (for further details, see "Bitstream" below), FICORA closed the case.

No case law exists for the interpretation of the very open-ended provision in the Telecommunications Market Act that allows the incumbent to refuse access on the grounds that it requires the transmission capacity or collocation room requested for its own use or its reasonably foreseeable future needs. New entrants claim that problems have emerged relating to refusals of access on the grounds that the copper pair has been reserved for the network operator's service provider, but no complaints have been submitted to the NRA in this regard

### 2.3.3. *Shared access and subloops*

Even though the figures provided by the NRA indicate that there has been an increase in the number of local loops in shared use as compared with last year, there are big differences in the price lists of incumbent operators: some do not provide for operational provisions on access to the upper band, with the result that the latter are defined on an "ad hoc" basis and in an unstructured way in commercial negotiations.

Shared use of the local loop is not only being exploited by the new entrants, but also by the major operators. For example, Sonera is making intensive use of this facility to increase its presence in the major cities of Finland, two of which (Helsinki, Tampere) are in the hands of the Elisa Consortium.

During the preparation of the draft Communications Market Act the issue of subloops was raised by several new entrants, because problems have arisen due to the fact that when modernising their networks, many fixed network operators have replaced exchanges with concentrators. Since the incumbent operators have interpreted the notion of "local loop" as meaning the connection between the concentrator and the end-users' premises, the local loops leased to new entrants have been very short and the system has required that they extend their own networks to each single concentrator of the incumbent operator. This problem has been solved to the new entrants' satisfaction in the draft Communications Market Act.

## 2.4. **Bitstream access**

Some 2000 ADSL-lines are operated by new entrants under bitstream offers, which contrasts with the figure of 1000 announced at the time of the preparation of the 7<sup>th</sup> Report.

Three major problems were identified during the hearing on the status of the Finnish telecommunications market that was held in Brussels on 11 October 2002. Firstly, some operators, including Sonera, have retail ADSL offers, but no wholesale offer to new entrants. Secondly, in some cases, there is a wholesale offer that can be negotiated, but it is not included in the public price list. Finally, there are price squeeze problems.

These findings are convergent with the results of a recent study by the National Competition Authority (NCA) concerning obstacles to competition in the broadband market (published in June 2002), which indicates that pricing is the main problem in the wholesale ADSL market: some operators do not include wholesale offers to competitors in their public price list, and/or price their products at an unreasonable level or in a discriminatory manner (which results in price squeezes). The study also showed that in some cases, provisioning terms include restrictive provisions that prejudice competitors (in this context, it is noted that in the context of the preparation of this 8<sup>th</sup> Report, all new entrants have drawn attention to problems with provisioning deadlines). Retail markets were considered to be generally competitive, even though tying (e.g. of the prices for the internet service, the access service and for equipment) and the lack of alternative operators in some sparsely populated areas were identified as particular problems.

There is no sector-specific legislation mandating bitstream access in Finland. In their response to the Commission's administrative letter of 29 January 2002 regarding bitstream access, the Finnish authorities indicated that in implementing the national legislation, they required network operators with SMP that provide a DSL connection to a service operator (e.g. its own service operator) to offer the same service to other service operators. This means that if, for example, Elisa Networks provides a DSL connection to the ElisaCom OY service operator (that operates the DSL service offered to end-users), it must also provide such connection to competing service operators.

Following the above-mentioned study (which is being followed up by company-specific investigations) the NCA issued an opinion according to which operators should have separate prices for retail and wholesale ADSL products and services, and their price lists should be public, precise and transparent. Moreover, SMP operators' wholesale prices and service level should be reasonable. Provisioning terms should be reasonable, fair and non-discriminatory.

The above-mentioned FICORA decision of 23 September 2002 also addressed allegations by the complainant regarding the subsidisation of Elisa's ADSL retail subscription and equipment and regarding the tying of these two products. In this regard, FICORA indicated that it had no competence to deal with these matters, because the pricing of ADSL subscriptions and services falls outside the scope of national telecommunications legislation since the latter does not cover switched data communications. This restriction will be removed in the new Communications Market Act.

## **2.5. Situation of the (broadband) local access market**

### *2.5.1. Status of the DSL market, position of the incumbent*

According to the Finnish authorities' estimates, there are some 180 000 broadband connections in Finland. The number of broadband subscriptions increased tenfold in 2001-2002<sup>21</sup>.

Some 112 000 xDSL lines were provided to end users by the incumbent operators, their subsidiaries or partners on 1 August 2002. This number was 59 000 on 1 January 2002. In addition, the incumbent operators have 16 000 internet broadband connections by means of cable modem access.

---

<sup>21</sup> (Finnish) Telecommunications Statistics 2001, publication of the Ministry of Transport and Communications



The number of DSL lines operated by new entrants is 19 500 on the basis of full local loop unbundling (10 000 lines), shared access (7 500 lines) and bitstream (2000 lines). In addition, they have some 25 000 internet broadband connections by means of cable modem access.

### *2.5.2. Development of alternative means of access*

From January 2002 to August 2002 the number of cable modems in use increased from 32 000 to 41 000. In some areas cable operators have been able to substantially increase their market share due to attractive prices (e.g. Welho in the Helsinki area). Many cable operators are owned by the local telephone companies, a fact that may cause competition problems.

There are fifteen local broadband wireless local loop (WLL) operators in Finland, and the number of new entrants actually operating wireless local loops is five. So far, WLL operators have had a limited impact on local access competition.

## **2.6. Leased lines**

No concerns have been expressed by operators regarding the prices of leased lines in Finland. As data is unavailable, it is impossible to compare the prices of national leased lines in Finland with those applicable in other Member States. International leased line prices compare favourably with other Member States, and have decreased over the previous reporting period, in particular as concerns distant EU lines.

Delivery periods for leased lines also compare favourably with other Member States as concerns certain capacities and lengths of leased lines.

## **2.7. Numbering**

Numbering is, in addition to interconnection and local loop unbundling, the area where Finnish new entrants have repeatedly called for more proactive measures on the part of the NRA to ensure competitive market conditions.

### *2.7.1. Carrier selection and pre-selection*

Some 11% of fixed telephony customers have concluded carrier pre-selection agreements with alternative operators. In practice, there is no implementation of carrier pre-selection for local calls, which was mandated in March 2001. Thus the facility is not contributing to competition in the local voice telephony market, and in particular in dial up internet.

The limited take-up of carrier pre-selection is due to the prices applicable. One-off charges have varied as widely as between €10 and €60. The new entrants welcome the provisions in the draft Communications Market Act that stipulate that the one-off fee may not be so high as to deter the use of the facility and that FICORA may in individual cases determine its maximum amount. However, the interconnection (call origination) charges added to the one-off fee are depicted by new entrants as even more problematic than the one-off charges.

New entrants have also criticised the fact that there are no third party agreements available, which means that they cannot use alternative operators to carry traffic, and carrier pre-selection has to be arranged for bilaterally with each of the SMP operators.

### 2.7.2. *Number portability*

The take-up of number portability remains low. Only some 15 000 numbers have been ported, which is the same number as the one mentioned in the 7<sup>th</sup> Report. New entrants claim that the same pricing related obstacles as those regarding carrier pre-selection hinder the take-up of number portability. The way in which calls are routed through the incumbents' networks increases costs. New entrants have therefore called for the creation of a DNS Master Database.

The explanatory memorandum, which accompanied the draft Communications Market Act (version of May 2002), stated that the pricing of number portability has so far prevented its implementation in practice, and referred to the "unreasonable pricing" of the facility. The memorandum also foresaw the creation of a master database so as to ensure that the technical implementation of number portability does not give rise to excessive costs. It provided that FICORA could lay down rules concerning the timetable for transition to the master database. It also specified that where an operator did not wish to participate in the database, it would have to bear itself the additional costs arising from any uneconomical technical implementation of number portability.

However, these provisions have been removed from the final version of the draft Act that was submitted to the Finnish Parliament on 13 September 2002. The draft Act now stipulates that the per call costs incurred will be shared equally (50%-50%) by the donor operator and the receiving operator.

As a result of the removal of the above-mentioned provisions from the draft Act the creation of a master database will depend on the willingness of operators to implement this technical solution. Sonera has indicated its reluctance to participate in such a database in so far as the costs involved are not proportional to the quantity of numbers ported. The NRA's role remains a coordinating one (as has been the case so far), as specifications for the database intended for mobile number portability (and at a later stage for fixed number portability) are being discussed in an industry working group. This working group was set up three years ago already to facilitate the technical implementation of fixed number portability, but it has not been able to make progress as regards the creation of a master database.

The 6<sup>th</sup> and 7<sup>th</sup> Implementation Reports noted that the Finnish NRA was investigating the cost-orientation of number portability charges. This investigation was closed in September 2001 without any conclusive results. The NRA noted that few numbers had been ported (in some networks the number was nil) and that the distribution of costs could only be based on estimates.

While the NRA acknowledges that there is very limited take-up of fixed number portability, it notes that for several years, it has been possible for business customers to connect to two local networks (which both have their own numbering), and direct their outgoing and incoming traffic through either of these operators' networks (i.e. using the old or the current number). Some 400 exchanges provide for this facility.

## **2.8. Cost accounting and accounting separation**

Until the end of 2001, no systematic independent verification of compliance with the cost accounting system of SMP operators had been conducted by the NRA and no annual certificate concerning compliance had been published.

In 2001, the Commission launched an infringement proceeding against Finland on account of lack of verification of the cost accounts of SMP operators and publication of an annual statement concerning compliance. In the second half of 2001 and in 2002, FICORA investigated the 2000 cost accounts of eighteen SMP operators as concerns local call tariffs and interconnection charges (as required by Directives 98/10/EC and 97/33/EC). The authorities have also committed to undertake verifications of SMP operators' 2001 accounts.

Under the Finnish legislation, SMP operators are free to determine for themselves the accounting methodology they wish to use. In practice, SMP operators use different cost accounting systems, many of which are still based on historic costs.

The above-mentioned investigations by FICORA of SMP operators' cost accounting systems have been carried out at a general level: FICORA scrutinised, in particular, the system environment, procedures of entries into the cost accounting systems, the connections between the cost accounting systems and other systems of financial management, the rules of distribution of the costs and allocation methods, as well as the connection between the cost accounting system and the pricing of operators. It did not address volumes and figures relating to individual products and services.

After having verified the cost accounts of ten SMP operators in the second half of 2001, FICORA published in December 2001 a statement concerning compliance in which it did not provide any company-specific information and concluded that on average, any verifiable link between the cost accounting systems and the pricing systems applied was weak and that the cost accounting systems were generally not adequate in terms of the aims of the Telecommunications Market Act. This is understood as meaning that these cost accounting systems do not comply with the principles of transparency, cost orientation and unbundling.

The key question is the regulatory measures that will be undertaken to remedy the problems identified. As mentioned above, no public information is available concerning the outcome of the verifications as concerns each individual company audited. The justification given is that the audit reports contain business secrets. Disparate information was collected during the preparation of this 8<sup>th</sup> Report: one large operator stated that after the verification, FICORA had indicated a series of changes to be made in the operator's cost accounting system. The requested changes were considered reasonable by the operator who had subsequently implemented them. Another large operator indicated that it was still waiting for the results of the verification and that these results were long overdue.

FICORA has indicated that it has discussed the findings of the audits with all companies concerned and that it trusts that these companies will proceed with the necessary modifications of their cost accounting systems. However, the question arises as to whether and how FICORA will ascertain this and which remedies or sanctions it will impose on companies that may continue to breach their regulatory obligations.

One possibility of remedying the identified problems would be for FICORA to establish the minimum standard that the cost accounting systems of all SMP operators would have to comply with. However, FICORA considers that this is not practicable due to the substantial differences in size of the SMP operators. Some operators employ only a handful of people and serve only a thousand customers. Instead, FICORA is drawing up a general, non-binding guideline to assist the operators, in particular the smallest ones, to develop their cost accounting systems. This is in line with the draft Communications Market Act, in which FICORA's powers to regulate cost accounting systems are limited to issuing general, non-binding guidelines and providing guidance to operators.

One operator has expressed concern about the fact that the statement concerning compliance published by the authorities at the end of 2001 created a general suspicion vis-à-vis all the companies audited, because it did not distinguish between operators. This had forced this operator to provide clarifications to the public and shareholders.

## **2.9. National roaming and access to mobile networks**

The Telecommunications Market Act was amended in 2001 with a view to obliging 2G licensees with SMP to negotiate roaming with 3G network operators. The new draft Communications Market Act does not change the current situation: the statutory obligation for national roaming is restricted to 3G-2G networks.

Access to the networks of 2G operators with national coverage has been organised on the basis of service provider agreements. This has been criticised and challenged by the new entrants, who argue that these agreements do not provide for genuine full capacity agreements and that the authorities should mandate 2G-2G roaming as a pro-competitive tool and, more generally, further develop mobile access regulation as is possible under the special access provisions of the current Directives and under the new framework.

In the spring of 2002 Telia, which had previously served its mobile customers through a service provider agreement with Radiolinja, concluded a roaming agreement with Suomen 2G and carried out a customer migration operation. Radiolinja retaliated by undertaking measures, some of which were considered to breach the law by the authorities. For example, FICORA ordered the company to immediately re-open Telia's subscriptions (IMSI space) that the company had closed. Also, in July 2002, the Consumer Authority issued a conditional fine of €80 000 to Radiolinja, but the case is currently pending before the Market Court.

The draft Communications Market Act introduces a provision allowing the NRA to impose access to SMP-operators' mobile networks by mobile service operators and mobile virtual network operators. It also provides that the NRA may impose an obligation on mobile operators with SMP to allow access to their SIM-card capacity by alternative operators. During the consultation period, Sonera and Radiolinja expressed concern about this provision, because they considered that such access should be based solely on commercial negotiations, as is already the case with access to Radiolinja's SIM-card.

In December 2001, the Finnish Competition Council adopted a decision regarding a complaint by Telia concerning alleged restriction of competition by Sonera in the pricing of access to its mobile network. The Competition Council ruled that Sonera is neither alone, nor jointly with Radiolinja, dominant in the national market of access to mobile networks. The Council however overruled the decision of the Competition Authority that Sonera's pricing policy had not caused prejudice to its competitors and returned the case to the NCA, which was ordered to study the extent to which Sonera's access pricing had deterred market entry.

Telia appealed this decision to the Supreme Administrative Court, which has not yet ruled on the case. The NCA has indicated that it would not tackle the pricing issue as long as the Supreme Administrative Court has not given its ruling on the issue of dominance

## **3. AUTHORISATIONS**

Under the light Finnish licensing regime, individual licences are only required for the provision of network services on public mobile networks. Operators maintain that this regime has promoted a competitive environment, in which operators are free to operate and test new

services and applications. They consider that the policy of minimal regulatory intervention has contributed to the emergence of new technologies.

### **3.1. Rights of way**

Under Finnish law digging rights should be granted free of charge. However, some local authorities have levied charges for digging, e.g. on the basis of €/meter. In two recent cases of September 2001 and December 2002, local administrative courts have declared that the charges levied by the local authorities in the context of the exercise of rights of way breached the law. One of these rulings (concerning charges levied by the City of Lahti) has been appealed to the Supreme Administrative Court. In those cases where the local administrative courts have issued rulings declaring such charges to be illegal, this has contributed to cooperation agreements between the operators and the local authorities, and the latter have cancelled the charges.

In March 2002, a proposal was submitted by the territorial planning committee to modify the current Construction Law (which is under review) with a view to incorporate a provision regarding charges for the installation of lines and equipment. The proposal was however rejected at political level.

The new entrants state that mast sharing occurs frequently, but that prices are high and as a result, they face the dilemma of whether to share masts or build their own. It is reported that obtaining permits for constructing new masts is not unproblematic, but the situation is not nearly as bad as in some other Member States.

## **4. UNIVERSAL SERVICE/CONSUMERS/ USERS**

### **4.1. Retail tariffs**

Due to the segmentation of the Finnish market between local and long distance/international operators, tariff rebalancing may be less of an issue in Finland than in other Member States. However, the cost orientation of retail tariffs (for local calls) remains to be demonstrated due to the lack of transparency of the SMP operators' cost accounts and the absence of systematic verification of compliance. Also, the Finnish authorities do not require the SMP operators' line rental charge or individual retail products to be cost oriented; this requirement of cost orientation must be met by the retail charges for fixed local telephony as a total. Furthermore, some line rental charges have been artificially low due to the (prohibited) reductions offered by some local operators to their owner-customers.

Consumer price regulation is not applied by the authorities in Finland, with the exception of the requirement of cost orientation of end-user tariffs for local telecommunications services provided via fixed public networks of less than 2 Mb/s. The specific cost orientation requirements of Article 17 of the New Voice Telephony Directive are not applied by national legislation as regards the activities of SMP operators in the markets for international and long-distance voice telephony, on the grounds that effective competition exists on those markets.

Following its decision, which concluded that the interconnection charges of Elisa were not cost oriented, FICORA initiated, in January 2001, an investigation of Elisa's local telephone tariffs. This investigation was closed in December 2001. In its decision, the NRA concluded that the distortions at wholesale level (identified in the investigation of the company's interconnection charges) needed to be corrected before it would be possible, based on the

company's cost accounts, to establish whether the retail tariffs of the operator are cost-oriented.

According to the study "The level of telecommunications tariffs in Finland in 2001", the retail tariffs decreased by 0.5% over 2000. The decrease in prices has slowed down in 2000 and 2001 as compared with the years 1995-1999 when the prices decreased by an average of 3.7% per year. In 2001, the prices of international communications decreased by 2.2% and the prices of mobile calls by 2.9%. Prices for long distance calls increased by almost 4% (these prices consist of the local network (interconnection) charges and of the price for the long-distance call). Local call tariffs increased by 2.4%, while the monthly line rental charges increased by 7.1%. This latter increase reflects the fact that more than half of the local telephone operators have stopped granting rebates on the line rental charge to their owner-customers.

The study also indicates that the prices for ADSL subscriptions have decreased considerably: on 1 January 2002, the standard ADSL service of 256Kbit/s provided by local operators was priced at €57 per month on average, which corresponds to a decrease of 21% as compared to the price applicable on 1 January 2001.

#### **4.2. Funding schemes**

No universal funding mechanism has been set up, because the provision of universal service is not considered as giving rise to net costs. However, some operators have indicated that if the principle of cost orientation were applied to each single element of fixed local telephony, in particular the line rental, a net cost might arise in some cases.

#### **4.3. Itemised bills**

Finnish operators do not provide bills that show, for each call, the partial or full number called, the date, the duration and the price of the call. The basic bill shows the total amount of calls (total minutes and prices) divided into local, long-distance, mobile, international and premium rate calls. Generally, the partial or full number and the date of each individual call are itemised upon request at an extra charge that varies between operators. Some operators also provide itemised bills free of charge upon request to their subscribers.

### **5. DATA PROTECTION**

#### **5.1. Traffic data retention**

Traffic data must be erased upon termination of the call and only certain data may be processed for the purpose of subscriber billing and interconnection payments. Such data may be stored for three months after the maturity of the bill (as a minimum) and three years after the bill has been paid in full (as a maximum).

#### **5.2. Unsolicited calls and e-mails**

For natural persons, an "opt-in" regime has been mandated by the Data Protection Act as regards automated systems (e-mail, SMS, fax and "speech machines"). For conventional telemarketing (unsolicited phone calls), an "opt-out" regime is applied, and the Direct Marketing Association of Finland maintains a voluntary register to this effect.

Legal persons are subject to an “opt-out” regime in all of the above categories (unsolicited phone calls, faxes, e-mails, SMS).

## **6. MOBILE ISSUES**

A new service operator “DNA Finland”, which uses the network of Suomen 2G, started commercial operations at the beginning of February 2001, and has attracted a relatively large customer base in a short time. The market shares in terms of subscriptions of the Finnish mobile operators in 2001 were as follows: Sonera 59%, Radiolinja 29%, Telia Mobile 6% and DNA 5%.

The merger between Telia of Sweden and Sonera has been the major development in the mobile market in recent months. According to the notification submitted to the Commission in May 2002, the merger will be effected by means of a share exchange offer by Telia to Sonera’s shareholders. In order to address the Commission’s concerns about direct horizontal overlaps in certain markets, in particular mobile communications services to retail customers, Telia undertook to divest its mobile communications business in Finland. To address the Commission’s concerns regarding the likelihood of foreclosure of certain markets (in particular mobile communications services), Telia and Sonera offered to legally separate their fixed and mobile networks and services in Finland and in Sweden. They also undertook to grant non-discriminatory access to their networks.

### **6.1. UMTS and 2,5 G roll-out**

The licence conditions provide that the 3G networks be in place by 1 January 2002. As mentioned in the 7<sup>th</sup> Report, given the market situation, the authorities required the 3G networks to be in place on 1 January 2002 “to a certain extent”, and this requirement has been considered to be fulfilled since all four 3G operators had operating test networks in certain parts of the country at that time.

FICORA monitors market developments, including the construction of the networks, on a six-monthly basis. Its latest report on this issue is dated 14 June 2002. The authorities follow a pragmatic approach in as much as the roll-out of the networks will be based on market conditions (availability of terminals etc), and the licensees will not be penalised for delays for which they are not responsible. Mobile operators are satisfied with this policy.

All three GSM operators with nation-wide licences have upgraded their mobile networks to meet the requirements of the GPRS technology and started to provide GPRS services in the course of 2001. Major take-up has yet to occur (with the exception of some large corporate customers), although it is estimated that possibly up to 50% of the handsets currently sold are GPRS compatible. Operators consider that there is scope for new applications in GPRS and that it may prove so successful that the introduction of UMTS may be delayed. The quality increase of UMTS as compared with GPRS does not, as of today, appear to compensate for the customers’ (financial and other) switch-over costs. The Ministry broadly agrees with this assessment and stresses that early launch of UMTS services will not be imposed on the operators, if the market is not there.

The new entrants consider that access to mobile networks and interconnection between GPRS and internet-based data networks are important challenges for the market and for the NRA. Vertically integrated operators that have both a fixed and a mobile arm are in a privileged position to develop these services, and pro-competitive measures are needed to avoid a

foreclosure of this market as far as the new entrants are concerned. The NRA has indicated that it shares this concern.

## **6.2. Network infrastructure sharing**

According to the Finnish legislation, free antennae space on masts must be leased to competitors who are prevented from constructing their own masts for environmental or town planning reasons. Approximately 60% of new antennae are placed on masts that are in shared use. The prices for the leasing of antennae space levied by Unibase, a 100% Sonera owned company, are considered extremely high by the new entrants.

No network infrastructure agreements have been notified to the NRA or concluded between the operators. The Ministry has not taken any formal position on this issue, but has stated that its approach to such agreements would in principle be positive, as long as competitive conditions and consumer interests are respected and in so far as such agreements contribute to wider coverage of networks rather than to slowing down infrastructure development.

## **7. PREPARATION FOR THE TRANSITION TO THE NEW FRAMEWORK**

The transposition into national law of the new framework has already started. A new draft Communications Market Act was submitted to the Finnish Parliament on 13 September 2002. Consultations were held with more than 260 stakeholders whose statements were posted on the Ministry's website. A hearing was also arranged on the topic, although some operators have expressed the view that this was more of a formality than a real forum for debate, while others praise the transparency of this legislative process.

Only one extra post has been budgeted for 2003 for (and currently only one person has been specifically charged with) the market reviews to be carried out in the coming months. Additional FICORA staff will assist in this work as necessary.

As mentioned in the 7<sup>th</sup> Report, some new entrants have expressed doubts as to whether the Finnish market has reached such a degree of effective competition that regulation can be rolled back (as has already been done for example in the case of long distance and international call tariffs). They also regret the fact that the NRA has not produced comprehensive market analyses that would be publicly available to justify its decisions to remove some regulatory obligations on SMP operators. Against this background, they put a lot of faith in the market analyses that the NRA will carry out in the context of the transition to the new regulatory framework. The Finnish authorities acknowledge that so far, there has not been any systematic collection of market data, but have announced that specifications for a database are currently being developed for this purpose.

In fact, the Finnish Telecommunications Market Act is being reviewed in a two-staged process to align it with the new EC regulatory framework. On 1 July 2002, a first series of amendments to the Act entered into force, which also changed the name of the previous Act to Communications Market Act. The aim of this first amendment was to bring regulation of television and radio networks under the same umbrella as regulation of telecommunications. It also provided for the conversion of existing licences into separate network licences and programme licences.

The new Act is also intended to provide for an enhancement of the operating conditions of commercial channels as the fees that they have to pay to the Finnish public broadcaster Yleisradio Oy have been reduced. The licence fee for analogue TV broadcasters has been



halved and the licence fee for digital TV broadcasters has been abolished for their first term of operation. These fees are paid to the Television and Radio Fund, which mainly finances the Finnish public broadcaster Yleisradio Oy. The new Act also enables competing internet service providers to use duplex cable television networks to offer their services.

Pursuant to the entry into force of the new Communications Market Act, the Finnish authorities have included some broadcasters in their annual notification to the Commission of operators which have been designated as having significant market power.

## 3.14 SWEDEN

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

The independence and autonomy of the Swedish national regulatory authority (Post- och telestyrelsen — PTS) is underpinned by the Swedish Constitution, and the NRA has the requisite powers under EC law, including the adoption of secondary legislation, granting of licences, decision-making on SMP status, issuing of injunctions and mediation in disputes between operators, and own-initiative powers in the field of interconnection. In disputes concerning interconnection terms in particular, PTS has a mandate to settle the dispute by a binding decision. It also has the possibility to issue fines (inter alia for non-compliance with legislation or licence conditions).

PTS is a government agency reporting to the Ministry of Industry, Employment and Communications. The Ministry is responsible for the State holding in the incumbent — which, following its flotation in June 2000, has been reduced to around 71% of the voting rights – but it is not directly involved in the incumbent's management<sup>22</sup>. The Ministry is also responsible for regulatory affairs, although different Ministers perform the two tasks. The Government appoints the Director General, for renewable six-year terms. PTS is sufficiently resourced and has a staff of 204, with a further sixteen full-time positions projected for 2003. It is financed mainly by frequency and licence fees, which is a way of reinforcing its independence. The fees are set to cover the agency's expenses for the activities that are specified in the various legal Acts. The Swedish Constitution safeguards the autonomy and independence of all State authorities — including PTS — and prohibits any interference by Ministries in the day-to-day activities of the authorities. The Constitution stipulates that all government agencies must act impartially and objectively.

Secondary legislation lays down that PTS must co-operate with the Consumer and Competition Authorities on consumer affairs and competition matters, and initiate a reciprocal and regular exchange of information.

Any decision made by PTS can be appealed to the General Administrative Courts, and many have been appealed in recent years (including important economic decisions on fees for carrier pre-selection and on interconnection charges, as well as decisions to award third-generation mobile licences). The appealed decisions can be confirmed or revoked, and the content of the decisions can also be changed partially or completely, i.e. the court also examines the substance of the case. Almost every decision that PTS has made requiring the operator with SMP on the interconnection market to lower its mobile termination charges (in 1999, 2000, 2001) has been appealed.

#### 1.2. Management of numbers

PTS is responsible for the allocation and management of numbers, and all operators are granted number capacity on equal terms and conditions. Since 1994 PTS has established

---

<sup>22</sup> On 26 March 2002, Telia and Sonera announced their plan to merge. The merging process is still pending. If the merger is accepted as planned, Telia's shareholders will own approximately 64% of the merged company. This would mean that the Swedish State would hold approximately 45% of the company and the Finnish State approximately 19%.

numbering plans and issued regulations regarding these plans and their use, and all numbering plans have been published. These plans are e.g. E.164, X.121, E.118, Q.708, E.212.

### **1.3. Frequency management**

PTS is also responsible for the management and allocation of frequencies, and has published frequency plans.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. Interconnection**

#### *2.1.1. Reference Interconnection Offer*

The incumbent publishes a reference interconnection offer (RIO) which includes relevant information, including interconnection charges. The incumbent is obliged to send the NRA a copy of its interconnection agreements to enable it to compare the agreements concluded and the RIO with the relevant cost accounting information, inter alia to verify that interconnection charges are cost-oriented and to verify non-discrimination.

The incumbent has been designated as having significant market power (SMP) on the national market for interconnection (as on other markets), and its interconnection charges (including mobile interconnection charges) should therefore be cost-oriented. In February 2002 PTS determined that Vodafone<sup>23</sup> and Tele 2 also had SMP on the national market for interconnection, which means that all GSM 900 operators currently providing services<sup>24</sup> now have to fulfil the cost-orientation requirement for mobile interconnection charges. The decisions have, however, been appealed by the incumbent, Tele 2 and Vodafone, and in the two latter cases the Court has suspended the decisions pending its judgment.

PTS adopted the above-mentioned decisions using the flexibility allowed by the current framework (Article 4 of the Interconnection Directive), which provides that operators with less than 25% can in certain cases be considered to have SMP. Tele 2 had a market share of 16.6% and Vodafone 13.4%, whereas the incumbent held 31.4% of the national market for interconnection. Article 4 of the Interconnection Directive provides that NRAs may determine that an organisation with a market share of less than 25% of the national market for interconnection has SMP, taking into account the organisation's ability to influence market conditions, its turnover relative to the size of the market, its control of the means of access to end-users, its access to financial resources and its experience in providing products and services in the market. Moreover, the preamble of the Directive states that the SMP determination should take into account the situation in the relevant market and that the market power of an organisation depends on a number of factors including international links. PTS considered that both Vodafone and Tele 2 were able to influence market conditions, that they both had a high turnover relative to the size of the interconnection market, and that they had very strong or strong international links and substantial experience in the provision of products and services in the interconnection market.

---

<sup>23</sup> Vodafone's operations in Sweden are carried out by Europolitan Holdings AB and its subsidiaries, Vodafone Sverige AB and Vodafone Stores AB. In April 2002 Europolitan Vodafone changed its name to Vodafone (see press release at <http://www.waymaker.se/bitonline/2001/12/19/20011219BIT01400/12190140.htm>)

<sup>24</sup> A fourth GSM 900 licence was granted to new entrant SweFour AB in May 2002, but it has not yet started to provide services.

### 2.1.2. *Interconnection charges*

PTS has on several occasions intervened in the setting of the SMP operators' mobile interconnection charges. Following an investigation of the incumbent's costs in May 1999, PTS required it to reduce its average mobile interconnection charges by approximately 20% from 15 June 1999 (from €0.30/minute for day time and €0.17/minute at other times, to an average price of €0.20/minute). After further examination of the most recent cost-accounting information, in May 2000 PTS required the incumbent to reduce the mobile interconnection charges further from 1 July 2000 (down to €0.12/minute on average, which PTS considered to be a cost-oriented interconnection charge). The incumbent appealed against this decision, and asked for it to be suspended pending the Court's judgment. At the same time the incumbent voluntarily reduced its interconnection charges to €0.16/minute. In February 2001 the Court ruled that the incumbent should reduce its mobile interconnection charges to €0.13/minute. The incumbent appealed the decision to the Administrative Court of Appeals. In May 2001 PTS required the incumbent to reduce the mobile interconnection charges to €0.11/minute. The incumbent also appealed against this last decision, and asked for it to be suspended, which was granted, although the Court later dismissed the appeal. In January 2002 PTS asked the incumbent to reduce its mobile interconnection charges to €0.10/minute. The incumbent yet again appealed against this decision, once again asking for the decision to be suspended pending the Court's judgment, although neither the Administrative Court nor the Administrative Court of Appeals granted such a suspension.

Pending these Court judgements, the interconnection charges of the other mobile operators are not currently subject to control by PTS and market prices apply instead. PTS does not set the market price, but assesses whether the level of compensation demanded by the new entrant is reasonable. In August 2000 PTS decided, in an interconnection dispute between the incumbent and a large new entrant, that the transit operator, i.e. in this case the operator handing over interconnection traffic to the terminating operator, is responsible for paying the terminating operator regardless of where the call originated from and which way it has been routed, unless there is a direct agreement between the originating and the terminating operator. PTS further decided that the compensation demanded by the new entrant was unreasonable, and considered that a reasonable compensation would be 10% higher than the cost-oriented price, which PTS had determined to be €0.12 per minute (as described above), i.e. €0.13 per minute. This PTS decision was confirmed in March 2002, and the Court ruled that the operator that hands over interconnection traffic to the terminating operator is responsible for paying the terminating operator. However, the Court overturned PTS's decision regarding the compensation demanded by the new entrant, finding that it was reasonable. The Court judgment has been appealed, and the case has not yet been concluded. In another case in spring 2002 the incumbent ceased to transfer mobile interconnection traffic from a number of new entrants for termination on an alternative operator's network (the incumbent being a transit operator in this case) since some of the new entrants did not pay for the interconnection traffic. PTS ordered the incumbent to continue to interconnect. In late spring 2002 the Court confirmed the PTS decision, ruling that operators are not allowed to cease to interconnect even if there is disagreement regarding the conditions (inter alia payment) in the agreement between the interconnecting operators. The Court judgement has been appealed and the case has not yet been concluded.

### 2.1.3. *Friaco*

The Telecommunications Act does not require PTS to introduce flat-rate internet access call origination (FRIACO). PTS has currently not received any formal request to introduce compulsory FRIACO, and is currently not considering introducing it. Although FRIACO is

often considered as a stepping stone to broadband, Sweden has managed to achieve a relatively high broadband uptake without the intermediate step of FRIACO (11% of Swedish households currently have a broadband connection, compared to the EU average of 4%).

## **2.2. Interconnection leased lines / partial circuits**

One new entrant has formally referred a dispute to PTS regarding interconnection leased lines. The main issues were changed terms and conditions, including an alleged sudden price increase and termination of current offerings without previous consultation with the operator concerned. PTS mediated in spring and summer 2002, and the new entrant signed a new agreement (with the higher prices) by the autumn of 2002, since it had already invested and constructed its network structure in a way that relied upon these circuits, although the new pricing would make it difficult to obtain a reasonable profit margin.

## **2.3. Unbundling**

### *2.3.1. RUO*

PTS has publicly stated that local loop unbundling (LLU) is one of its priorities. However, the uptake has not been big for shared access and full unbundling, and very few subloops have been delivered. ECTA figures show that only 1% of all digital subscriber lines are routed through unbundled local loops. The uptake of LLU has grown in the last months, although figures are still low (approximately 5 400 lines in July 2002). Most new entrants consider that the pricing of LLU does not leave any reasonable profit margin, and this is considered to be one of the main reasons for the low uptake. PTS has, however, examined the prices for LLU, and after modifications requested by PTS were carried out, the prices for full unbundling and shared access were found to be cost-oriented in December 2001. For fully unbundled loops the incumbent charges €11.3 in monthly rental, and €165.2 in connection fee (€84.8 for subsequent connections). For shared access the incumbent charges €5.4 in monthly rental, and €118.0 in connection fee (€84.8 for subsequent connections).

The incumbent offers fully unbundled lines and shared access in specific product packages. Fully unbundled lines, shared access and subloops are included in the reference unbundling offer (RUO). Fully unbundled lines have been offered by the incumbent's wholesale arm since March 2000, but no significant volume of agreements has been reached. Shared access has been included in the incumbent's RUO since March 2001, but, again, no significant volumes of agreements have been reached. Subloops are now also part of the RUO, but with no significant uptake.

## **2.4. Bitstream access**

In May 2002 PTS proposed — in a report requested by the Government concerning the application of the EC Regulation on LLU — an amendment to the Telecommunications Act which would oblige an operator with SMP for provision of publicly available voice telephony to provide bitstream access on non-discriminatory and cost-oriented terms in response to any reasonable request.

PTS stated that some of the proposed amendments were already covered elsewhere in the current legislation and in the incumbent's licence conditions, but felt that it was important to make the obligations clearer by adopting specific legal texts on bitstream access. PTS also stressed that it was important that these amendments should be included in the new Electronic Communications Act which will be adopted to take into account the new EC regulatory package. The consultation with industry has just ended. This should be weighed against the

facts that constitutional procedures require further examination of the proposals, that the legal framework should be stable (the issues are dealt with in another way in the new EC regulatory package) and that the Competition Authority is currently examining a related case regarding pricing of ADSL.

A number of operators appear to be more interested in buying wholesale ADSL from the incumbent and then reselling it, than in using the LLU alternative, due to the disadvantages connected with LLU. The price of wholesale ADSL is important in this respect, since it determines whether this solution would allow a reasonable profit margin. A number of operators have made formal complaints to the Competition Authority regarding the pricing of ADSL, claiming that the incumbent is abusing its dominant position on the ADSL retail market (the incumbent holds 80% of the retail ADSL market). The incumbent is alleged to have set the margin between the wholesale price that its wholesale arm charges other operators and its retail price so low that other operators cannot obtain a reasonable profit margin, and some operators even claim that there is a negative margin (the incumbent is alleged to have set low retail prices and very high wholesale prices). Operators also claimed that the incumbent discriminates against other operators regarding delivery times and type of services offered. The competition investigation is continuing.

From a consumer point of view, there appear to be problems with various contractual terms and significant price increases during the contractual period. Consumers are often tied to one operator (most often the incumbent), inter alia through long waiting times for an ADSL connection with another operator, and through high, non-recoverable one-off fees. Some operators seem to set low fees initially and shortly after a person has subscribed there are significant price increases. The Swedish Consumer Authority is currently looking into the contract terms of various market players, in co-operation with PTS.

## **2.5. Situation of the (broadband) regulatory situation**

There are currently approximately 100 ISPs operating in the Swedish market. Internet penetration is high (59% of households have internet access). The incumbent offers ISP services directly and via its subsidiary "ComHem", and by December 2001 the incumbent as an ISP had a market share of approximately 35%, in terms of total connections. Sweden has a relatively high uptake of broadband. In March 2002 between 510 000 and 540 000 households had access to broadband, which is four times as high as in December 2000. This corresponds to 11% of all households having a broadband connection, compared to the EU average of 4%.

In 2000 the Government set a goal to provide broadband to households and companies in all parts of Sweden. The Government Bill on IT policy of summer 2000 commissioned the Swedish National Grid to build a backbone network to all municipal centres in Sweden on strictly commercial terms, in the form of fibre optical cable on the Swedish National Grid's existing trunk network. The entire fibre network has to be open to any operator who wishes to purchase network capacity based on so-called dark fibre. Government funding was provided for the establishment of regional line connections, with priority given for regional and policy reasons where the market cannot be expected to meet the need for such links within the next five years. The Government allocated €282 million for the construction of the regional networks. The Government also reserved €343 million for the construction of local networks (partly for municipalities supporting the construction of local networks where there is no market provision, and partly for tax relief for subscribers who install broadband access, in order to encourage access to high-capacity networks). The roll-out of the broadband network capable of reaching every Swedish household is ongoing, although there has been less interest than in the beginning, partly related to financial difficulties. Also, certain municipalities have

not been able to build out networks, due to financing problems, and the Government therefore decided in 2001 to reduce the co-financing required from municipalities to 5%.

The number of households with a broadband connection is currently increasing from an already high level, in particular in the cities. Broadband is much less widespread in scarcely populated areas, and in certain municipalities there is no broadband on offer. The Government, bearing in mind the objective of providing broadband also in rural areas, recently took steps to increase the roll-out of broadband in scarcely populated areas. In summer 2002 the Government decided to provide further stimulation of broadband uptake, by dropping the original requirement of very high transmission capacity for installation of new infrastructure in order to be eligible for funding, and by providing that, in exceptional cases, funding can be provided for upgrading existing infrastructure (for example to provide ADSL). These measures were designed to be technology neutral, which would only apply under exceptional circumstances. The decisions were taken in particular to provide broadband in areas where no market players would be interested in providing broadband access (in particular areas with low population density).

In Sweden no cable TV operator is offering voice telephony over the cable TV network. Investments in upgrading the networks are necessary but cable TV is currently being developed to become an alternative way to provide voice telephony to end users. More than 2 million households have cable TV in Sweden.

Wireless local loop licences were due to be awarded by 1 October 2001, but due to delays the licences were only awarded in December 2001. There were five applicants, and four licences with national coverage in the 24.5-29 GHz-band were awarded (one of which was granted to the incumbent). None of the licensees have started to provide services yet. One of the licences was returned this spring. Due to this PTS has launched a new beauty contest for this licence. The deadline for submitting applications was 23 September 2002. PTS intends to issue a decision in November 2002. PTS has also launched a beauty contest for 42 regional licences (21 in the 3.5 GHz-band and 21 in the 10.5 GHz-band). The deadline for applications is 11 November 2002. Many operators consider this type of access to be an alternative to access to the fixed network, and operators have been carrying out trials for the last few years.

## **2.6. Leased Lines**

The incumbent is the most important market player in terms of leased lines. The percentage (in terms of retail revenues) of leased lines service offered by the incumbent is 62%. In 2001, the percentage of leased lines offered by the incumbent was 100% for lines up to 64 Kbit/s, 87% for lines between 64 Kbit/s and 2 Mbit/s, and 64% for lines with a speed higher than 2 Mbit/s.

## **2.7. Numbering**

The introduction of number portability for fixed telephony services (including ISDN), concerning premium-rate calls, free-phone services, shared cost services and personal numbering services began on 1 July 1999 and was completed in December 1999, using onward-routing technology. By September 2001, 6 446 fixed numbers had been ported. The operator from which the number is ported previously had the right to compensation for current costs related to the hand-over of the number, and to compensation for increased traffic costs. However, operators had difficulties in reaching agreement about the economic conditions, and a formal request was made to PTS to take a decision regarding the level of compensation for the administrative costs of handling orders for number portability. In May

2000 PTS set the fees that would apply for the administration of number portability, and the incumbent thereby had to lower its fees. In 2000, PTS proposed an amendment to the Act regarding the principles of compensation for number portability. Previously, the donor operator (often the incumbent) could recover additional traffic-related costs but PTS considered that this scheme did not provide any incentives for cost-efficient routing solutions. In June 2000, PTS therefore proposed that the Act be amended so that the donor operator and the call originating operator should divide the additional traffic costs equally. The incumbent does not charge the customer anything for porting the number in case of a change of operator (the same applies to non-geographic numbers). Mobile number portability was introduced in September 2001.

Carrier selection has been available since 1992. Carrier pre-selection (CPS) was introduced in September 1999. Despite a certain confusion and insufficient intervention by PTS in the initial stages of the reform, due to the lack of legal basis for intervention before legislation on CPS entered into force, the uptake has been relatively good. During 2001 the number of CPS subscribers increased by 35%. By the end of December 2001, more than one and a half million (1 552 000) of the incumbent's fixed-line customers used carrier pre-selection to route calls to alternative operators. At the same time, 947 000 of the incumbent's fixed telephony subscribers used carrier selection to route calls through an alternative operator. In 2002, 32 operators offered voice telephony via carrier pre-selection and the same number of operators offered voice telephony using carrier selection. There are, however, still some outstanding practical problems, inter alia regarding the procedures for subscribing to another operator. PTS has received complaints from consumers being listed as having changed operators without their knowledge. In PTS's view, the problem occurs when an operator, or a telemarketing company acting on behalf of the operator, does not follow the regulations. PTS has recently formally intervened in this matter and improvements in the procedures have been made, but there is room for further improvement.

Legislation requiring the customer's calls to be routed to the pre-selected operator even if no area code is dialled entered into force in February 2002. Previously a customer had to dial the area code in order to access the pre-selected operators (otherwise the call was routed via the incumbent). Since February 2002 CPS has been available for long-distance national calls, international calls, local calls and calls to mobile.

The Act requires operators to base the fees they charge each other on costs related to the day-to-day operation of CPS and not on the costs of the investments necessary to make CPS technically possible. In practice this applies only to the incumbent, who has the right to compensation for operational costs only (the costs of processing orders).

## **2.8. Cost accounting/accounting separation**

The incumbent's cost-accounting system has historic costs as cost base, with fully distributed costs as cost standard. PTS is currently working on implementing a cost accounting system based on current costs, and a LRIC based accounting system is to be fully implemented in January 2004. Verification of compliance with the cost accounting system is carried out by PTS and the last accounts verified were for the accounting year 2000. The last statement of compliance was published in 2001.

PTS requires the incumbent to provide relevant economic information regularly, which PTS uses for its surveillance duties. Based on the findings of its regular monitoring of the incumbent's accounting information, PTS publishes an annual report on deficiencies in the incumbent's accounting system and the proposed remedies. It also draws up a more



comprehensive report, which is not published since it contains commercially sensitive information. PTS also verifies the incumbent's internal transfer prices in order to verify that the non-discrimination principle is followed, and that no cross-subsidisation occurs.

### **3. AUTHORISATIONS**

The Swedish licensing regime may be described as "light", with many general authorisations and relatively few individual licences (the latter are only required in specific cases). The licence conditions are reasonable and not too onerous. The Telecommunications Act enumerates possible conditions to be imposed. The licence conditions imposed are relatively few, and are listed in each individual licence (itself a public document). Licence fees cover only administrative costs and are determined in relation to the annual turnover of the licensee (1.57 % of turnover, with an extra 0.5 % of voice telephony turnover for the SMP operator).

### **4. UNIVERSAL SERVICE / CONSUMERS**

PTS has determined that the incumbent has significant market power (SMP) in the market for fixed voice telephony and its voice telephony tariffs must therefore be cost-oriented, according to EU legislation. The incumbent's line rental charges should be cost-oriented, according to the Telecommunications Act; PTS is obliged to verify that this is the case, and regularly publishes reports on the evolution of tariffs. PTS published its latest report on the evolution of line rental charges on 13 November 2001 ("*PTS granskning av Telia AB's priser for telefonabonnemang*"). The price cap which previously prevented the incumbent from increasing fixed fees such as installation and line rental charges more than the change in the retail price index was repealed with effect from 1 January 2001. Line rental charges can therefore now be set freely by the incumbent (provided they follow the principles of cost-orientation). There is no set period for tariff changes, but in practice a period of one month applies for tariff increases.

The incumbent does not receive any financial contributions from other operators for the cost of providing universal service, due to the low net cost of universal service provision, which has not been deemed to constitute an excessive burden. At present Sweden has no plans to introduce a financing scheme (and the current Swedish regulatory framework does not allow the setting-up of such a scheme). The incumbent has not requested funding.

#### **4.1. Universal Directory**

In Sweden a directory including all subscribers is available to users, although the printed directory provided by a sub-contractor to the incumbent includes mobile numbers only when the subscriber so requests and for an extra fee. A directory enquiry service including all subscribers is also available to users, and PTS has procured a service for free directory enquiries for people with special functional disabilities.

All notified operators are obliged to provide available relevant subscribers' data to any party who requests it for the purpose of providing enquiry services. A number of complaints have been lodged with the relevant authorities regarding the conditions for access to relevant information, which is important in order to provide directory services and directory enquiry services. Complaints have been lodged with PTS regarding the conditions of access to the incumbent's subscriber information, which were considered unreasonable. In May 2002, PTS issued an injunction which prohibited the incumbent from applying certain conditions of access to subscriber information on the ground that these conditions were unreasonable. Since

1 June 2002, when new legislation entered into force, the Telecommunications Act has prescribed cost-oriented pricing for the provision of subscribers' data.

#### **4.2. Itemised billing**

The incumbent provides a basic level of itemised billing at no extra charge, showing the partial/full number called (with the exception of local calls); duration of each call; the date of the call; and the price of each call. Tele 2 and Telia Mobile only provide itemised billing at extra charge.

#### **4.3. Quality of Service**

PTS does not set quality-of-service performance targets for SMP operators or other fixed operators. The incumbent carries out measurements of quality of service according to the ETSI EG 201 standards. Measurements of quality of service have not been published by the operator, but are published by the NRA.

#### **4.4. Rights of Way**

Facility sharing is not compulsory, but rights of way/access to property may be granted through individual agreements or under the Rights of Way Act (applicable to both public and private entities).

Many operators which have been granted third-generation mobile licences have had difficulties obtaining planning permission. The process is very slow and often the granting of planning permission by local authorities depends upon whether the operator can commit to facility sharing. Difficulties in obtaining planning permission were one of the reasons for one licensee requesting less strict licence conditions regarding the timetable for roll-out and coverage requirement.

### **5. DATA PROTECTION**

#### **5.1. Traffic data retention**

PTS is responsible for the enforcement of data protection in the telecommunications sector, and follows developments in the security of electronic information handling. According to Swedish legislation anyone who provides, within a publicly available network, telecommunications services or network capacity, must ensure that their activities fulfil reasonable requirements on reliability and technical security. In case of a particular risk of a breach of the security of the network, subscribers must be informed concerning such risk and any possible remedies, including the costs involved.

As regards data retention, Swedish legislation states that anyone who has access to data regarding a particular telecommunications message must erase or make anonymous such data at the end of the call or when the message has reached its destination. Data which are necessary for subscriber billing or payment of interconnection charges may be processed until the outstanding payment is made or until the end of the period during which the bill may be lawfully challenged or payment may be pursued (three years). The maximum period also applies for payment of interconnection charges. There is no maximum period for storage of data for security reasons.

As regards unsolicited phone calls, and unsolicited e-mails, Sweden has implemented an opt-in approach. According to section 49 of the Telecommunications Act, if traffic data are used as the basis for an operator's own marketing, consent is required (otherwise it is forbidden). The opt-in approach only applies to natural persons. Explicit consent in advance is necessary (either in written form or explicitly stated).

## **5.2. Unsolicited calls and e-mails**

As regards information about subscribers, the new section 67 of the Telecommunications Act lays down that the subscriber's consent must be obtained before the processing of information about him starts. Withdrawal of consent means that the processing of information must stop. According to section 68 of the Act, a subscriber's refusal to allow his data to be processed for the purpose of direct marketing may be published in the telephone directory, if the subscriber so requests. The subscriber can also decide that certain personal information should be omitted from publication in the directory.

## **6. MOBILE ISSUES**

Sweden awarded four licences for third-generation mobile telephony through a "beauty contest" in December 2000. Licences were awarded to Orange, Europolitan (which later became Europolitan Vodafone and is now called Vodafone), Tele 2 and HI3G Access (now operating under the name "3"). The criteria for selecting operators related to their financial strength, technical plans, business, market and investment plans, mobile telecommunications know-how, and plans for coverage of the 3G network. The licensees were each awarded  $2 \times 15 \text{ MHz} + 5 \text{ MHz}$ . The incumbent did not receive a licence and appealed to the Administrative Court, but the appeal was rejected.

According to the conditions of the third-generation mobile licences, operators must offer network capacity in a limited geographical area by 1 January 2002 and by 31 December 2003 the networks must be fully developed (meaning a minimum coverage of at least 8 860 000 people in Sweden, which corresponds to 99.98% of the Swedish population according to population statistics on 31 December 1999). In January 2002 PTS monitored the roll-out and all licensees fulfilled the requirement of offering network capacity by 1 January 2002. PTS continues to monitor the roll-out and have regular dialogues with the licensees. Licensees have a possibility to make agreements about, inter alia, site sharing and national roaming in other networks in the relevant frequency bands, in order to achieve the required coverage. The licensees must, however, ensure that at least 30% of the required population coverage is covered by their own infrastructure (and consequently the operators may share radio-infrastructure up to 70%).

There are two network sharing consortia in Sweden: *3G Infrastructure Services* (3G IS) which consists of Vodafone, HI3G Access "3" (which in turn consists of Hutchison Whampoa and Investor), and Orange; and "Svenska UMTS-nät" ("*Swedish UMTS-Net*"), which is owned by Tele2 and Telia. A company named "Svenska UMTS-licens" ("*Swedish UMTS licence*") now owns the licence obtained by Tele2. Consequently, Telia has a 50% control of one of the four licences. Both consortia have been found compatible with competition rules by the Swedish Competition Authority.

There have been a number of obstacles for the roll-out of 3G, in particular problems related to mast-sharing, difficulties in obtaining national roaming, difficulties in obtaining planning permission, lack of terminals and services. All the operators which have been granted 3G licences are experiencing difficulties related to planning permission and mast-sharing. The

new entrants on the market have difficulties in getting agreements on mast-sharing with two of the established GSM-network owners. However, in September 2002 three mast-sharing agreements were reached.

The procedure for obtaining building permits from municipalities has been slow and complicated and the granting of planning permission often depends on whether the operators are able to commit to mast-sharing with other operators. Local authorities are formally independent from national authorities and can decide independently over the use of land and property. This circumstance limits PTS's scope to intervene. PTS has informed the Government about the situation, to see if anything can be done. PTS is also currently conducting a survey, together with the Swedish association of local authorities, to investigate the handling of applications for building permits. The difficulties in obtaining planning permission are also related to concerns about the effects of radio transmitters on public health. It is generally agreed that these problems have slowed down the 3G rollout and at least one operator that later requested a delay in the roll-out of 3G specifically mentioned difficulties in getting planning permission and difficulties in obtaining collocation/mast-sharing on existing masts, as some of the reasons for requesting a slower roll-out.

One of the four 3G licensees stated in the summer of 2002 that it would have difficulties in meeting the requirements concerning roll-out and population coverage and therefore formally applied to PTS for less burdensome requirements. The licensee should have built the network by 31 December 2003, like the other licensees, but requested permission to delay completion of the network until December 2006. The company also requested a less rigorous coverage requirement (8 300 000 people instead of 8 860 000). The operator that applied for less strict requirements was Orange, which co-operates with two other licensees (Hi3G Access "3" and Vodafone) for the construction of the network. The reasons given for applying for less strict requirements were: initial delays in roll-out due to the incumbent appealing against the decision not to grant the company a 3G licence; the incumbent's co-operation with one of the 3G licensees in building a 3G network which effectively means that there are five market players on the 3G market and not four; difficulties obtaining planning permits (where a market player de facto often obtains a planning permit only if it agrees to mast-sharing with other licensees, which slows down the process further); the non-functioning of national roaming; difficulties in obtaining collocation/mast-sharing on existing masts; lack of 3G handsets; lack of demand for 3G services; and difficulties obtaining financing. In September 2002, PTS concluded that there was no justification for granting less strict licence conditions. At approximately the same time that the request was denied another operator, Vodafone (which cooperates in the same network sharing consortia as Orange), also made a formal request for less strict licence requirements (seeking a prolongation of the roll-out period). PTS is currently investigating the matter. Hi3G Access "3" has subsequently also announced to PTS its intention of requesting a change in its license conditions.

According to the Telecommunications Act, certain mobile operators would be obliged to give access to their networks to a new mobile operator with a network licence, where this operator did not have coverage. Access should be on market terms, but the right to roaming is limited to seven years after establishment. The obligation to provide roaming is applicable only towards operators that have been granted a licence for mobile services or mobile network capacity after the entry into force of the roaming provision (on 1 July 2000). Accordingly, this obligation can be imposed on Vodafone and Tele 2. Whether the obligation would also apply to Telia, as a consequence of the "Svenska UMTS-nät" having acquired "Svenska UMTS-licens", has not been ruled upon.

## **7. PREPARATION FOR TRANSPOSITION OF THE NEW REGULATORY FRAMEWORK**

The Ministry has conducted a study of the transposition process and the need to analyse the markets before the final implementation date. The final conclusions regarding the procedures to be used will be published by the end of this year. PTS is involved in a project, together with the NCA and the Radio and TV Authority, to develop a method for market analysis following the Commission's Guidelines and forthcoming Recommendation and to conduct such analysis in order to have it ready at the time of implementation of the new EC Regulatory Package. The development of methods is at an advanced stage and initial market analyses have already begun. PTS is fully committed to conducting the market analyses and believes itself capable of doing so, although it has stated that the legal basis to request information for broadcasting might be a problem, whereas it would have the necessary legal basis in current legislation for requesting all other information which is necessary for the market analyses. Draft primary legislation (the Electronic Communications Act Bill) setting out the legal framework for transposing the new EC regulatory framework is under way, and it is likely that the necessary primary legislation (the Electronic Communications Act) will be adopted and enter into force in time for the July 2003 deadline.

## 3.15 UNITED KINGDOM

### 1. REGULATORY FRAMEWORK

#### 1.1. National Regulatory Authority

The most important issues which Oftel is currently dealing with are the review of mobile termination charges by the Competition Commission, the setting-up of the new Office of Communications (Ofcom) and ensuring that the appropriate regulatory environment is in place to create a competitive market in broadband in the United Kingdom. It is also starting to identify how best to implement the new EU Regulatory Framework.

Oftel is considered to have a strong regulatory and technical expertise and has been active in seeking new forms of regulation such as incentive regulation. In the last 12 months it has continued to be closely involved in determining the appropriate conditions for broadband roll-out and also local loop unbundling. It now appears that the appropriate regulatory environment for unbundling is in place but demand from alternative operators, although higher than at the end of 2001, remains very modest due to difficult market conditions.

There has been some criticism of Oftel's speed of decision-making when determining interconnection disputes. It therefore introduced in February 2001 stricter internal rules designed to enable it to meet its EC obligation of making a final determination in an interconnection dispute within six months. In most cases, Oftel managed to respect the six-month deadline in 2001, and is currently considering how to streamline procedures further in order to be able to meet the four-month deadline under the new EC Directives. New entrants did point out that those cases in which determination has taken longer, were the most important cases to the market and they actually took much longer than the prescribed six months, even exceeding one year. Nevertheless, at the 4 October hearing new entrants acknowledged that action by Oftel was likely to improve the situation.

Oftel also has concurrent powers alongside the Office of Fair Trading (OFT) regarding competition issues, but there has been criticism by operators that Oftel has not been sufficiently transparent in indicating when it would use its different powers (competition or sectoral powers). It therefore published a Notice on 1 July 2002 in which it states that it will normally commence investigations, except for interconnection disputes, under the Competition Act first rather than under sectoral rules.

Oftel decisions under the Competition Act 1998 are subject to appeal on the merits of the case to the Competition Commission Appeal Tribunal – a specialist competition court - and these decisions can be appealed, on a point of law to the appeal courts. Other Oftel decisions are subject to judicial review on the grounds set out in English administrative law, i.e. on a point of law. However for matters covered by the Licensing Directive and the Interconnection Directive a wider form of judicial review has been introduced (under section 46B of the Telecommunications Act) also allowing an appeal by a third party and on the merits of the case. One operator has already made such an appeal (against Oftel's Determination relating to Interim Carrier Pre-selection).

Ofcom is likely to become operational towards the end of 2003 and will take over the work of Oftel, the Independent Television Commission (ITC), the Radiocommunications Agency (RA), the Radio Authority and the Broadcasting Standards Commission (BSC). Ofcom will be responsible for sectoral and content regulation as well as enforcement of the competition

rules concurrently with the OFT. The Government announced in September 2002 the appointment of Lord Currie as the first Chairman of the Board of Ofcom, and his non-executive directors were appointed in the following month. The Board is now putting in place the appropriate management and operational structures.

## **1.2. Management of numbers**

Oftel has been responsible for managing and allocating numbers since 1994. In 1999 a ten-digit National Numbering Scheme with a capacity of 9 billion numbers was introduced. Any operator, including service providers operating under class licences, may apply to Oftel for numbers, and operators may also obtain numbers by way of sub-allocation from an operator holding an individual licence. The Specified Numbering Scheme is published and regularly updated on Oftel's website.

## **1.3. Frequency management**

The Radiocommunications Agency (RA) is responsible for civil radio spectrum management issues. The RA has in the past years carried out auctions for, inter alia Wireless Local Loop (WLL) licences and for 3G licences. An Independent Review of the Radio Spectrum Management was carried out on behalf of the British Government by Professor Martin Cave, whose report was published in March 2002. The review focused on the use of measures such as auctions, pricing and trading to promote efficient and flexible spectrum across public and private sectors, to stimulate innovation and growth in the communications economy. Some of the 47 recommendations will be implemented by the Communications Bill. The national frequency plans have been published. It is intended that the new, converged regulator for the communications sector, Ofcom, will absorb the activities of the RA when it becomes fully operational.

## **2. INTERCONNECTION AND ACCESS REGIMES**

### **2.1. RIO**

The latest Reference Interconnection Offer (RIO) was published by BT in December 2001, and contains interconnection charges for leased lines, including those for interconnection leased lines.

In the United Kingdom the principle of non-discrimination as set out in the EC Directives has been transposed and interpreted in UK law as "no undue discrimination". However, concerns have been expressed by new entrants that this is a higher burden of proof than required under EC law. In order to provide guidance on this point, Oftel published in September 2002 a Statement on access obligations, where it set out how it would interpret this principle under the new EC regulatory framework. The Statement states that Oftel considers that non-discrimination does not necessarily mean that there should be no difference in treatment between undertakings, but rather that any differences should be objectively justifiable, for example due to differences in underlying costs. This clarification has been welcomed by industry representatives.

Mobile call termination charges set by Vodafone and MMO2 are regulated. In July 2000 Oftel began a review of the competition in the market for mobile call termination and concluded in September 2001 that current mobile call termination charges were substantially above cost and that there were not sufficient competitive constraints on mobile call termination charges set by the four mobile operators (MMO2, Vodafone, T-Mobile UK- and Orange). Oftel

therefore proposed a charge control of RPI minus 12% each year for the next four years until March 2006 (calls using third-generation mobile infrastructure are excluded) and submitted proposals to amend the licences of all four mobile operators accordingly. However, all four mobile operators objected to the licence amendment, so Oftel referred the case to the Competition Commission on 7 January 2002. The Competition Commission has, since then, been carrying out an in-depth review of mobile call termination and its findings are due to be published by the beginning of 2003 at the latest. The new charge control, provided that the Competition Commission agrees to it, would take effect from 1 April 2003 but the market would be reviewed again in 2003 in keeping with the new EC regulatory framework.

The interconnection charges for fixed to fixed networks are very low in the United Kingdom and well below the EU average in comparison to the other Member States. For calls at local and single transit level the tariffs (€0.49 and €0.73 respectively) are even the lowest in the EU. For mobile to fixed networks, the interconnection charges are exactly the same as for fixed to fixed calls.

## **2.2. Internet**

Internet penetration is significant in the United Kingdom with 43% of households (or eleven million households) connected to the internet (May 2002), where the EU average is 40%. Four million households of those eleven million use an unmetered (flat-rate) retail package. The increased availability of unmetered (flat-rate) retail packages has helped to increase the average time spent on-line - the average household currently spends nine hours per week on-line, up from eight hours per week on-line in the same period last year; those with unmetered access spend an average of thirteen hours on-line.

## **2.3. FRIACO**

The incumbent is required to offer a wholesale unmetered internet access service, FRIACO (Flat Rate Internet Access Call Origination), from its local exchanges, to enable other operators to offer their own retail unmetered internet access products and compete effectively with the incumbent's unmetered retail services. It is also required to provide FRIACO at the trunk exchange level. In order to avoid overloading the incumbent's trunk network in the short term a staged process was developed to limit the amount of unmetered traffic at the single tandem exchanges in the short term, moving to unlimited access by early 2003. In May 2002 Oftel amended some of the requirements for the provision of FRIACO by the incumbent. Previously an operator had to pay the incumbent in advance for unmetered capacity, whereas metered capacity was paid for in arrears. Following Oftel's intervention the incumbent amended its payment terms for FRIACO in arrears, which effectively reduces FRIACO charges by between six and eight per cent. In July 2002 Oftel required the incumbent to cut the cost of its wholesale unmetered internet access charges by eight and a half per cent. The incumbent's FRIACO charges are now also part of its general network charge control and are thereby required to fall by at least RPI - 7.5% every year.

## **2.4. LLU**

The process of local loop unbundling (LLU) has been difficult and Oftel has issued close to twenty Directions and Determinations, following complaints and on its own initiative. In 2001 and 2002 it has intervened in relation to the terms and conditions for collocation; the revised charges (including the charges for shared access); required the incumbent to offer both co-mingling and unescorted access at cost-oriented prices; set the service level the incumbent must offer and established compensation agreements if the incumbent fails to meet the service



levels. Oftel has also completed a number of investigations, including an investigation into alleged undue discrimination between LLU and the incumbent's ADSL rollout (not finding evidence of any material distortion of competition).

Despite the regulatory framework being in place, and the fact that the Reference Unbundling Offer (RUO) includes all requested elements, the uptake of local loop unbundling has been poor. Although around 200 exchanges are equipped for LLU, and by the end of August 2002 the number of completed collocation facilities had risen to 136, only 12 operators are providing services using LLU. There has been very little take up of fully unbundled lines (1 600 by mid-October 2002), no request for shared lines (other than some test lines) or requested sub-loops. As the market for LLU services has not developed as expected, the price controls set in the Oftel Determination of 2000 will continue, and a review of regulatory provisions will take place in the first half of 2003.

As reported last year regarding prices, Oftel has determined various key charges. In October 2001 Oftel carried out an investigation into the pricing of the incumbent's collocation prices and found that prices were generally cost-oriented, but some prices, for example those for external tie cable rental and escorted access, were found to be too high. In January 2002 Oftel therefore directed the incumbent to reduce the prices that were too high and this was followed by a Direction in March 2002 setting out the charges for MPFs and internal tie cables.

## **2.5. Interconnection leased lines**

Oftel has been heavily involved in determining the appropriate terms on which the incumbent should provide wholesale partial private circuits (PPCs). Some of the issues which were still not solved in negotiations at the time the incumbent launched PPCs on 1 August 2001 were referred to Oftel for Determination under the interconnection dispute resolution procedure under the Interconnection Directive by several operators. On 14 June 2002 Oftel made this so-called "PPC Phase 1 Direction", that solved certain matters, such as forecasting obligations, minimum term, and some aspects of the Service Level agreement, but left some complex matters, such as cost-oriented charges and infrastructure sharing for the Phase 2 Direction. The Phase 1 Direction concluded that the two retail markets for leased lines and most of the leased lines wholesale markets were not yet effectively competitive, although the wholesale market for the trunk segments was considered prospectively competitive. In September 2002 Oftel published its draft Phase 2 Direction and the work is expected to be concluded in November 2002. This draft Phase 2 Direction specifies significant price cuts from current levels (reductions in the 30-50% price range); sets out requirements for a comprehensive SLA; and specifies various types of enhanced functionality which the incumbent would be required to offer.

On 9 October 2001 the incumbent submitted a request to Oftel to determine that it does not have SMP for high bandwidth leased lines for the purposes of the Leased Lines Directive. Oftel considered that the issues contained in the incumbent's submission were closely linked to the PPC dispute, and will deal with the incumbent's request for lifting of its SMP status in the context of the market review due to be carried out by 25 July 2003, as was confirmed at the hearing of 4 October 2002.

## **2.6. Bitstream (DSL) access**

The incumbent has proceeded with its ADSL roll-out and by the end of August 2002 1116 ADSL exchanges were enabled, which represents 66% of exchanges, and 62% of UK households. In total there were 357 000 ADSL end users and this number was growing by

around 10 000 per week. By October 2002 the incumbent had 309 wholesale customers, with just over 400 000 wholesale DSL lines provided by the incumbent via those retail service providers. Of the 400 000 lines just over half were provided to the incumbent's retail arms and the rest to alternative operators.

The incumbent's ADSL roll-out has not been without controversy and there have been many complaints or own-initiative investigations by Oftel into allegations of anti-competitive behaviour by the incumbent including:

- an alleged margin squeeze between retail and wholesale DSL;
- terms and conditions for wholesale DSL, in particular the absence of a service level agreement;
- marketing of its ADSL services after finding no evidence of anti-competitive behaviour
- terms for providing ATM DSL interconnection to other operators.

New entrants lodged a complaint in December 2000 concerning unreasonable terms and conditions for wholesale DSL, including the absence of a service level agreement. After an investigation Oftel concluded that, in principle, the incumbent's contract terms and conditions were capable of being considered to be so unreasonable as to amount to an abuse of dominant position by the incumbent. However, Oftel was not able to conclude that there was a material effect on competition arising only from inadequate terms and conditions since other factors, such as pricing and costs, could have affected the pace of roll-out of DSL services at the retail level. The incumbent introduced Service Level agreements in August 2001 and Service Level Guarantees in December 2001

Shortly after re-opening of the investigation for an alleged margin squeeze by the incumbent through subsidising the supply of retail ADSL services by its service provider business, BT Openworld, its wholesale price was reduced. The various reductions of the wholesale and retail prices since launch and start of the investigation were taken into account by Oftel in its final conclusion in March 2002 that there was no unfair cross subsidy or margin squeeze between the new wholesale and retail prices.

Operators also complained to Oftel that the incumbent's retail arm had been given advance notice of recent wholesale reductions. Oftel found no evidence that this was the case. In May 2002 Oftel published a Statement setting out that the incumbent cannot use detailed information contained in residential customers' bills in order to target particular customers.

Following a request for determination of an interconnection dispute, Oftel issued a final Determination in June 2002 requiring the incumbent to provide ATM interconnection to other operators to enable them to provide ADSL service at retail minus charges. The incumbent was also required to offer service level agreements, including compensation payments and trial SDSL if requested by an operator. Five operators have already signed up for ATM interconnection, and three of those are already offering services.

The two "own initiative" investigations by Oftel related to "rate-adaption" (a technological advance that enables the reach of DSL to be extended from approximately 3.5 km to approximately 5.5 km from an enabled exchange), and the incumbent's indicative launch prices of the DSL wholesale products launched in November 2001, and which were significantly lower than the trial prices, have now been resolved. The incumbent has introduced rate adaptation across all its products and with regard to the second investigation, no evidence of predatory pricing has been found.

In the United Kingdom there is competition at the infrastructure level between cable modem providers and DSL (provided by the incumbent and new entrants) and various service providers who are providing retail DSL services in competition with the incumbent. By October 2002 the total number of broadband connections had passed 1 million. There is continued growth in the uptake of DSL (342 00 by the end of August 2002, and about 400 000 by October 2002) and cable modems (598 000 by October 2002, which represents over half of all broadband connections), with over 20 000 new connections each week. The other delivery routes for broadband are via wireless local loop, satellite and local loop unbundling, although they only have a marginal impact on the number of connections, together representing approximately 6 000 of the total connections by October 2002.

Estimates show that Wireless Local Loop (WLL) will account for between 7% and 18% of the broadband market within the next five years. It is hoped that this technology will be economically viable outside the areas where it is currently economic to deploy DSL.

Regarding satellite, two-way broadband satellite has the potential of reaching those parts of the United Kingdom outside of the reach of an ADSL or cable modem. A number of service providers are offering broadband satellite services in the United Kingdom, and the subscriber figures, although still low, are increasing. In April 2002 BT wholesale announced plans to start trials of a new satellite internet service that would enable high-speed always-on downloads to the end user, using the PSTN as the return path.

There are currently more than 700 internet service providers (ISPs). Unlike most other Member States, the ISPs related to the incumbent do not have a particularly strong market position, only around 20% of the overall retail dial-up market . Over 80% of on-line households and 76% of SMEs with internet access use dial-up PSTN connection to the internet.

Early in 2002 Oftel published the final conclusions of its review of the level of effective competition in dial-up narrowband internet access. Oftel concluded that the retail dial-up internet access market was competitive with a wide range of unmetered and metered services. Oftel also reviewed the state of competition in three wholesale markets: call origination, internet call termination and connectivity (access). Oftel's conclusions were that the wholesale call origination was not effectively competitive, with the incumbent having market power and an estimated 80% of the market. Network charge controls (price caps) and requirements on the incumbent to provide wholesale products (such as FRIACO) were considered necessary by Oftel. The FRIACO charges were included in the incumbent's network charge control in 2002. The wholesale internet call-termination market was also not considered effectively competitive, with the incumbent considered as having market power, and existing controls will therefore remain in place. Wholesale internet connectivity was, however, considered an effectively competitive market, with a considerable number of suppliers and no operator having market power.

## **2.7. Leased Lines**

For national leased lines, the tariffs are well above the EU average for all lines, except for the short 2Mbit/s leased lines which is below the EU average. Oftel's strategy with regard to the development of competition in the leased lines market has been to address the lack of competition at retail level by taking action at the wholesale level. Oftel has mandated the provision of Private Partial Circuits (PPCs) by the incumbent and is completing its work regarding prices and Service Level agreements for PPCs in the draft Phase 2 Direction which was issued in September 2002 (also referred to in the 'interconnection leased lines' section

above). This is intended to increase the take-up by other operators of PPCs and lead to greater competition at the retail level. Work to assess the state of competition in the leased lines market at retail and wholesale levels will continue as part of the forthcoming broadband market review.

In continuation of last year's trend, very high repair times are reported for voice bandwidth leased lines in the United Kingdom (Kingston), although no complaints have been made to Oftel.

## **2.8. Numbering**

The exact number of ported fixed numbers is not known exactly, but estimated to be around four million since the implementation of geographic number portability in 1996, and the roll-out of portability for non-geographic numbers from 1997. Mobile number portability has been offered since January 1999. Since then 1.6 million mobile numbers have been ported, and the trend is increasing. Subscriber-driven fixed-line number portability has been offered since January 2000. Oftel has made determinations regarding the incumbent's costs and charges for geographic and non-geographic number portability. In October 2001 Oftel issued a Consultation Document on new charges for the incumbent's fixed portability services (both geographic and non-geographic numbers), based on LRIC.

In its June 2002 consultation Oftel launched a number of proposals to change the framework for number portability. One of the proposals is for numbers to be held in a central master database, which would be updated every time a customer transferred their number to a new supplier. Operators would use the central database to regularly update their own networks so that calls to "ported numbers" are routed directly to the new network. Under the current system known as "onward routing", if a customer keeps their number when changing supplier, calls to the number continue to be routed over the network of the old supplier, before being transferred to the new supplier. If the original supplier's network is shut down, for example due to bankruptcy, calls will no longer be connected.

In the case of mobile number portability, Oftel requested in 2001 that mobile operators review their porting procedures and administrative practices in order to produce a cheaper, faster and more reliable process. The newly introduced simplified porting procedures have reduced the time needed to port a number to a few days, and mobile number portability has increased.

The incumbent does not charge the customers anything for porting fixed numbers when changing operator, and there is also no charge for porting a non-geographic number when changing operator. There is no charge for porting a mobile number, when changing operator, subject to very limited exceptions..

In August 2002, 27% of end-users were using another supplier other than the incumbent, with 11% using an indirect access provider. Since December 2000 permanent (switch-based) CPS has been available for national and international calls. Since December 2001 permanent CPS has been available for all calls, and approximately 15 operators are now using permanent CPS to offer voice telephony. Monthly CPS orders topped 130 000 in September 2002, and there are now 400 000 customer lines with CPS (end of September 2002). A new, simplified customer order process for CPS was launched in July 2002.

## **2.9. Cost accounting/accounting separation**

BT has implemented accounting separation (between interconnection and other activities), and all its accounts are subject to an independent auditor's report and are published in

accordance with accounting policies and procedures agreed with Oftel. Both SMP operators in the United Kingdom (BT and Kingston) have in place cost-accounting systems for interconnection and local loop unbundling based on forward-looking/current cost (with Long Run Incremental Costs (LRIC) as cost base and Fully Distributed Costs (FDC) as cost standards. For Kingston the cost accounting system for local loop unbundling is to be fully implemented within the next eighteen months.

BT's regulatory accounts are independently audited and published annually. The regulatory accounts include detailed cost information agreed between the Director-General and BT. Those accounts are supported by publicly available documents on policy, procedure and methodology.

Verification of compliance with the cost accounting system by an independent body is made regularly for both BT and Kingston (for both voice telephony and interconnection). The last accounts verified (the accounting year) was the year ending on 31 March 2002 for Kingston, and 31 March 2001 for BT. The last statement of compliance was published on 31 July 2002 for Kingston and 12 December 2001 for BT. For both BT and Kingston the audit report is contained within the regulatory accounts. As regards BT's accounts, Oftel identified a number of deficiencies with BT's regulatory accounts, in particular the levels of transparency and granularity. Oftel is therefore currently addressing these issues with BT and final decisions are expected shortly.

### **3. AUTHORISATIONS**

#### **3.1. Licensing procedure**

The UK licensing scheme is relatively light with many general authorisations (class licences) and licence conditions in compliance with EC law. A simplified licence modification procedure has recently been introduced. There are no fees for general authorisations.

WLL Licences have been awarded in most frequency bands and further licence awards are being planned for the 10 GHz, 28 GHz, and 40 GHz frequency bands. The Radiocommunications Agency (RA) carried out an auction for 28 GHz broadband wireless local loop licences in November 2000. Forty-two licences were offered - three in each of fourteen regions - and sixteen were awarded in seven regions: three in each of four regions - Greater London, Greater Manchester, West Midlands and Northern Ireland - and a further four licences were awarded in northern England and Scotland. Licences are at various stages in deploying networks. Two operators hold national wireless local loop licences, although only one actually provides services using WLL technology.

A second award process closed on 14 October 2002 without any more licences having been awarded. The RA published a consultation document on 15 October 2002 proposing a new award process for the unsold licences on offer, which would no longer include restrictions on purpose of use or coverage obligations. This would be in line with the Independent Review of spectrum management conducted by Professor Martin Cave (see also above). Licences already awarded would also be amended to fall in line with these recommendations. The RA has also been consulting with interested companies on the scope for developing the 40.5-43.5 GHz band for multimedia wireless systems. Companies generally supported opening the band but believed that there would not be a market for very high bandwidth services for another two to three years. The RA is working with the industry in developing a licence award process to meet industry requirements when market demand emerges for delivering such services. However, a complaint has been made to the Commission about delays in

granting rights of use on certain frequencies in the 28 GHz and 40 GHz band but the RA has not yet had an opportunity to comment on the case.

### **3.2. Rights of Way**

All operators are encouraged to collocate or share installations wherever possible and appropriate. This is particularly true of mobile operators who often use masts to install their network equipment. As part of its response to a government consultation on planning, the mobile industry agreed to improve the process for the sharing of masts between themselves and others, such as broadcasters, who also use masts for the installation of infrastructure.

Rollout of 3G services is proceeding according to schedule. It has been claimed that health and environmental concerns make rollout difficult in certain areas (due to the planning process) and that there are particular problems in Scotland (and also some parts of London) due to the strict regime. However these problems are unlikely to jeopardise the attainment of the licence condition that 80% of the population be covered by 31 December 2007 ( since this represents only 10% of geographic coverage in the United Kingdom it appears unlikely that the need to obtain planning permission will prevent the operators from meeting their rollout obligations). Hutchison will start to provide limited 3G services in late autumn 2002.

## **4. UNIVERSAL SERVICE, CONSUMERS, USERS**

### **4.1. Tariffs/price controls**

Oftel has imposed retail price controls since 1984, since there has been insufficient competition in the retail market to exert downward pressure on prices. In this time the incumbent's residential call prices have fallen by over 50% in real terms.

Oftel issued a Statement in June 2002, setting out the conclusions of its review of competition in the provision of fixed telephony services. Oftel found that competition had steadily increased but was not yet effective. Oftel therefore required the incumbent to provide a new wholesale line rental product, which would enable new entrants (notably service providers) to provide a single bill that covers both line rental and telephone calls. The wholesale line rental has to be offered on cost-based and non-discriminatory terms. Oftel sets prices for the wholesale line rental, for the transfer of a service from the incumbent to a service provider and for the connection of a new line for a service provider. Additionally Oftel will continue to ensure that consumers are protected through a price control of RPI-RPI focused on the expenditure pattern of the bottom 80% of residential customers and by extending the scope of the current Low User Scheme to cover the lowest spending three deciles of residential customers. Once a commercially viable wholesale line rental product has been fully implemented by the incumbent in line with a determined product specification and is being actively taken up by service providers, the price control will be modified to RPI +/- 0%.

On the network side Oftel believes that operators are still reliant on the incumbent to provide connection to, and conveyance over, its network, and announced in February 2001 that network charge controls would continue. These charges were set at tariffs ranging from RPI minus 13% to RPI minus 7.5% for a further four years from October 2001.

### **4.2. Universal service**

BT and Kingston currently have a universal service obligation (USO) under the terms of their licences. Oftel's position has always been that the costs and benefits of providing universal

service are closely matched. In its August 2001 Statement on Universal Policy Oftel concluded that since the net costs were estimated at between £53 and £73 million and the net benefits at around £61 million, the net cost was not considered to be an undue burden and thus did not warrant a funding mechanism

#### **4.3. Directory enquiries**

In the United Kingdom, subscribers have access to a directory enquiry service including all subscribers. There have, however, been some difficulties in ensuring that all mobile data are available. A free directory enquiry service is available for users unable to use a paper directory. Following a public consultation exercise, a market research study into consumer attitudes to directory services and a cost-benefit analysis, Oftel has initiated an action programme aimed at liberalising the directory enquiry market. There will be a change from the current 192 code to a variety of codes based on 118xxx starting in December 2002

#### **4.4. Itemised billing**

The incumbent offers itemised billing free of charge showing namely: partial/full number called; start time and duration of each call, date of the call, the price of each call. NTL and Vodafone offer itemised billing at extra cost.

#### **4.5. Quality of Service**

Oftel does not set Quality of Service performance targets for SMP operators, or other operators. SMP operators measure quality of service using the recommended ETSI standards (ETSI EG 201, and partially also ETSI ETR 138). Measurements since 1995 have been published via the Telecommunications Industry forum (the latest publication is for the period January 2002 to June 2002). Oftel has also launched a number of consumer initiatives, inter alia Comparable Performance Indicators (CPIs), which provides comparable quality-of-service information on a wide range of telecommunications operators in the United Kingdom. Oftel has also initiated quality-of-service surveys for the four mobile networks in the United Kingdom, which provide information on a national and regional basis on successful call set-ups, dropped calls and successfully connected and held calls.

### **5. DATA PROTECTION**

The Information Commissioner (previously known as the Data Protection Commissioner) has responsibility for enforcement of both general data protection enactments and those specific to the telecommunications sector. Oftel also has certain responsibilities in relation to data protection in the telecommunications sector.

In the United Kingdom, as regards security, the UK legislation provides that a telecommunications service provider shall take measures, if necessary in conjunction with the provider of the relevant telecommunications network, to secure the security of the service he provides. Measures shall only be taken if, taking into account the state of technological development and the cost of implementing the measures, they are proportionate against the risks against which they would afford safeguards. In the “guidelines on the essential requirements for network security and integrity” and the “criteria for restriction of access to the network” of October 2002 Oftel sets out guidance as to what measures to protect network security and integrity operators are expected to put in place to meet the requirements of condition 20 of their licences, which reflects the provisions of Article 13 of Directive 98/10/EC.

## **5.1. Traffic data retention**

As regards processing of data, the UK legislation provides that personal data in respect of traffic handled by the telecommunications network provider/service provider, which is processed to secure the connection of a call, should be erased upon termination of the call. For the purposes of subscriber billing and interconnection payments, data may be processed until the expiry of the period during which legal proceedings may be brought in respect of payments due (six years).

## **5.2. Unsolicited calls and e-mails**

As regards unsolicited phone calls and unsolicited e-mails, an opt-out approach has been implemented. Where e-mail addresses constitute personal data because they contain an individual's name, any processing must be carried out in accordance with the requirements of the Data Protection Act of 1998. This means that any company that continues to process an e-mail address that contains personal data, in order to send unsolicited marketing communications, after being instructed by the individual to stop, will be in breach of the Act's fair processing requirements.

## **6. MOBILE ISSUES**

The United Kingdom has allocated five third-generation mobile licences under the Wireless Telegraphy Act by means of an auction, which ended on 27 April 2000, with licences being granted to the four "incumbents" (BT Cellnet (now MMO2), Vodafone, Orange, One2One (now T-Mobile) and a new entrant (Hutchison 3G). The auctioned licences cover the 1900-1980 MHz and 2110-2170 MHz bands.

The third-generation licences contain an obligation to roll out a third-generation network covering at least 80% of the UK population by 31 December 2007. Should an operator fail to roll out a network, the rollout obligation provides a backstop legal mechanism for revoking the licence. Two existing second-generation mobile operators, Vodafone and BT Cellnet (now MMO2), agreed to a modification to their Telecommunications Act licences to incorporate a roaming condition which was triggered when they won a third-generation licence. The condition provides for the Director-General of Telecommunications to determine a roaming agreement if the parties cannot reach agreement through commercial negotiation. Before the roaming condition is triggered, a new entrant must build out its network to cover 20% of the UK population, and any mandated roaming agreement will last only until 2009. There is, at present, no mandatory national roaming between second-generation mobile operators.

## **7. PREPARATION FOR TRANSPOSITION OF THE NEW REGULATORY FRAMEWORK**

The plans for the establishment of the Office of Communications (Ofcom), which will administer a single regulatory framework encompassing telecommunications, broadcasting and radiocommunications, are advancing. Ofcom will exercise regulatory responsibilities across telecommunications, broadcasting and spectrum management and will undertake sector regulation (both economic and consumer protection) and content regulation. Ofcom, which will become operational towards the end of 2003, will take over the work of Oftel, the Independent Television Commission (ITC), the Radiocommunications Agency (RA), the Radio Authority and the Broadcasting Standards Commission (BSC), and will administer sector regulation (both economic and consumer protection) and content regulation as well as



enforce the UK competition rules. Ofcom will deliver a coherent regulatory framework for the increasingly convergent communications industries.

The transposition and implementation of the new EC communications regulatory package is complex in the United Kingdom since the transposition/implementation is going on at the same time as the new regulatory body, Ofcom, is being set up. The draft Communications Bill is establishing Ofcom and at the same time transposes a great part of the new EC regulatory package. It is expected that the Bill will be adopted in time to transpose the EC regulatory package by 25 July 2003 but a series of Statutory Instruments are foreseen in the event that the target date is not met. Ofcom will only be fully active towards the end of 2003 and Oftel will carry out the market reviews and designate SMP operators until then.

## **Annex 4**

**List of operators, associations and organisations involved in the preparation and hearings for the eighth report**

|                       |   |  |   |
|-----------------------|---|--|---|
| <b><u>BELGIUM</u></b> | <b>Belgacom</b><br><b>Belgacom Mobile</b><br><b>BELTUG</b><br><b>ISPA Belgium</b><br><b>Ombudsman Telecommunicatie</b><br><b>Test Achat</b>         |  |   |
|                       | <b>Platform Telecom Operators &amp; Service Providers:</b><br>A.S.T.R.I.D<br>BASE nv<br>B-Telecom<br>Brutele S.C.                                   | BT<br>Cable & Wireless Global Belgium nv<br>Codenet<br>Colt Telecom<br>Global Crossing België<br>KPN Belgium nv    | Level 3 Communications<br>Mobistar<br>Telenet Operaties<br>UPC Belgium<br>Ventelo Belgium<br>Versatel Telecom Belgium<br>Worldcom Belux |
| <b><u>DENMARK</u></b> | <b>Danish Consumer Council (Forbrugerrådet)</b><br><b>Danish Telecommunication Industries Association</b><br><b>Devoteam</b><br><b>Hi3G Denmark</b> |  |   |
|                       | <b>ITEK (Confederation of Danish Industries)</b><br>Dansk MobilTelefon I/S<br>Ericsson DiAx A/S<br>EuroCom Industries A/S                           | Kirk Telecom A/S<br>Maxon Telecom A/S<br>NOKIA Danmark A/S<br>Primus TeleCom A/S<br>Schneider Electric A/S Danmark | SRK Telemateriel<br>TDC A/S<br>TELE Greenland A/S<br>Anlægsdivisionen<br>Telital R&D Denmark A/S  |
|                       | <b>Orange</b><br><b>Sonofon</b><br><b>TDC</b><br><b>Telia Denmark</b><br><b>Telenor</b><br><b>Tiscali</b>   |  |   |

| <b>GERMANY</b> | <b>Deutsche Telekom AG</b>   |   |   |
|----------------|--|---|---|
|                | <p><b>ANGA, Verband Privater Kabelnetzbetreiber e.V.</b><br/> 3 Com GmbH<br/> A N T E C Betriebsgesellschaft<br/> Acterna Deutschland<br/> ADC Telecommunications GmbH<br/> AEP Plückerhahn GbR<br/> Alcatel SEL AG<br/> ALLBAU<br/> ANKARO<br/> antennen electronic braun gmbh<br/> Antennen Elektroniksysteme<br/> Antennentechnik Weser-Ems GmbH<br/> ASTRA Marketing GmbH<br/> ASTRO Strobel<br/> AXING AG<br/> Baumann GmbH<br/> Bayerische<br/> bk-multimedia Breitbandanlagen und<br/> BKtel communications GmbH<br/> BLANKOM Antennentechnik GmbH<br/> BNMG Brandenburgische Netz-<br/> Bollhorn GmbH<br/> Bosch Breitbandnetze GmbH<br/> Brandenburgische Kabel- und<br/> BTV Jena GmbH<br/> C-COR.net Broadband<br/> Communications Products<br/> Cablecom Management GmbH<br/> chello broadband GmbH<br/> Christian Schwaiger GmbH &amp; Co.<br/> KG<br/> Citykom Münster GmbH<br/> Concepta Kommunikations-<br/> Delta System<br/> Dimetis AG<br/> DiTRA Gesellschaft für Kabelnetze<br/> E. Erbach<br/> e.discom Telekommunikation<br/> GmbH<br/> Elektro Schwarzkopf<br/> Elektro Wienholt<br/> Ericsson GmbH<br/> EUTELSAT<br/> EWT Communications GmbH ewt<br/> elektro- und</p> | <p>Fernseh-Elektronik Heinloth<br/> GAH<br/> GELSEN-NET Kommunikations-<br/> Gemeinde Finsing<br/> GERHARD ZIEGELMEIER jun.<br/> GfR Gesellschaft für<br/> Grundig Vertriebs-GmbH<br/> GTN Kommunikations- und<br/> GWS Wohnstättengesellschaft<br/> Harmonic Germany GmbH<br/> Hohenstein - Ernstthaler<br/> Holtschneider - Mietantennen<br/> HUMAX Digital GmbH<br/> Interkabel GmbH<br/> IPITEK Integrated<br/> isis Multimedia Net<br/> Kabel Plus Gesellschaft für<br/> KABEL-TV<br/> KABELCOM Braunschweig<br/> GmbH<br/> Kabelcom Rheinhessen GmbH<br/> Kabelprofi Gesellschaft<br/> KAMAS Kabel-Management-<br/> KATHREIN-Werke KG<br/> KEVAG Telekom GmbH<br/> KfGW - Kabelfernsehen fürKFS<br/> Kabelfernsehen<br/> KKG Kabelkommunikation<br/> KMG Kabel-Fernsehen<br/> KOMRO GmbH<br/> Kriebel Verlag GmbH<br/> KSG Kabel-Service Gesellschaft<br/> Kutz Kabel-Service GmbH<br/> KWS Electronic GmbH<br/> Lehmensiek<br/> LKG Lausitzer<br/> Marienfeld MultiMedia GmbH<br/> Martens Antennen- und Kabel-<br/> Martin Ondrusch<br/> MDCC Magdeburg-City-Com<br/> GmbH<br/> Media[netCom] AG<br/> MediaRent GmbH<br/> MET Medien-Energie-Technik<br/> Micronik multimedia GmbH<br/> MKS MediaKom Service<br/> Möller-Antennenvermietung-<br/> Motorola Broadband GmbH<br/> Nagravision S.A.</p> | <p>NEFkom Telekommunikation<br/> NetCologne Gesellschaft für<br/> Neuberger Nachrichten-<br/> Neubrandenburger Medianet<br/> Neumeier, Hegmann &amp; Co.<br/> Nortel Networks Germany<br/> Ost Telekommunikations GmbH<br/> PentaKom<br/> Philips Broadband Systems Pieper<br/> &amp; Partner GmbH<br/> Radio-, Fernseh- und<br/> Rehnig BAK Bayern GmbH<br/> Rehnig BAK Hessen GmbH<br/> Rehnig BAK Südwest GmbH<br/> RFT radio-television<br/> Richard Hirschmann GmbH &amp; Co.<br/> RKS TELECOM Südwest GmbH<br/> &amp; Co.KG<br/> Sachse Kabelservice GmbH<br/> SAG-Abel<br/> Kommunikationstechnik SAT-<br/> Direkt<br/> Schneider<br/> SCHWELMER &amp; SOZIALE<br/> Scientific Atlanta Central Europe<br/> GmbH<br/> Scientific-Atlanta Germany GmbH<br/> Siedlungsgesellschaft<br/> Siemens AG<br/> Sirti GmbH<br/> STG Kommunikations- und<br/> Sumpmann Elektronik<br/> SüwagTelNet GmbH<br/> Tele Columbus GmbH<br/> TeleNEC Telekommunikation<br/> Teleste GmbH<br/> Telindus GmbH<br/> Thiele Kommunikations-<br/> Thomson broadcast<br/> TKN Telekabel Nord GmbH<br/> Tratec Telecom B.V.<br/> tss GmbH<br/> URBANA Telekommunikation<br/> URBANA Teleunion<br/> Uwe Rehnig-B-A-K<br/> ÜWU Mediendienste GmbH<br/> Wärmeversorgung und<br/> WILHELM SIHN jr. KG<br/> wilhelm.tel GmbH<br/> Young-Net GmbH</p> |
|                | <p><b>BREKO, Bundesverband der regionalen und lokalen Telekommunikations-gesellschaften:</b><br/> accom<br/> AugustaKom<br/> BCC<br/> BerliKomm<br/> BITel<br/> BreisNet<br/> citykom.münster GmbH<br/> CNE<br/> DOKOM<br/> EWE TEL GmbH<br/> HEAG MediaNet GmbH</p>   | <p>HeLiNet<br/> HL komm htp - Hannovers<br/> Telefon Partner GmbH<br/> ISIS Multimedia Net GmbH &amp; Co.<br/> KG<br/> jetz!<br/> KielNET<br/> KomTel LEWTeNet<br/> Magdeburg-City-Com GmbH<br/> Mainz-Kom<br/> MK-Net<br/> M-net<br/> NEFkom<br/> NetCologne<br/> Netcom Kassel<br/> nordCom GmbH<br/> osnatel GmbH<br/> pulsaar</p>   | <p>3T<br/> TeleBeL Téléos<br/> Teliko GmbH<br/> TMR<br/> TraveKom<br/> WOBKOM GmbH<br/> Wolfsburgwicom<br/> Alcatel SEL AG<br/> DeTeWe Public Communication<br/> Networks AG &amp; Co. KG<br/> LambdaNet Communications<br/> GmbH<br/> Marconi Communications GmbH<br/> PANDATEL AG<br/> Siemens AG<br/> Carrier Vertrieb Deutschland<br/> Telsis GmbH</p>  |

|                             |   |  |  |
|-----------------------------|---|--|--|
|                             | <p><b>VATM Verband der Anbieter von Telekommunikations- und Mehrwertdiensten:</b><br/> AIRDATA AG<br/> AOL Deutschland GmbH &amp; Co. KG<br/> Arcor AG &amp; Co.<br/> Broadnet Mediascape Communications AG<br/> BT Ignite GmbH &amp; Co.<br/> Cable &amp; Wireless Deutschland GmbH<br/> COLT Telecom GmbH<br/> Completel GmbH<br/> debitel AG<br/> Drillisch AG<br/> E-Plus Mobilfunk GmbH &amp; Co. KG<br/> Energis GmbH<br/> envia.tel GmbH<br/> European Telecommunication</p> | <p>Holding AG<br/> EWE TEL GmbH Fibernet GmbH<br/> HanseNet Telekommunikation GmbH<br/> Hutchison Telecom GmbH<br/> IN-telegence GmbH &amp; Co.KG<br/> interoute Telecom Deutschland GmbH<br/> KKF.net AG<br/> KPNQwest Network Ireland Ltd.<br/> LambdaNet Communications GmbH<br/> Level 3 Communications GmbH<br/> Lycos Europe GmbH<br/> MCI WorldCom Deutschland GmbH<br/> mcn.tele.com AG<br/> MediaWays GmbH<br/> Mobilcom Communicationstechnik GmbH<br/> Net Mobile AG<br/> NetCologne Gesellschaft für Telekommunikation mbH</p> | <p>O<sub>2</sub> (Germany) GmbH &amp; Co. OHG<br/> OneTel Telecommunication GmbH<br/> QSC AG Quam Group 3G UMTS GmbH<br/> RedLine<br/> Telekommunikationsgesellschaft mbH<br/> RSL COM Services GmbH<br/> STAR 21 Networks AG<br/> Talkline GmbH<br/> Talkline ID GmbH<br/> Telegate AG<br/> Telia International Carrier GmbH<br/> Tesion Communicationsnetze<br/> Südwest GmbH &amp; Co.KG<br/> Tiscali Business Solutions GmbH &amp; Co.KG<br/> Tropolys GmbH<br/> ventelo Deutschland GmbH<br/> Versatel GmbH &amp; Co KG<br/> Victorvox AG<br/> 01051 Telecom GmbH</p> |
|                             | <p><b>Vz bv</b><br/> Aktion Bildungsinformation e.V. (ABI)<br/> Arbeiter-Wohlfahrt Bundesverband e.V.<br/> Arbeitsgemeinschaft evangelischer Haushaltsführungskräfte (AEH) des Deutschen Evangelischen Frauenbundes e.V. (DEF)<br/> Bund der Energieverbraucher e.V. (BDE)<br/> Bundesverband der Katholischen Arbeitnehmerbewegung e.V. (KAB)<br/> Bundesverband der Meisterinnen und Meister der Hauswirtschaft e.V. (MDH)</p>  | <p>Deutsche Volksgesundheitsbewegung e.V. (DVB)<br/> Deutscher Familienverband (DFV)<br/> Deutscher Frauenring e.V. (DFR)<br/> Deutscher Hausfrauen-Bund (DHB) -<br/> Berufsverband der Haushaltsführenden e.V.<br/> Deutscher Mieterbund e.V.<br/> Deutscher Staatsbürgerinnenverband e.V. (DSV)<br/> Diakonisches Werk der Evangelischen Kirche in Deutschland (EKD)</p>   | <p>Evangelische Aktionsgemeinschaft für Familienfragen e.V. (EAF)<br/> Fahrgastverband PRO BAHN e.V.<br/> Familienbund der Deutschen Katholiken e.V. (FDK)<br/> Gemeinschaft Hausfrauen (GH) - Berufsgemeinschaft in der Katholischen Frauengemeinschaft Deutschlands (kfd) Bundesverband e.V.<br/> Hausfrauenvereinigung des Katholischen Deutschen Frauenbundes e.V.<br/> Institut für angewandte Verbraucherforschung e.V. (IFAV)</p>   |
|                             | <p><b>QSC AG</b><br/> <b>Rae Piepenbrock Schuster</b><br/> <b>Talkline ID</b><br/> <b>Tele2</b><br/> <b>Telecom e.V.</b><br/> <b>Telego! GmbH</b><br/> <b>Vodafone</b><br/> <b>WorldCom</b></p>   |  |  |
| <p><b><u>GREECE</u></b></p> | <p><b>Cosmote Mobile Telecommunications</b><br/> <b>Every</b><br/> <b>Forthnet</b><br/> <b>Lannet</b><br/> <b>OTE</b><br/> <b>OTEnet</b><br/> <b>Panafon</b><br/> <b>Quest Wireless</b><br/> <b>Silk Route Holding</b><br/> <b>Starcom</b><br/> <b>STET Hellas</b><br/> <b>Telecom Italia</b><br/> <b>Vodafone</b></p>  |  |  |

|                      |   |  |   |
|----------------------|---|--|---|
| <b><u>SPAIN</u></b>  | <b>AESPI (Asociación Europea de Proveedores de Servicios de Internet):</b>  | Arrakis Servicios y Comunicaciones<br>Cable & Wireless<br>Eresmas Interactiva<br>TISCALI   | Vodafone<br>Wanadoo España<br>WorldCom<br>Ya.com Internet Factory   |
|                      | <b>ANIEL (Asociación Nacional de Industrias Electrónicas y de Telecomunicaciones):</b><br>Abrared, S.A. (Neo)<br>Astra Marketing Iberica, S.A.<br>Auna Cable<br>Broadnet Consorcio, S.A.<br>Cable & Wireless, S.A.<br>Correos Telecom, S.A.<br>Difusio Digital Societat De Telecomunicacions, S.A. (Tradia)<br>Euskaltel, S.A.<br>Global Crossing Spain<br>Hispasat, S.A. | Infoglobal, S.A.<br>Islalink<br>Jazz Telecom S.A.<br>Lambdanet España<br>Lleida Network Serveis<br>Telematics, S.L.<br>R Cable Y Telecomunicaciones Galicia, S.A.<br>Red Electrica Telecomunicaciones, S.A. (Albura)<br>Retecal, Sdad. Oper. Telecom. De Castilla Y Leon<br>Retevisión I, S.A.     | Retevisión Movil, S.A. (Amena)<br>Skypoint, S.A. Telecom. Castilla La Mancha<br>Teledesic Communications Spain, S.L.<br>Telefonica Cable<br>Telefonica Data<br>Telefonica De España, S.A.<br>Telefonica Moviles<br>Telefonica Sistemas, S.A.<br>Vodafone<br>Xfera Móviles, S.A. |
|                      | <b>ASTEL (Asociación de Empresas Operadoras y de Servicios de Telecomunicaciones):</b><br>ALBURA<br>Aló Comunicaciones<br>Al-pi (Catalana de Comunicaciones)<br>AMENA- Retevisión Móvil<br>ATT Global Network Services España<br>AUNA Cable<br>Aviron Router  | Banda Ancha, S.A.<br>BT Ignite España S.A.U.<br>Cable & Wireless<br>Cableuropa, S.A. – Grupo ONO<br>Capcom International, S.L.<br>Colt Telecom España, S.A.<br>Comunitel Global, S.A.<br>Comytel<br>EasyNet España, S.A.<br>Euskaltel, S.A.<br>FlagTelecom, S.A.<br>Flash10.com, S.A.<br>IBERBANDA | International First Class Courier<br>Interoute Telecomunicaciones, S.A.<br>Jazz Telecom, S.A.<br>METRORED<br>Primus<br>Retevisión, S.A.<br>SKN / SKYPOINT<br>Spantel<br>Telecom Italia<br>UNI2<br>Vodafone<br>Wanadoo<br>WorldCom   |
|                      | <b>Telefónica</b>   |  |   |
| <b><u>FRANCE</u></b> | <b>AFORS (Assoc. Française des Opérateurs Réseaux et Services de Télécommunications):</b><br>9 Telecom Réseau<br>Adp Télécom<br>At&T<br>Bouygues Telecom  | BT<br>Cable & Wireless<br>Cegetel<br>Colt<br>Completel<br>Easynet<br>E-Message<br>Global Crossing<br>Kertel  | Ldcom<br>Tiscali Prosodie<br>SFR<br>T-Systems Siris<br>SRR<br>Telecom Developpement<br>Tradingcom Europe<br>Upc France<br>Worldcom  |
|                      | <b>AFORM (Assoc. Française des Opérateurs Réseaux Multiservices) :</b>  | Est Vidéocommunication<br>France Télécom Câble NC<br>Numericâble<br>Noos   | SCGS<br>UPC France<br>Valvision<br>Vialis   |
|                      | <b>AFOM (Association Française des Opérateurs Mobiles) :</b>  | Bouygues Telecom<br>Orange Telecom<br>SFR  |   |
|                      | <b>AFA (Assoc. des Fournisseurs d'Accès et de Services Internet)</b><br>6 <sup>ème</sup> SENS<br>9 TELECOM<br>AOL France<br>CABLE & WIRELESS France   | CLUB-INTERNET T-Online<br>France<br>COLT France<br>FIRSTMARK<br>FREE<br>INTERPC<br>KERTEL<br>LYCOS France<br>MAGIC ON LINE   | MSN France<br>NC NUMERICABLE<br>NOOS<br>SITADELLE<br>TISCALI France<br>UPC France<br>WANADOO<br>WORLDCOM France<br>YAHOO! France  |
|                      | <b>France Telecom</b>   |  |   |
|                      | <b>UFC Que Choisir</b>  |  |   |

|                               |  |  |  |
|-------------------------------|--|--|--|
| <b><u>IRELAND</u></b>         | <b>ALTO (Assoc. of Licensed Telecommunications Operators):</b>   | Budget Telecom<br>Cable & Wireless<br>Chorus<br>COLT<br>Conduit<br>Esat BT | ESB Telecom<br>Ventelo Nevada<br>NTL<br>Smart Telecom<br>Swiftcall<br>Worldcom |
|                               | <b>Eircom</b><br><b>IBEC (Telecoms &amp; Internet Federation)</b><br><b>Ireland Offline</b><br><b>Eircell</b><br><b>Esat BT</b><br><b>Irish Internet Assoc.</b><br><b>Meteor Mobile Com.</b><br><b>O2</b><br><b>Vodafone</b><br><b>WorldCom</b>  |  |  |
| <b><u>ITALY</u></b>           | <b>AIIP (Associazione Italiana Internet Providers)</b><br><b>Albacom</b><br><b>Altroconsumo (Associazione Consumatori )</b><br><b>ANUIT (Associazione Nazionale Utenti Italiani di Telecomunicazioni)</b><br><b>Atlanet</b><br><b>Edisontel</b><br><b>e-biscom</b><br><b>Fastweb</b><br><b>H3G</b><br><b>ISPE 2000</b><br><b>Libero</b><br><b>Netchemya</b><br><b>Noicom</b><br><b>Vodafone-Omnitel</b><br><b>Telecom Italia</b><br><b>Telespazio</b><br><b>TIM</b><br><b>Tiscali</b><br><b>U.N.I.S.A. (Unione Nazionale Imprese Servizi Audiotex)</b><br><b>Wind</b><br><b>WorldCom</b> |  |  |
| <b><u>LUXEMBOURG</u></b>      | <b>BT-Ignite</b><br><b>Cegecom</b><br><b>Codenet</b><br><b>EPT Lux</b><br><b>Equant Luxembourg</b><br><b>Luxembourg Online</b><br><b>Tele2/ Tango</b><br><b>WorldCom</b>   |  |  |
| <b><u>THE NETHERLANDS</u></b> | <b>ACT (Assoc. of Competitive Telecom Operators) :</b>   | BT Ignite<br>Coet<br>Enertel   | Priortry Telecom<br>Versatel<br>WorldCom                                       |
|                               | <b>BBNED</b><br><b>Dutchtone</b><br><b>KPN</b><br><b>KPN Mobile</b><br><b>NLIP</b><br><b>Tele2</b><br><b>Tiscali</b><br><b>Vodafone</b>  |  |  |

|                               |  |   |  |
|-------------------------------|--|---|--|
| <p><b><u>AUSTRIA</u></b></p>  | <p><b>Kammer für Arbeiter und Angestellte<br/>ISPA Austria<br/>Telekom Austria<br/>Wirtschaftskammer Österreich</b></p>  |   |  |
|                               | <p><b>VAT (Verband Alternativer Telekomnetzbetreiber):</b><br/>3G Mobile Telecommunications GmbH<br/>Colt Telecom Austria GmbH<br/>Connect Austria<br/>Gesellschaft für Telekommunikation GmbH<br/>Equant Austria<br/>Telekommunikationsdienste GmbH</p>   | <p>eTel Austria AG<br/>eTel Austria AG vorm. European Telecom International AG<br/>Hutchison 3G Austria GmbH<br/>Kabelsignal Rundfunk-Vermittlungsanlagen AG<br/>LIWEST Kabelmedien GmbH<br/>master-talk Austria Telekom Service GmbH &amp; Co KG</p>   | <p>Tele2 Telecommunication Services GmbH<br/>Telekabel Wien GmbH tele.ring<br/>Telekom Service GmbH<br/>T-Mobile Austria GmbH (bisher: max.mobil.<br/>Telekommunikation Service GmbH)<br/>UTA Telekom AG<br/>WorldCom Austria GmbH</p>   |
| <p><b><u>PORTUGAL</u></b></p> | <p><b>APRITEL (Assoc. dos Operadores Privados de Telecomunicações):</b><br/>Cabovisão - Televisão por Cabo, S.A.<br/>Eastécnica, SGPS, S.A.<br/>Ericsson Telecomunicações. Lda*<br/>HLC Telecomunicações e Multimédia, S.A.<br/>Interoute, Comunicações Digitais, S.A.<br/>Jazztel Portugal - Serviços de Telecomunicações, S.A</p> <p><b>Portugal Telecom</b></p>             |   |  |
| <p><b><u>FINLAND</u></b></p>  | <p><b>FiCom (The Finnish Federation for Communications and Teleinformatics)</b><br/>Alcatel Finland<br/>Alma Media Interactive<br/>Auria<br/>BT Ignite Finland<br/>Corenet<br/>Digita</p>  | <p>Elisa Communications Ericsson Finland<br/>Finland Post<br/>Finnnet Group<br/>Hewlett-Packard Finland<br/>Jippii Group<br/>NetSeal<br/>NK Cables<br/>Nortel Networks Finland</p>  | <p>Reiniko<br/>RSL Com Finland Scando<br/>Siemens Osakeyhtiö (Information and Communication)<br/>Sonera<br/>Song Networks Finland<br/>SurfNet<br/>Telia Mobile/Finland<br/>Tikka Communications</p>  |
|                               | <p><b>Elisa<br/>Equant<br/>Cubio Communications<br/>Ficora<br/>Jippii Group<br/>Radiolinja<br/>RSLCom<br/>Sonera<br/>Song Networks OY<br/>Telia Finland (Mobile)<br/>Tele2</b></p>   |   |  |
|                               | <p><b>TheFinnet Group</b><br/>Alajärven Puhelinosuuskunta<br/>DNA Finland Oy<br/>Eurajoen Teleosuuskunta<br/>Finnnet Oy<br/>Finnnet-Media Oy<br/>Härkätien Puhelin Oy<br/>Iisalmen Puhelin Oy<br/>Ikaalisten-Parkanon Puhelin Oy<br/>Jakobstadsnejdens Telefon Ab<br/>Kajaanin Puhelinosuuskunta<br/>Karis Telefon Ab<br/>Kaukoverkko Ysi Oy<br/>Keikyän Puhelinosuuskunta</p> | <p>Kimito Telefonaktiebolag<br/>Kokkolan Puhelin Oy Kuopion Puhelin Oyj<br/>Kymen Puhelin Oy<br/>Laitilan Puhelinosuuskunta<br/>Lohjan Puhelin Oy<br/>Loviisan Puhelinosuuskunta<br/>Lännen Puhelin Oy<br/>Länsilinkki Oy<br/>Mariehamns Telefon Ab<br/>Mikkelin Puhelin Oyj<br/>Nettiportti Oy<br/>Oulun Puhelin Oyj<br/>Outokummun Puhelin Oy<br/>Pargas Telefon Ab</p> | <p>Pohjanmaan PPO Oy<br/>Pohjois-Hämeen Puhelin Oy<br/>Päijät-Hämeen Puhelin Oyj<br/>Salon Seudun Puhelin Oy<br/>Satakunnan Puhelin Oy<br/>Savonlinnan Puhelin Oy<br/>Suomen 2G Oy<br/>Suomen 3G Oy<br/>Suomen 3 KTV Oy<br/>Telekarelia Oy<br/>Telepohja Oy<br/>Vaasan Läänin Puhelin Oy<br/>Vakka-Suomen Puhelin Oy<br/>Ålands Telefonandelslag</p> |



|  |   |   |  |
|--|---|---|--|
| <b><u>SWEDEN</u></b>   | <b>Konsumentverket</b><br><b>KREAB</b><br><b>Näringslivets Telekommitee</b><br><b>Orange Sverige</b><br><b>Svenska IT-företagens Organisation, SITO</b><br><b>Swedish Urban Networks Assoc.</b><br><b>Tele2 Sverige AB</b><br><b>Telia AB,</b><br><b>Telia s.p.r.l.</b> |   |  |
| <b><u>UK</u></b>   | <b>BT</b><br><b>Consumers' Association</b><br><b>ISAP (Internet Service Providers Assoc.)</b><br><b>National Consumers' Council</b><br><b>O2</b><br><b>Orange</b>   |   |  |
| <b>OLOG (Other Licensed Operators Group)</b><br>COLT;<br>Cable & Wireless;<br>Easynet;<br>Energis;<br>EON Communications Ltd<br>Fibernet Group PLC | Global Crossing<br>Global One;<br>Hutchinson 3G<br>Kingston Group;<br>Level 3;<br>Your Communication;<br>ntl;<br>One2One;   | Redstone<br>Thus;<br>Telewest;<br>Telia;<br>Telinco;<br>Telstra;<br>Vodafone and<br>World online<br>Worldcom; |  |
| <b>ACSP (Assoc. of Communicaiton Service Providers):</b><br>Affinity Wireless Internet<br>Centrica Telecom<br>CKX Telecom<br>DIALnet plc           | Direct Marketing Association<br>ISPA<br>London Internet Exchange<br>NOA<br>Powergen<br>Project Telecommunications Plc<br>Reuters Ltd  | RSL COM<br>Spitfire Technology Group<br>Thus Demon Internet<br>Video Networks Ltd<br>Wavetech<br>World Online |  |

**PAN EUROPEAN ORGANISATIONS**

**ECCA (European Cable Communications Association)**

**ECCO (European Competitive Carriers' Organisation)**

**ECTA (European Competitive Telecommunications Assoc.)**

**ETNO (European Public Telecommunications Network Operators' Association)**

**EuroIsps (European Internet Services Providers Association)**

**INTUG (International Telecommunications Users Group)**