COMMISSION OF THE EUROPEAN COMMUNITIES

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COMMISSION STAFF WORKING DOCUMENT

ANNEX TO THE

COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

EUROPEAN ELECTRONIC COMMUNICATIONS REGULATION AND MARKETS 2005 (11TH REPORT)

{COM(2006)68 final}

11th Report on the Implementation of the Telecommunications Regulatory Package – 2005

Staff Working Paper - Vol. 2

CORRIGENDUM

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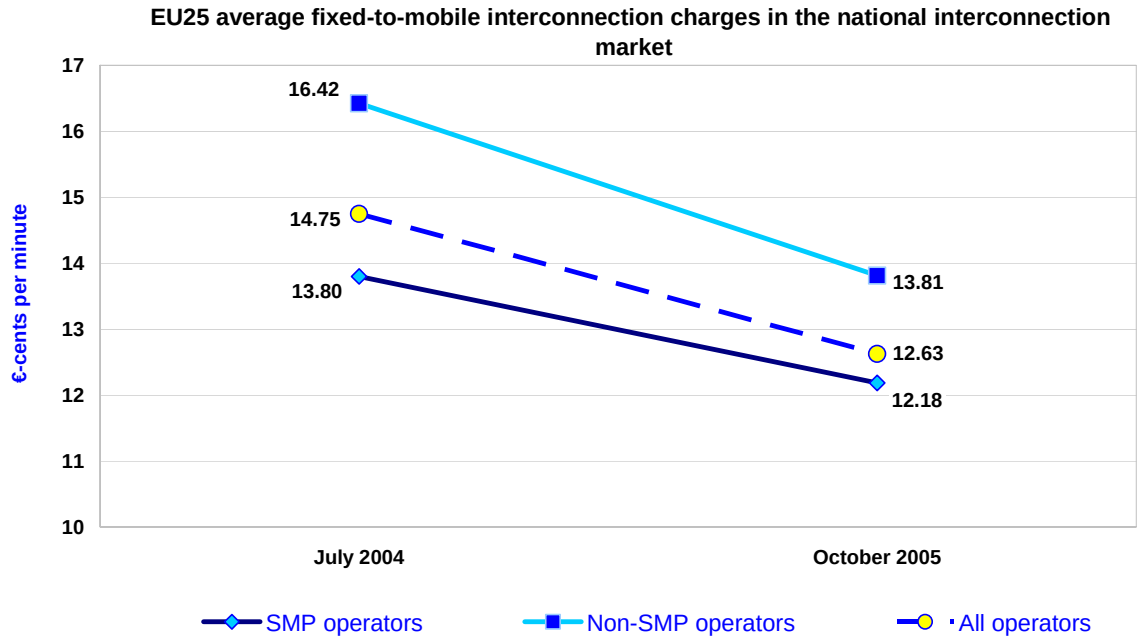

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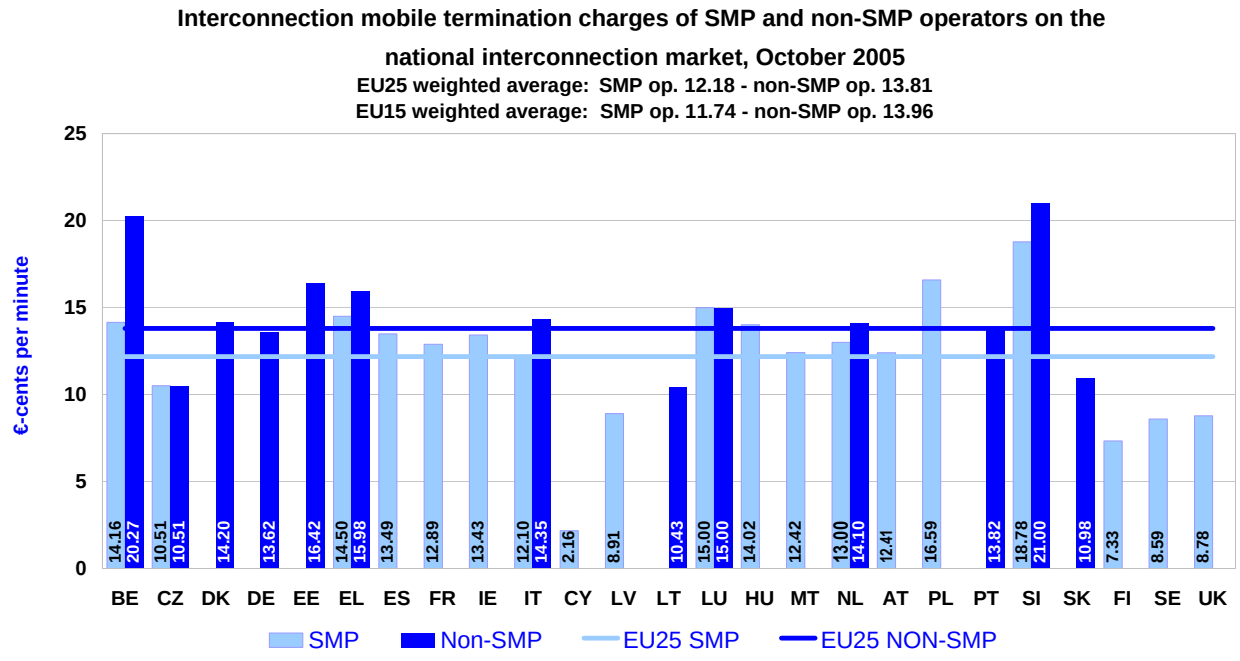

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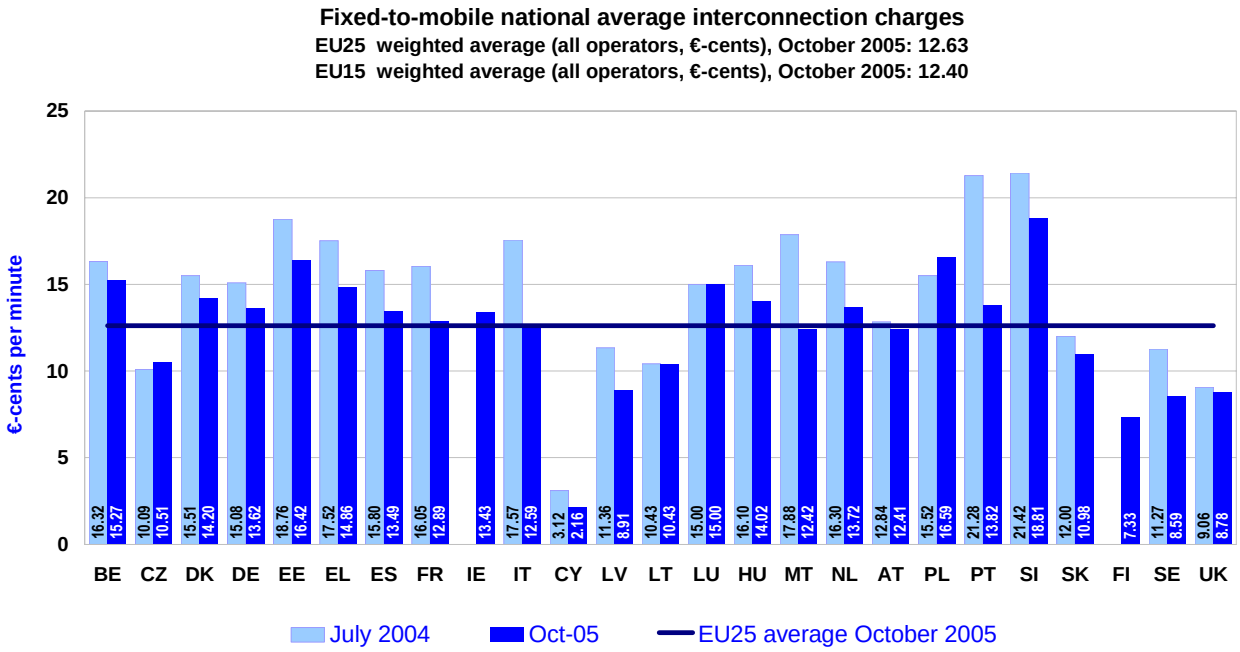

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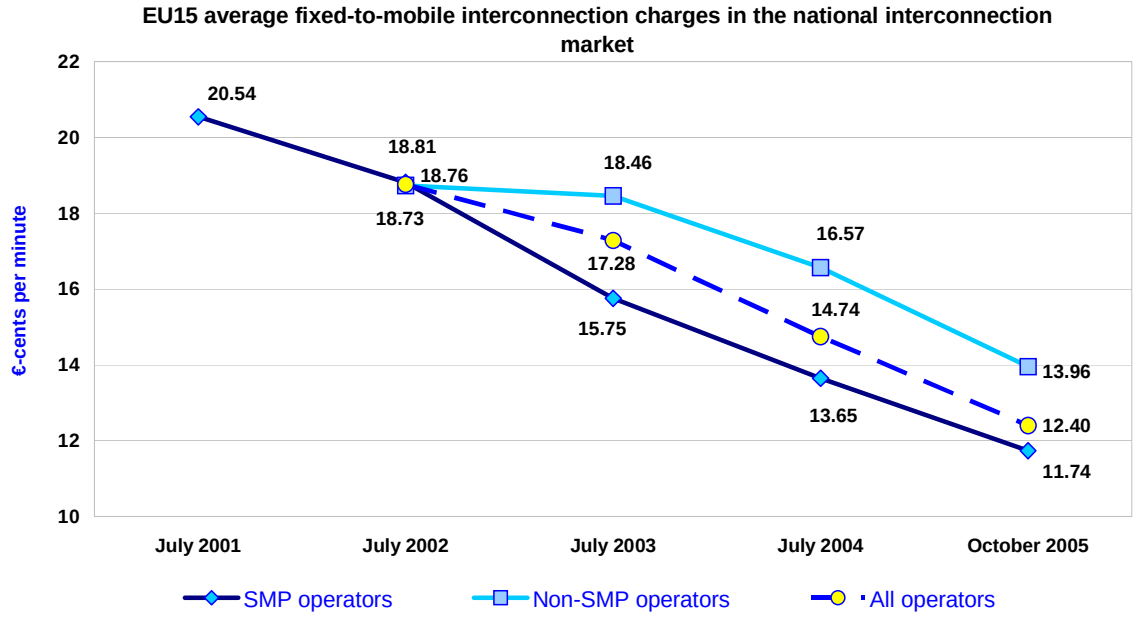

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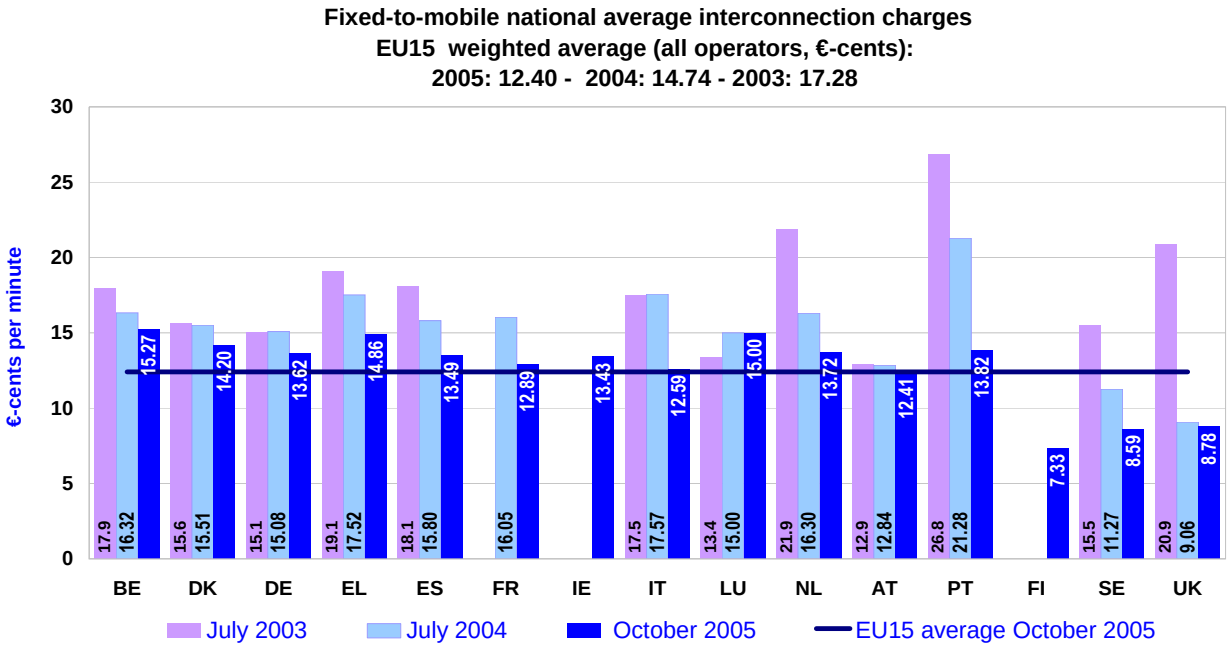

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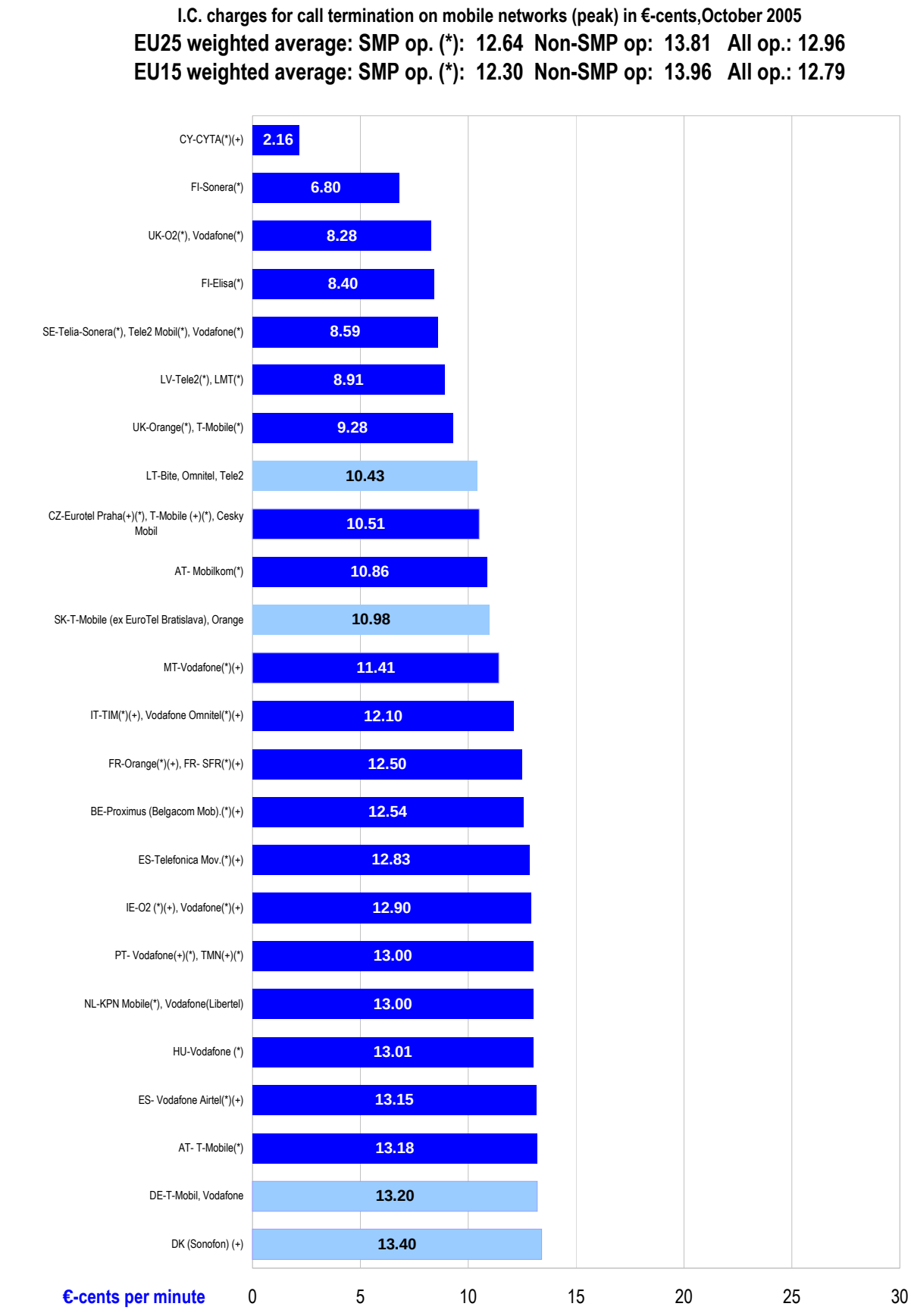

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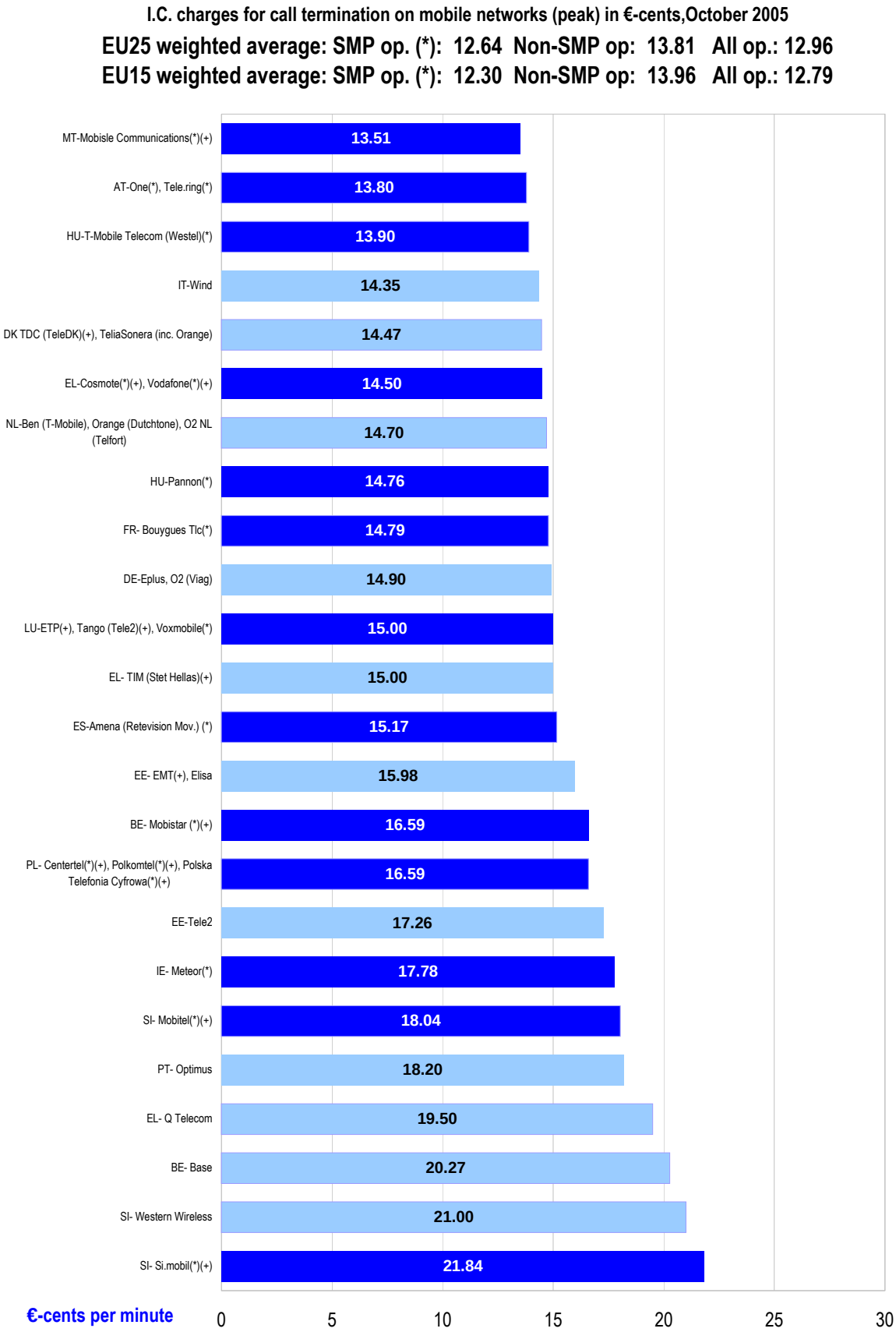

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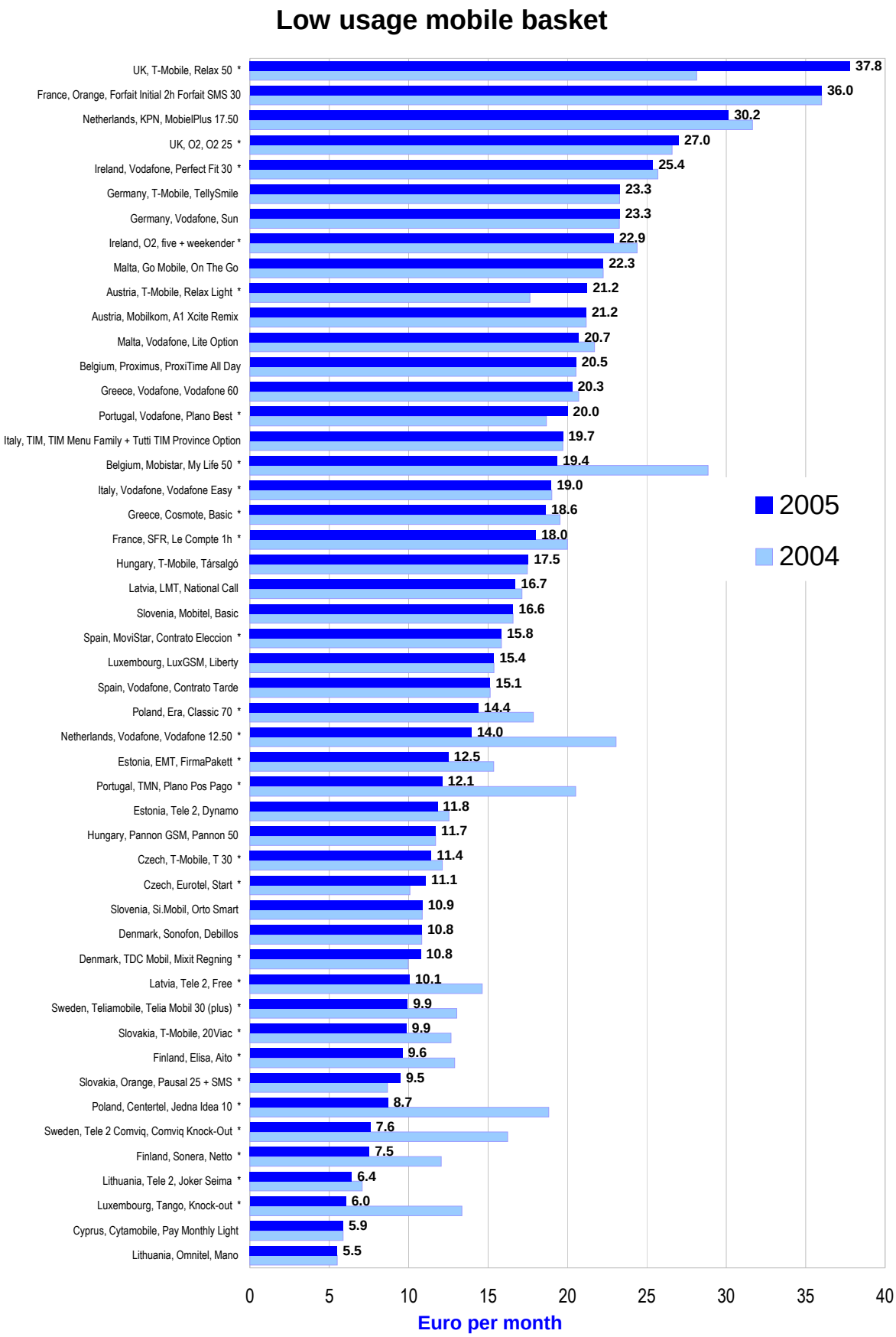

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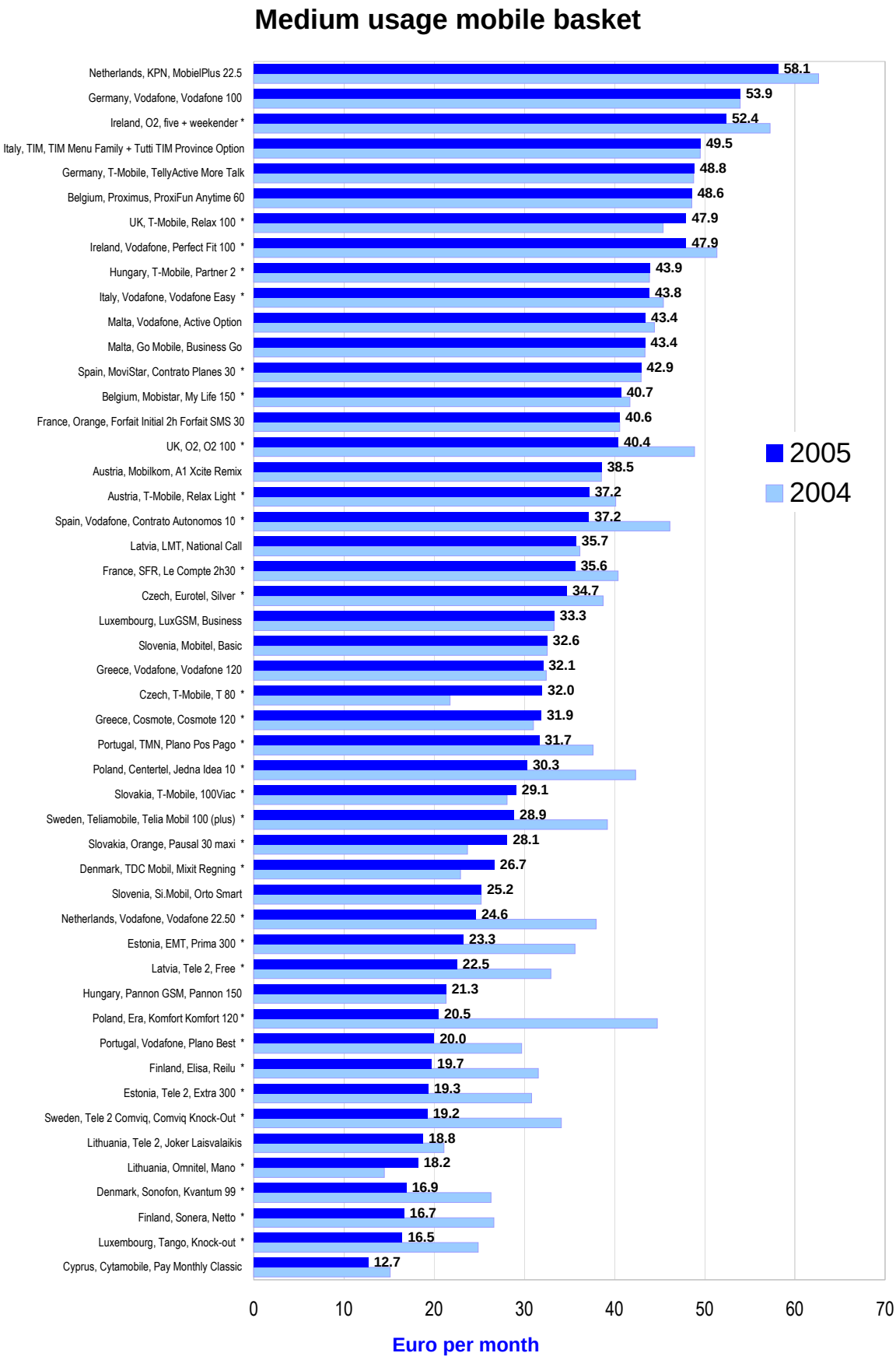

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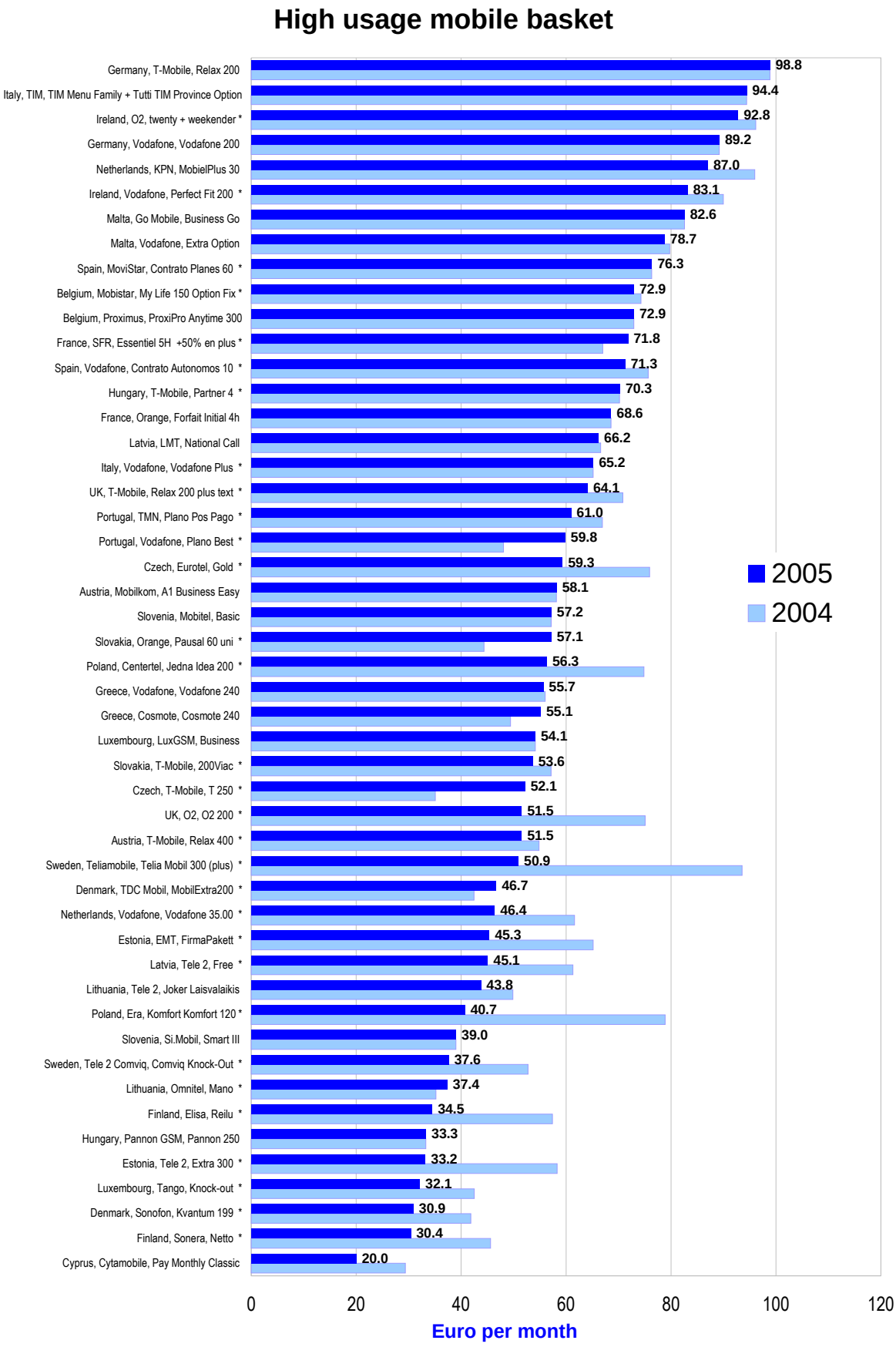

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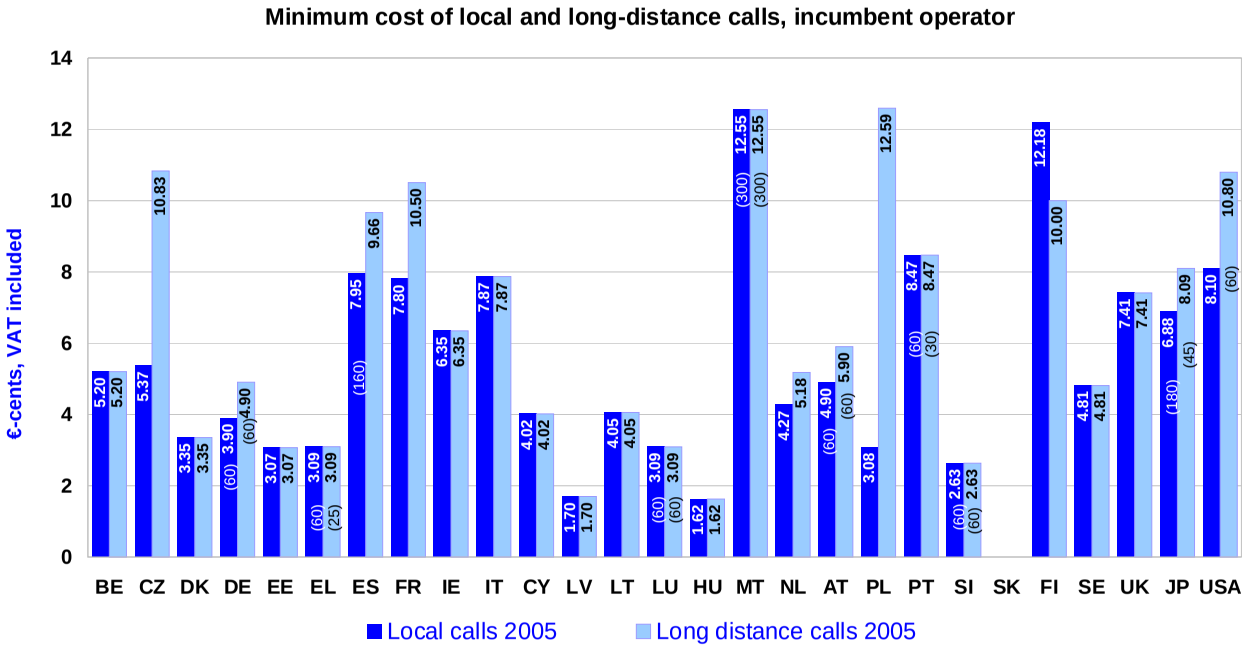

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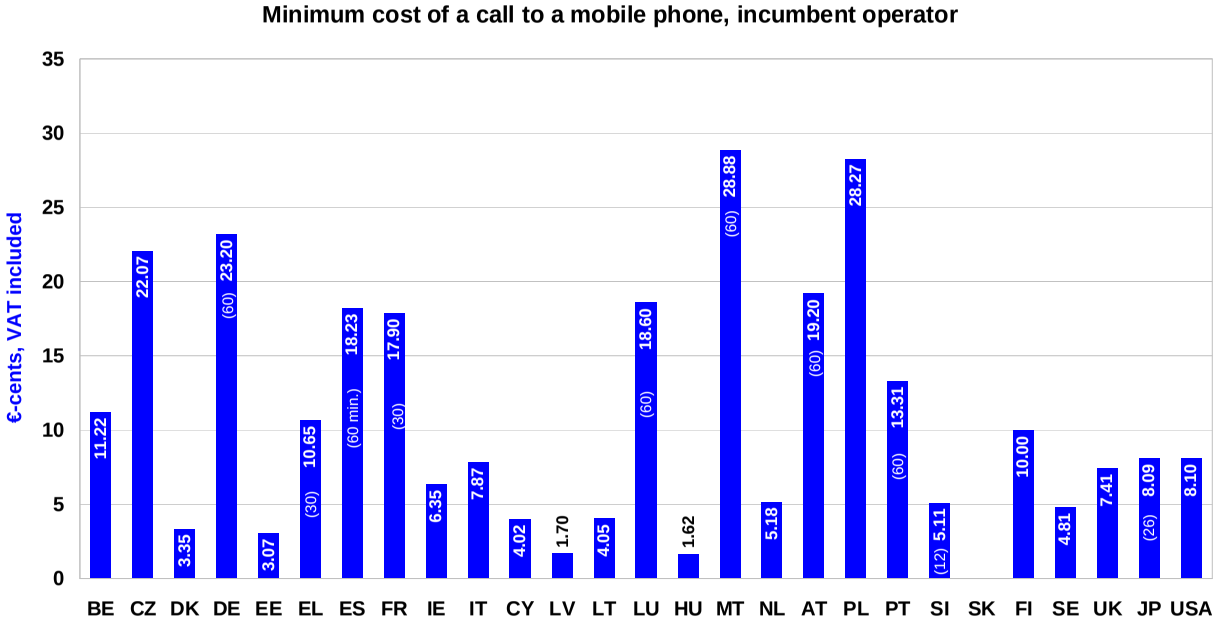

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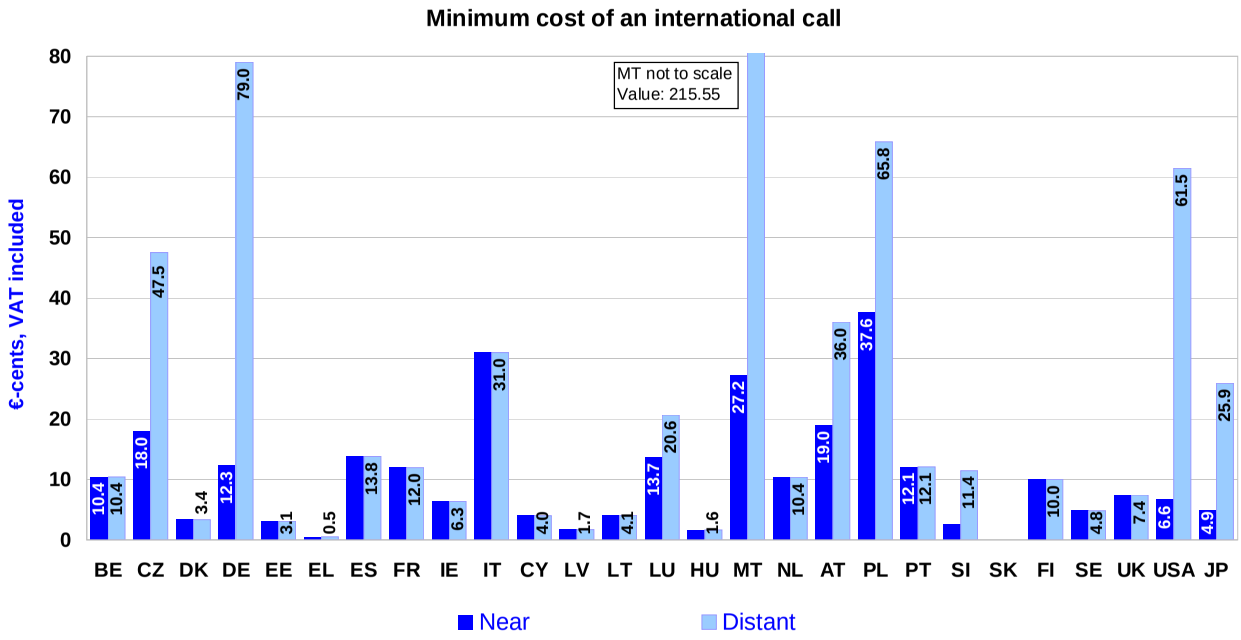

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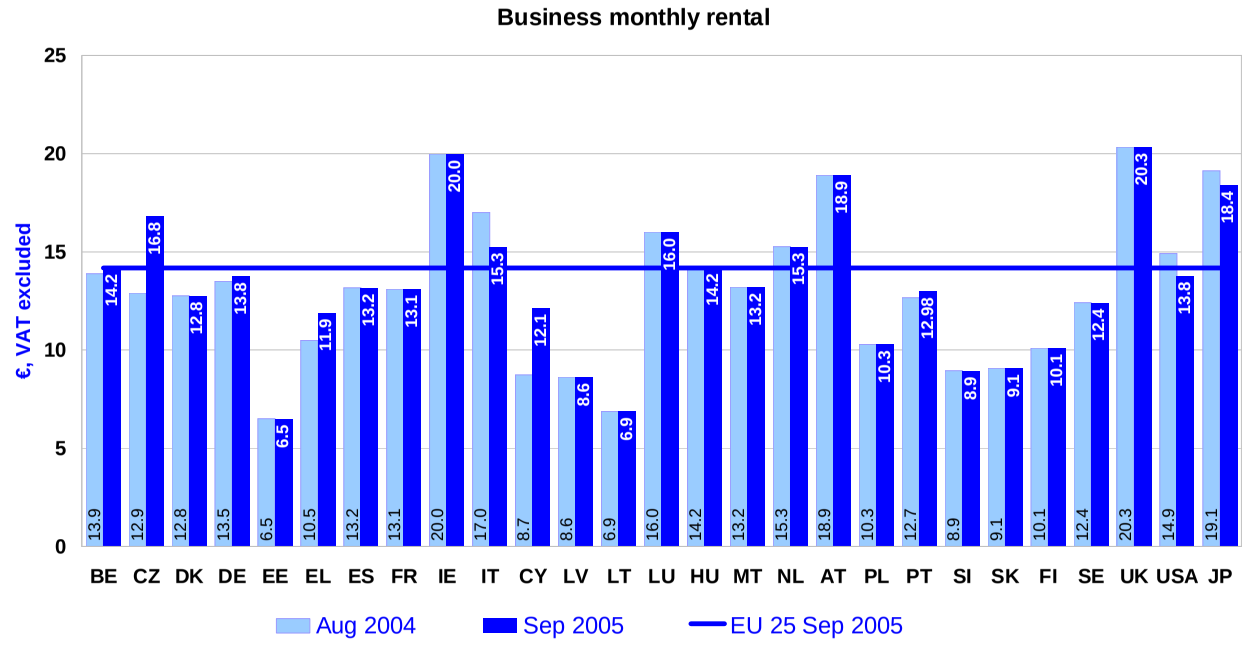

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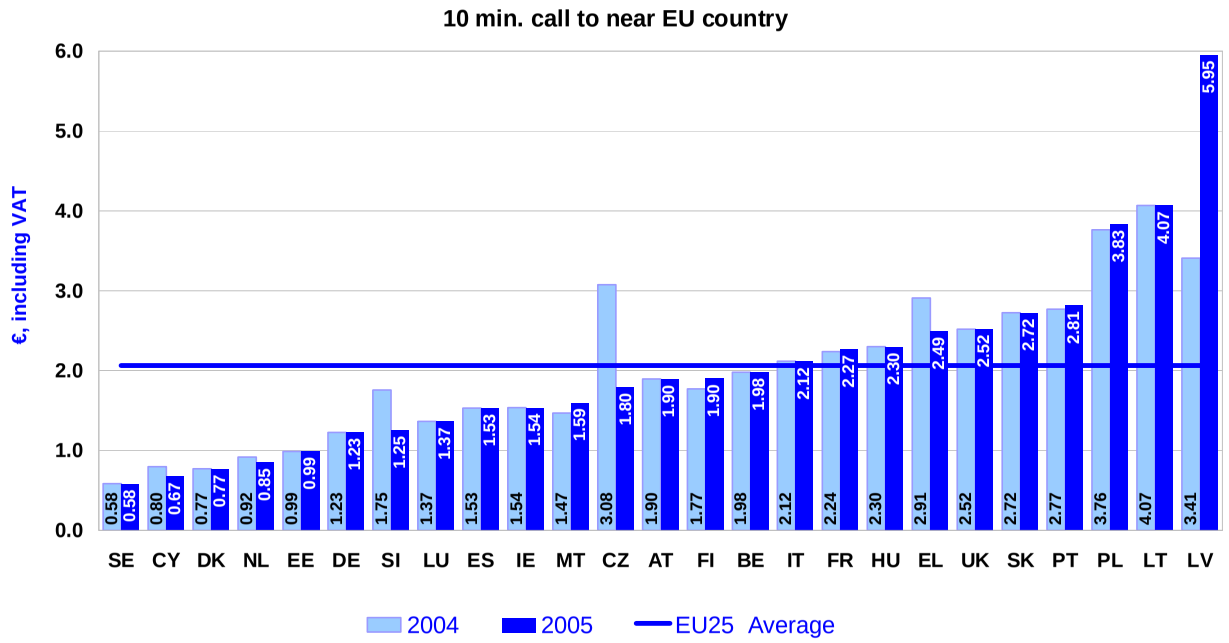

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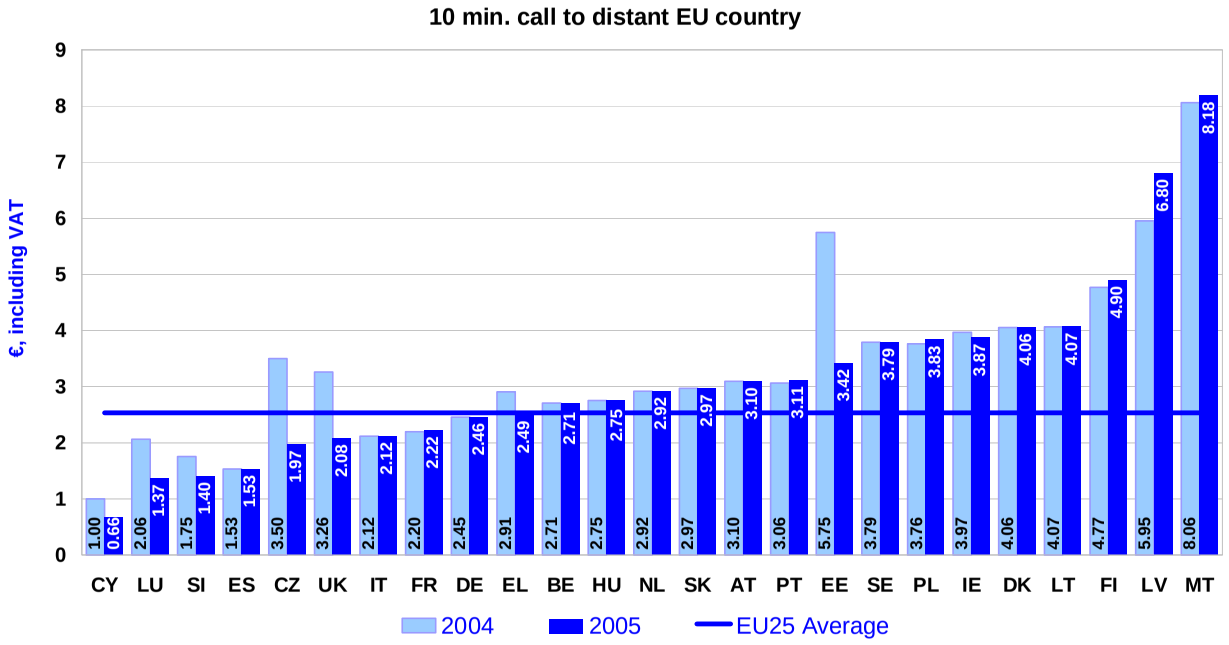

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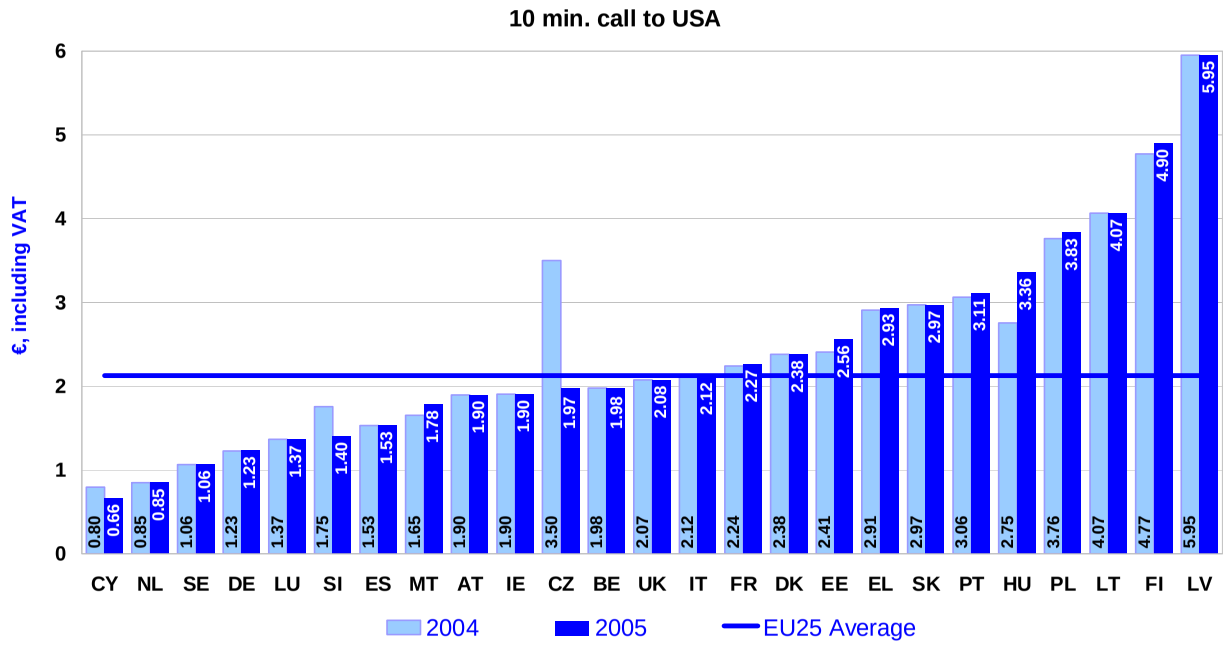

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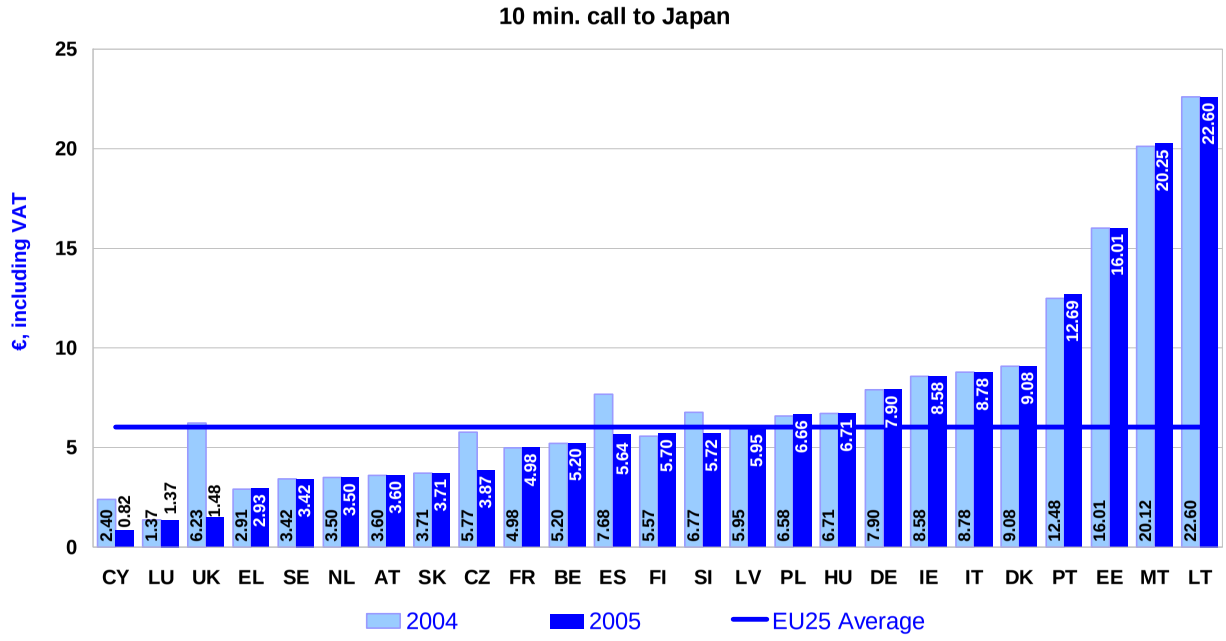

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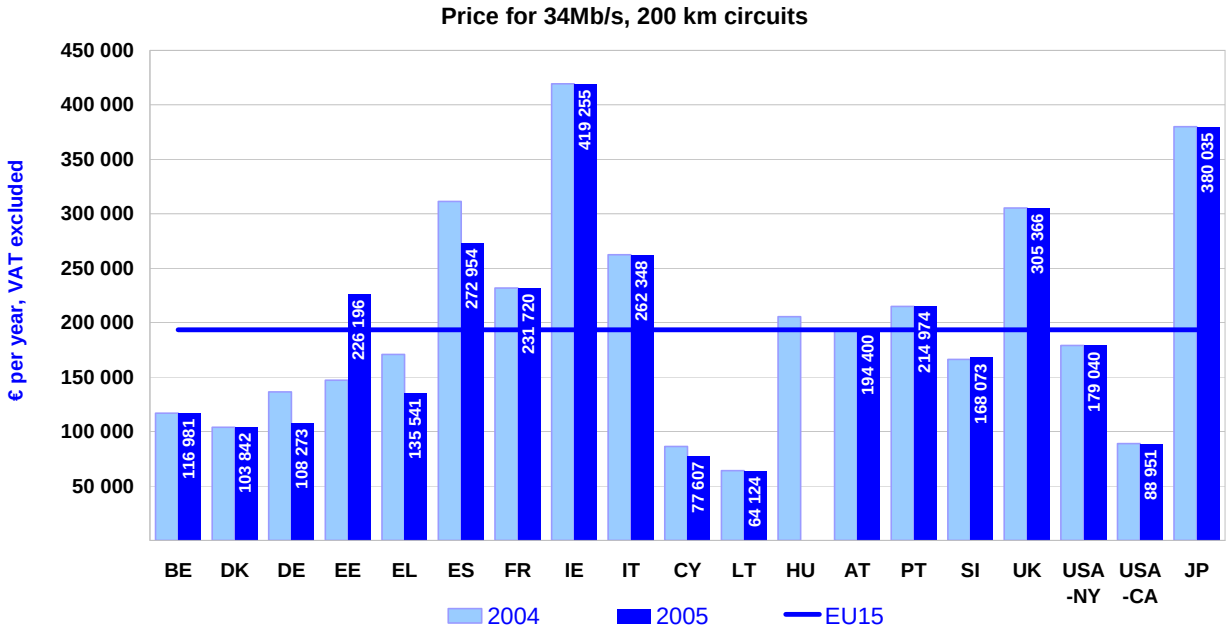

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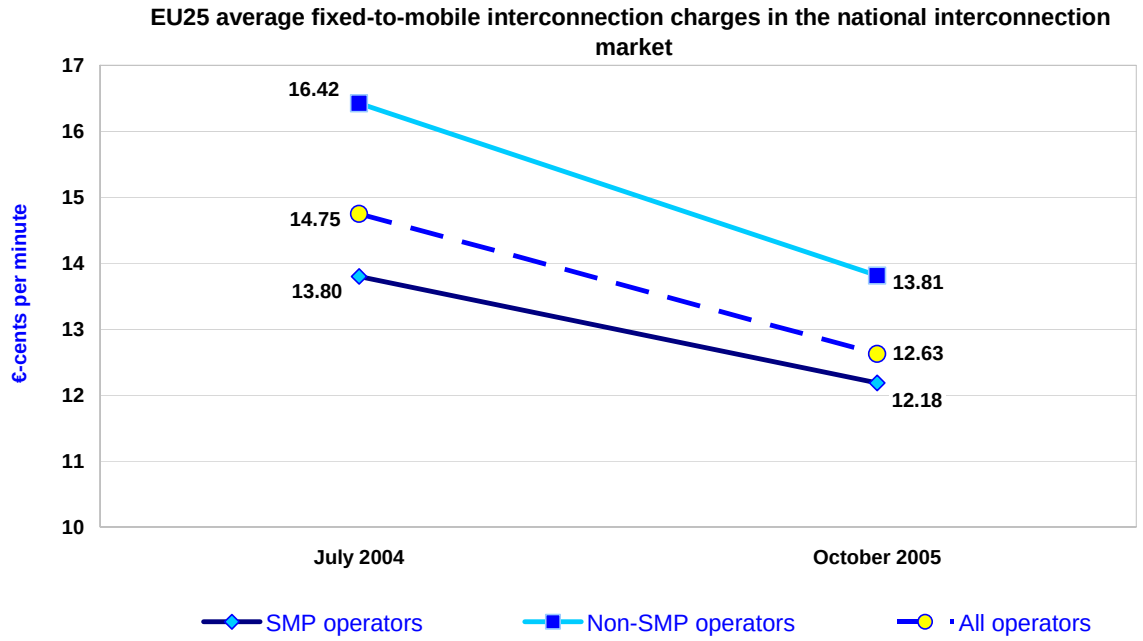

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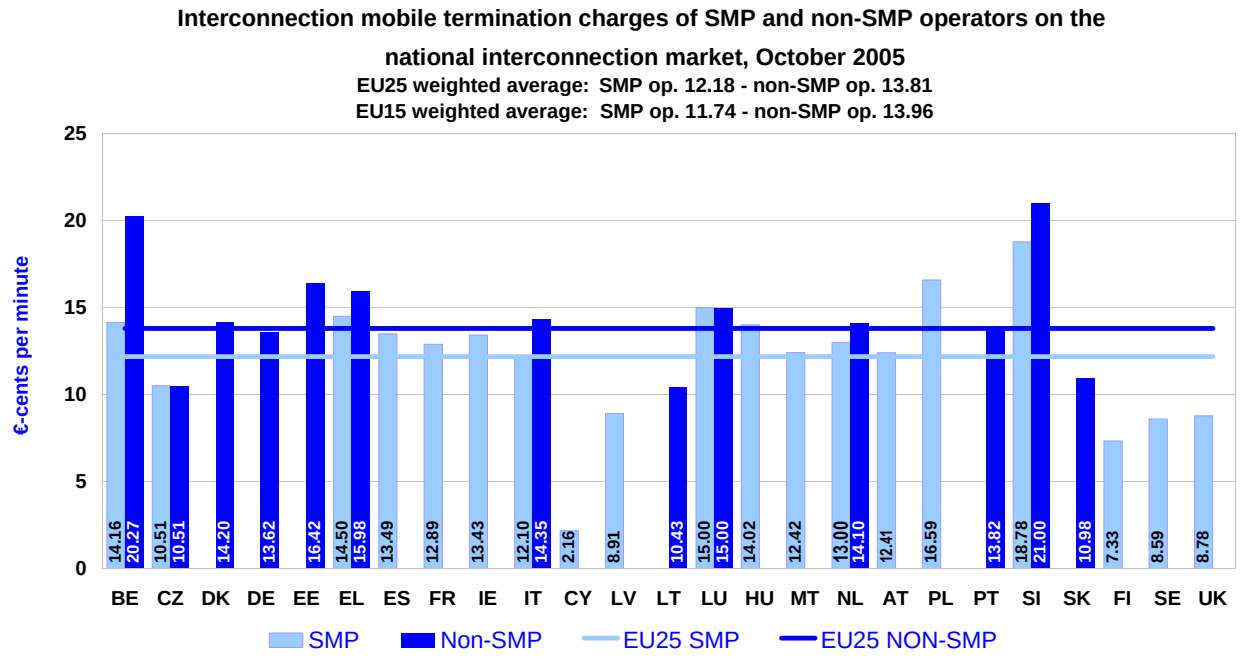

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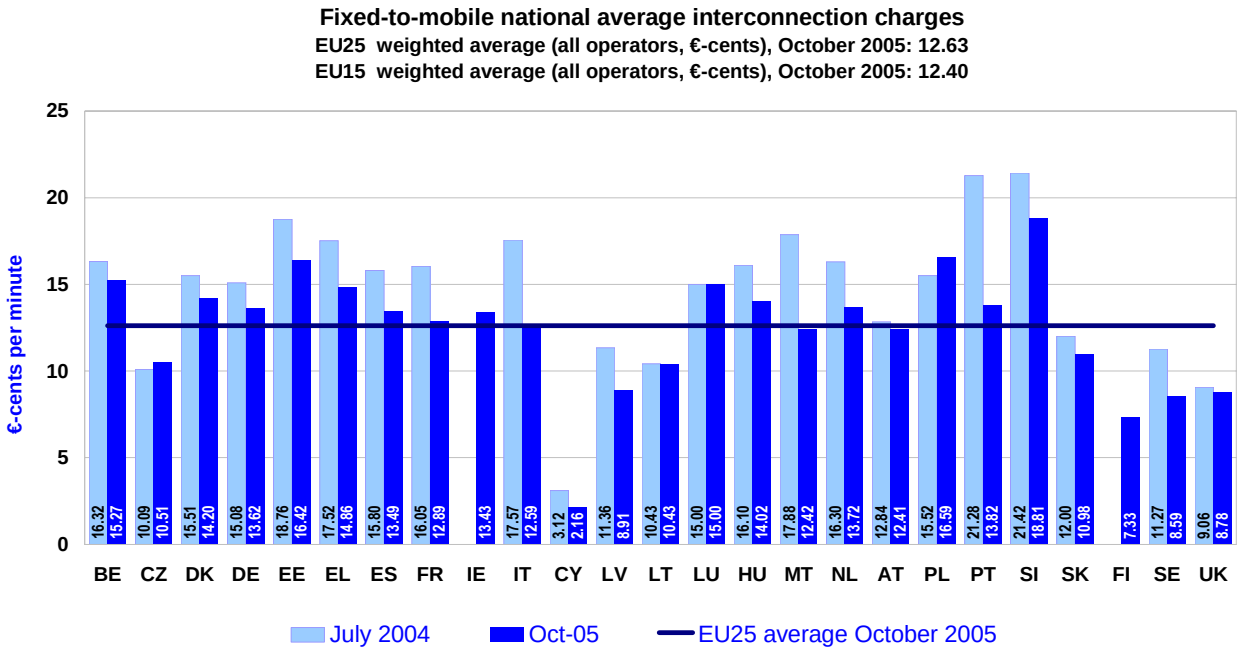

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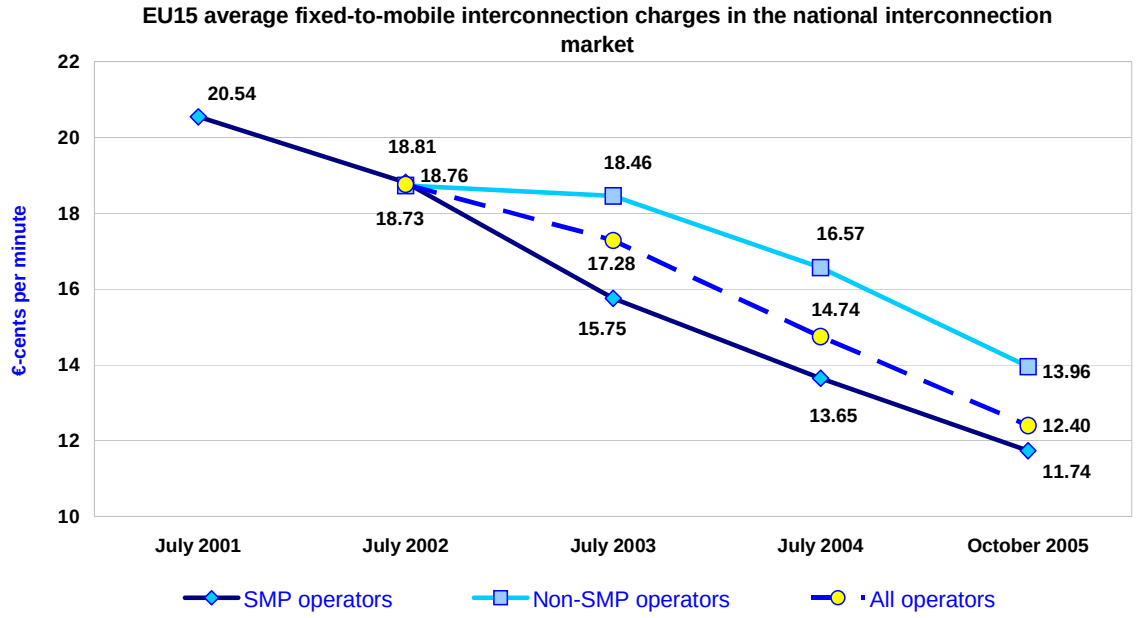

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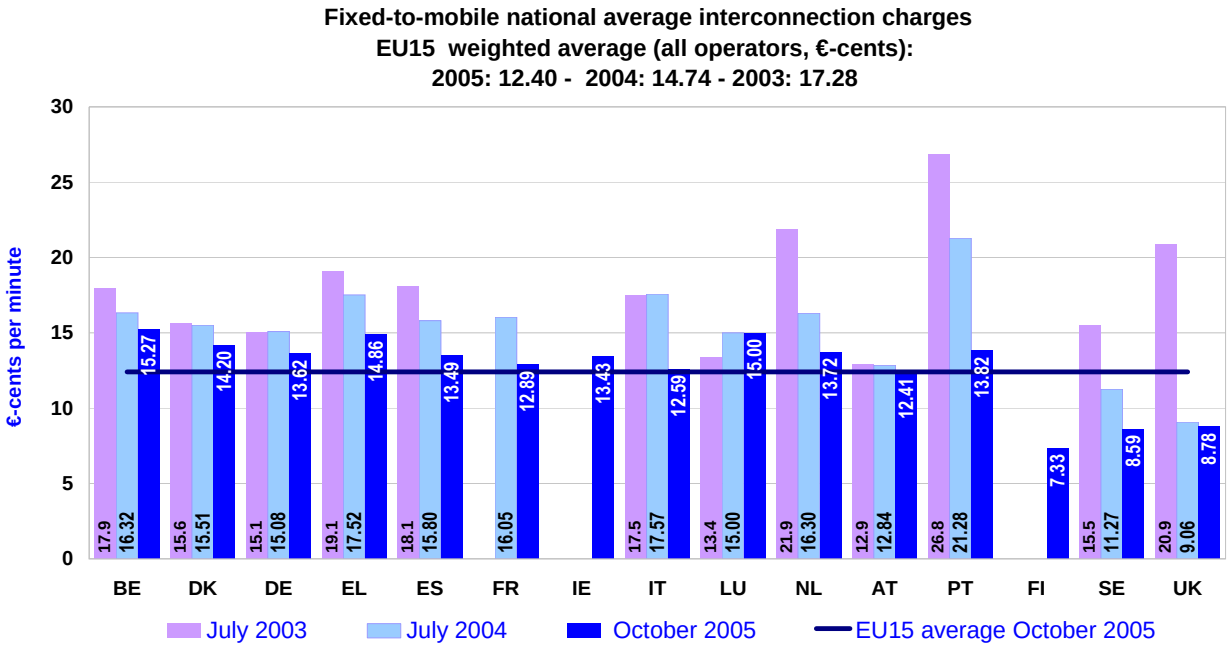

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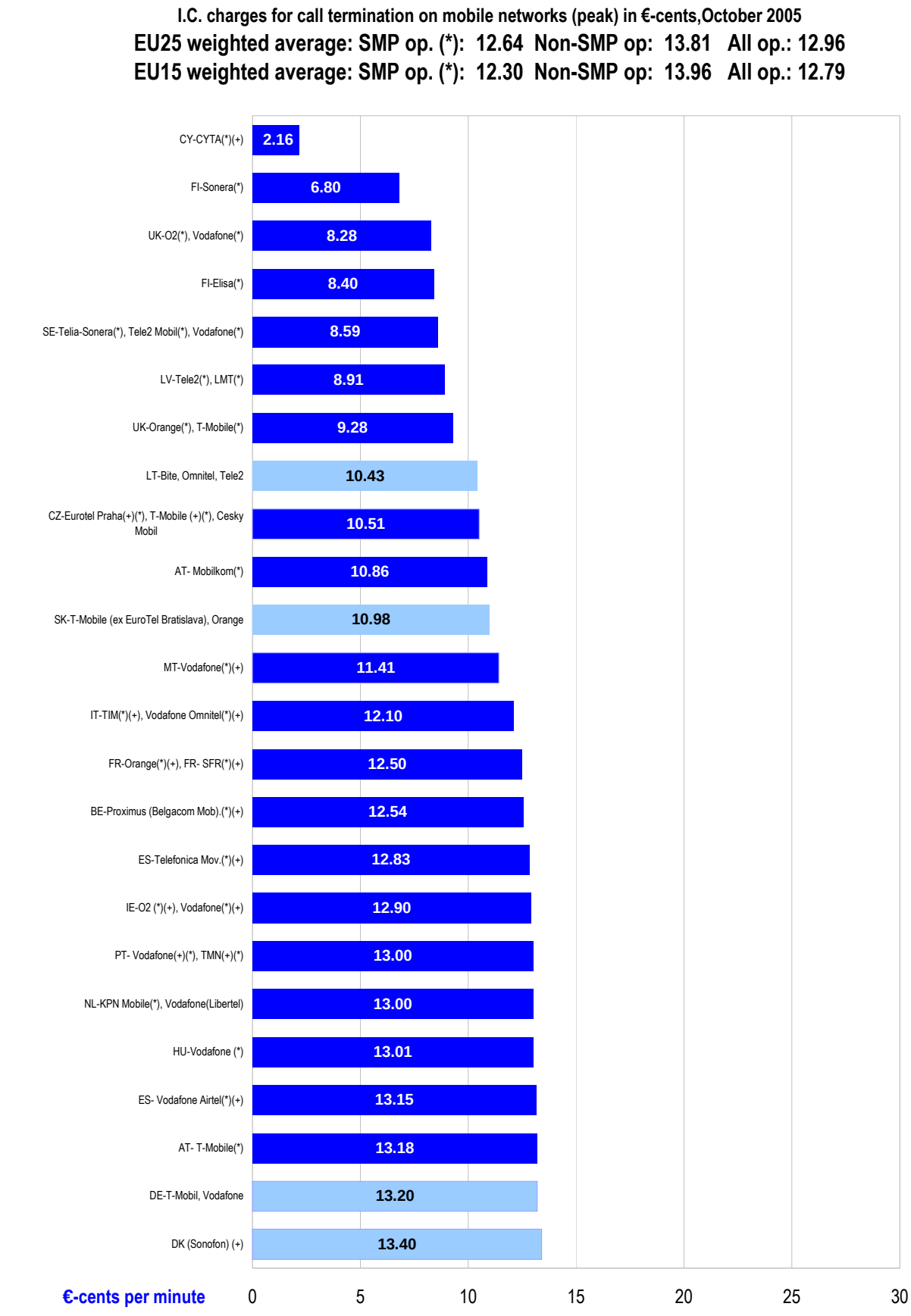

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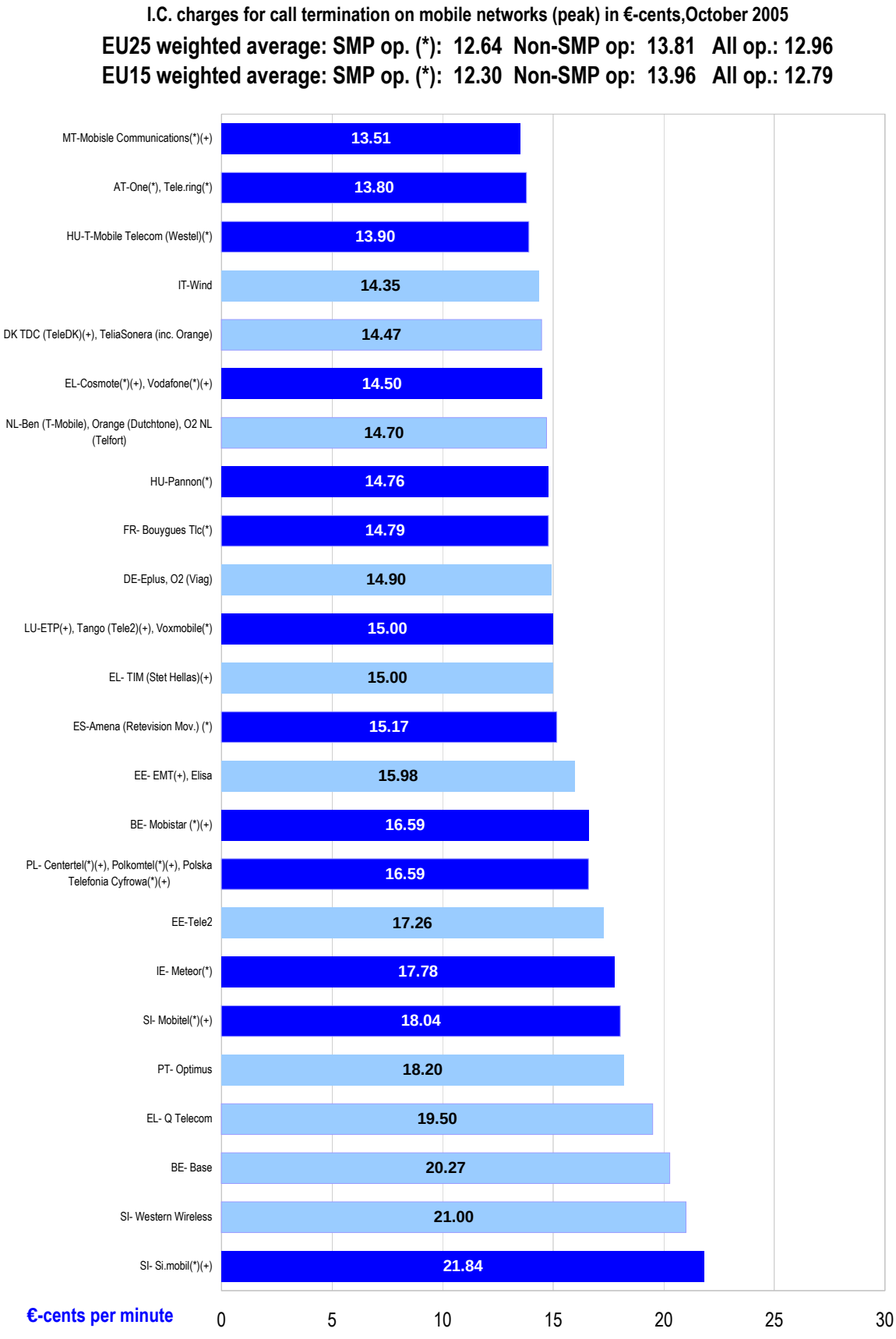

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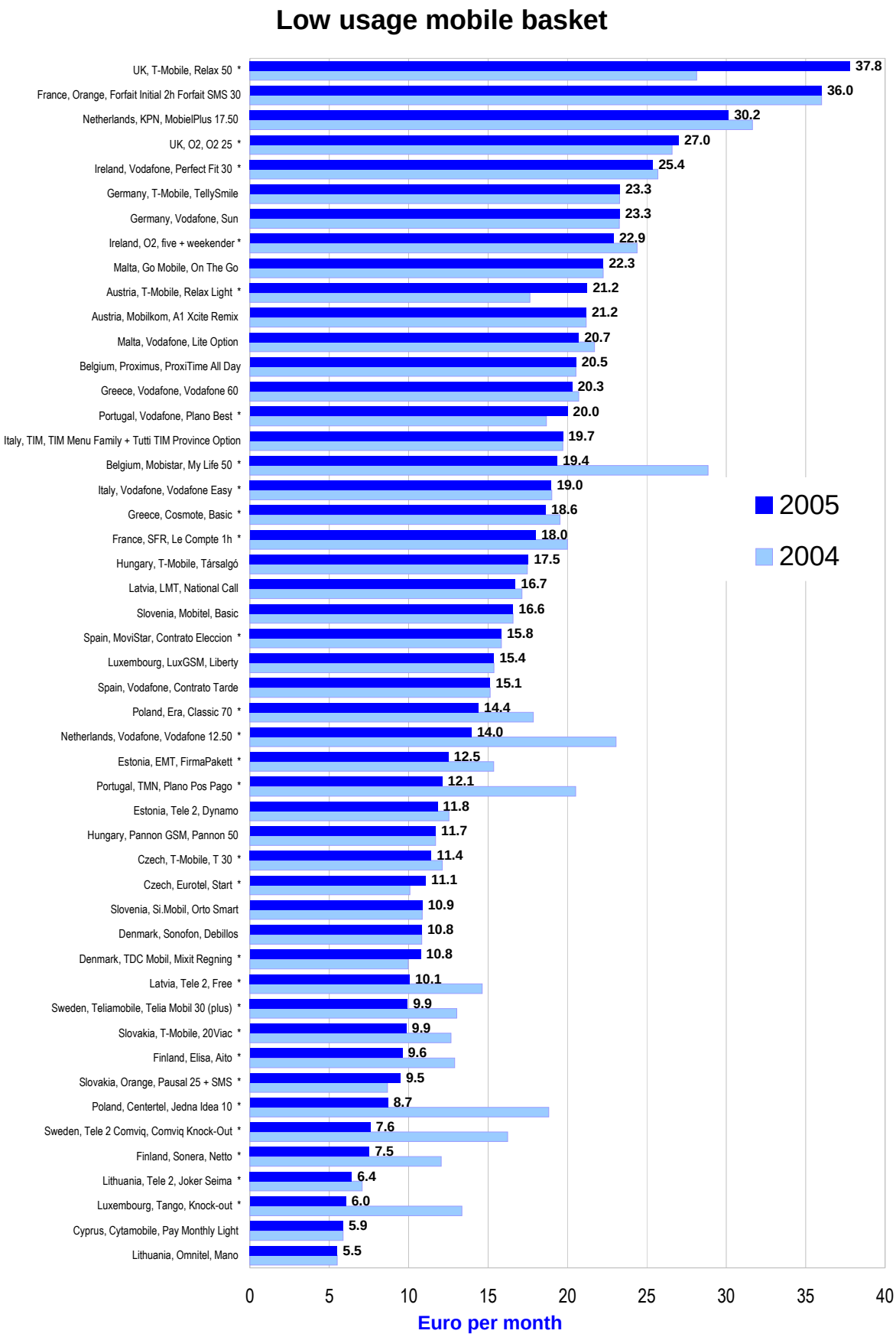

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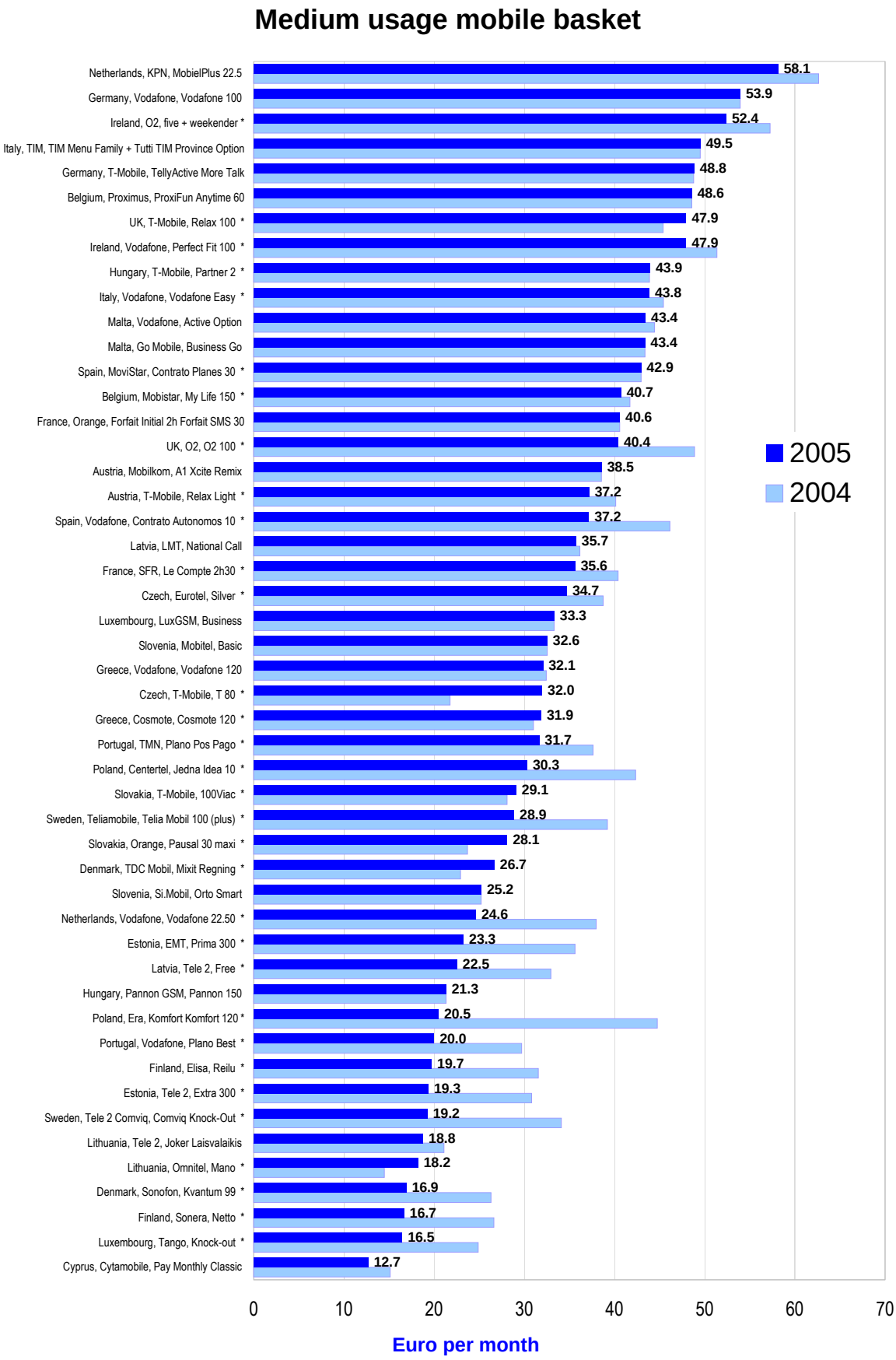

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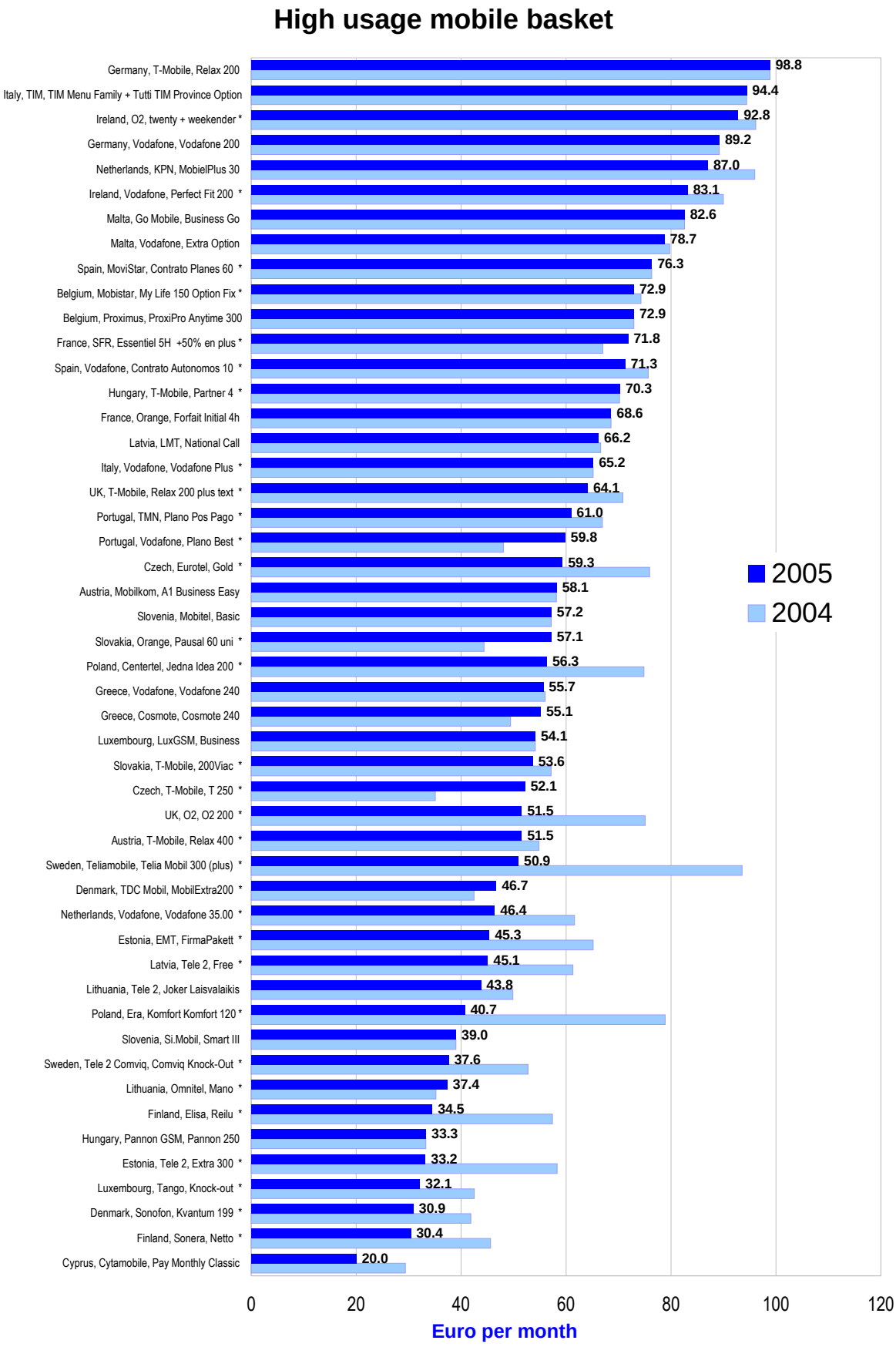

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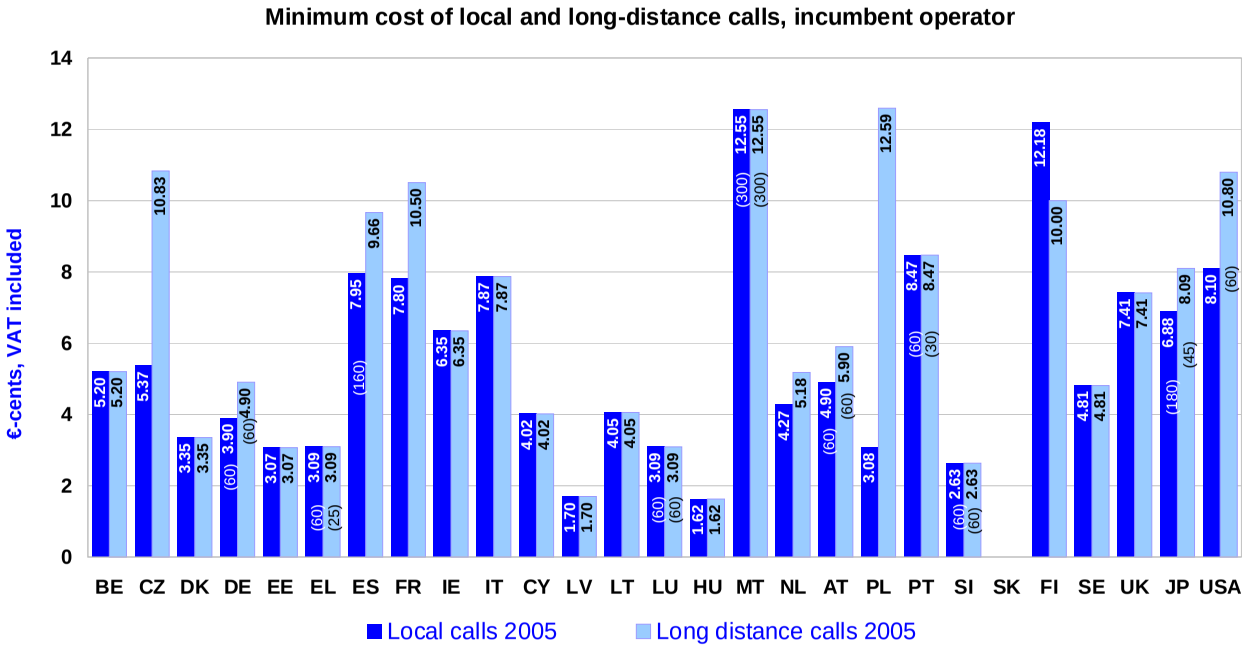

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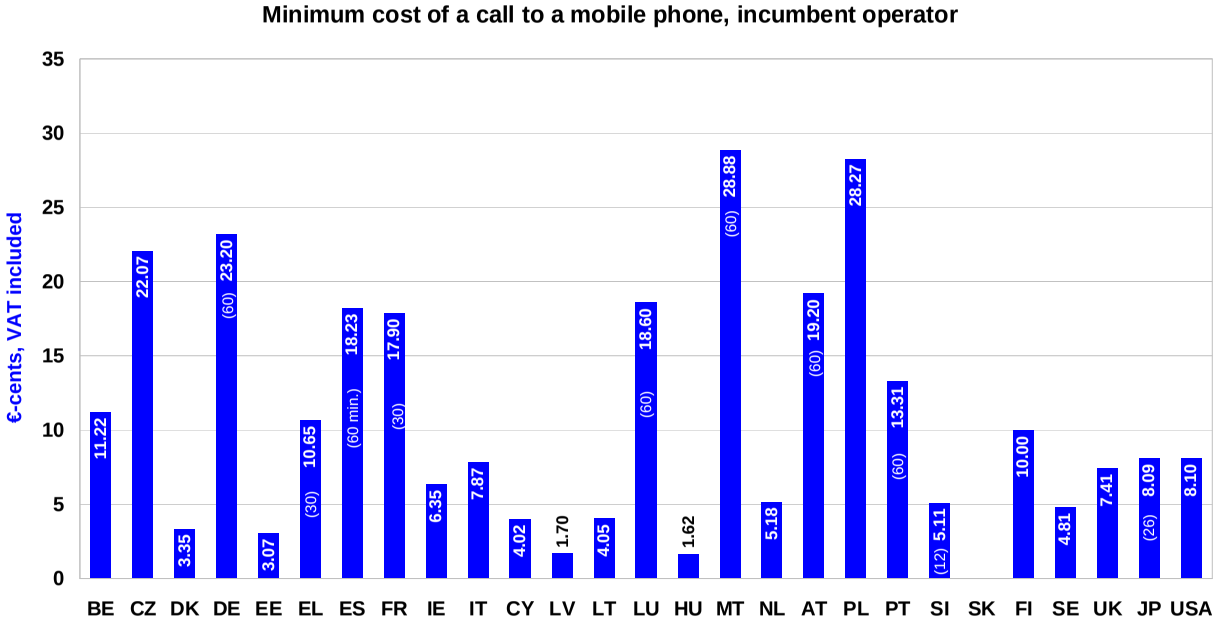

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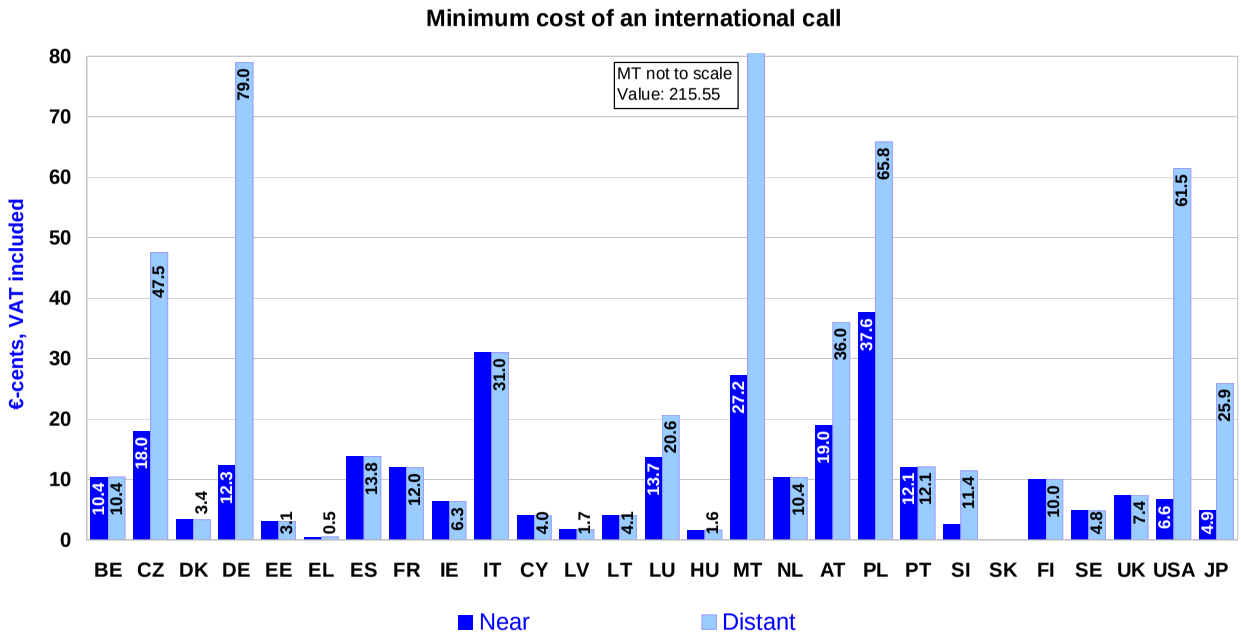

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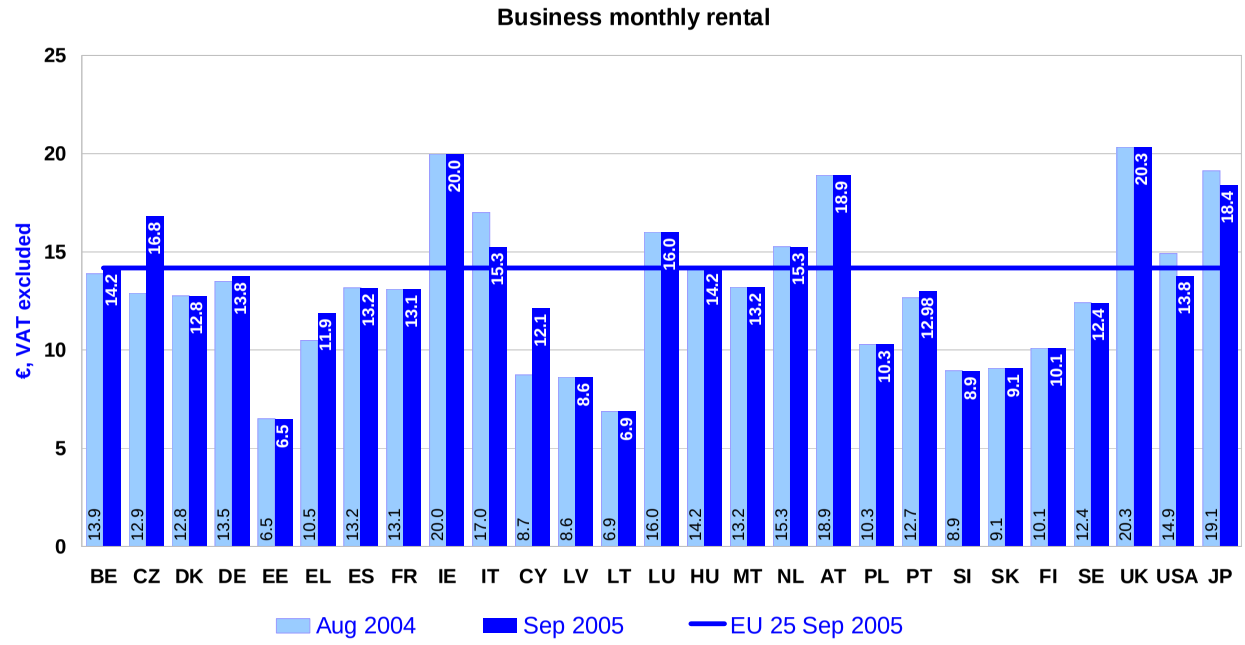

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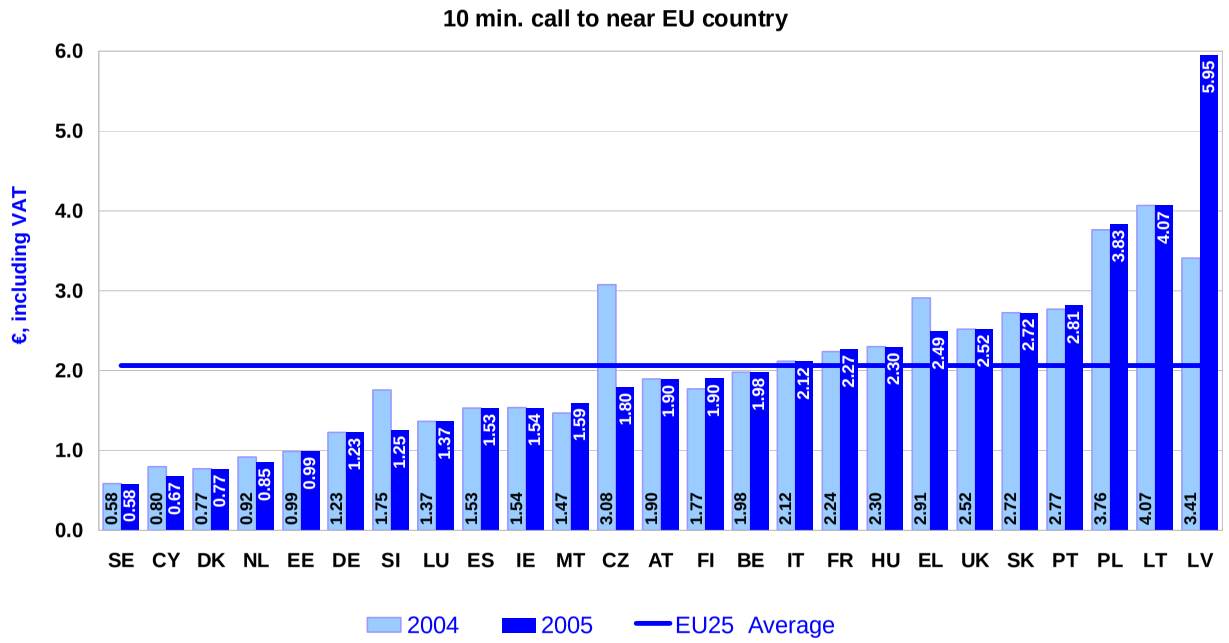

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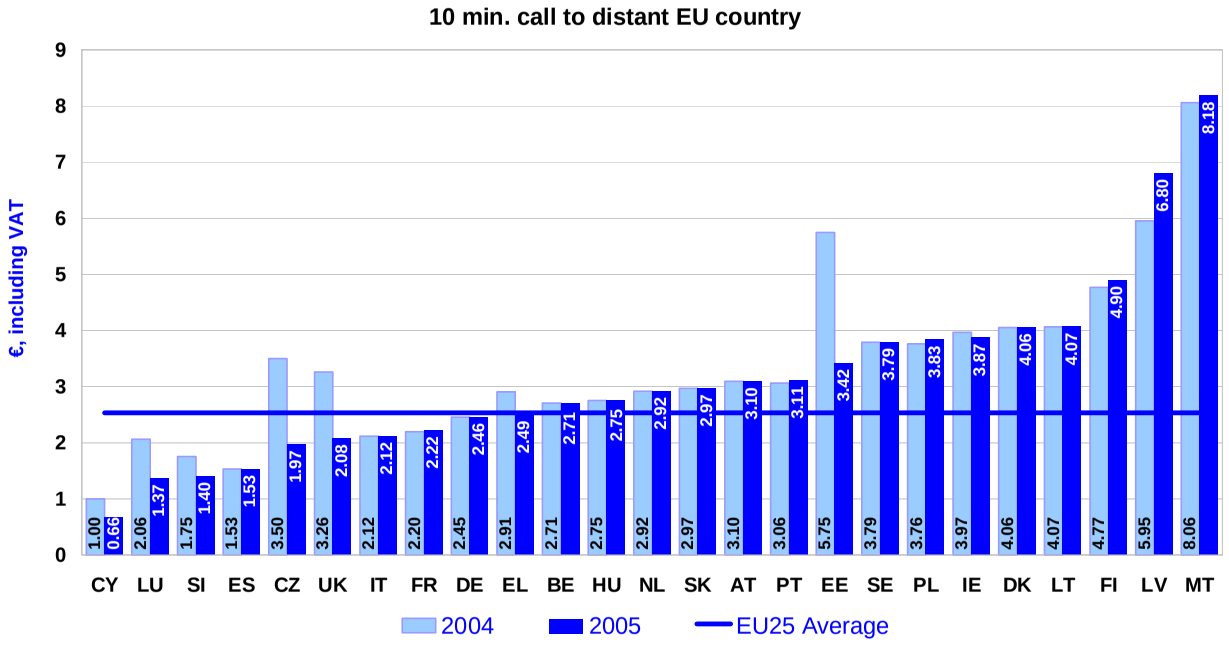

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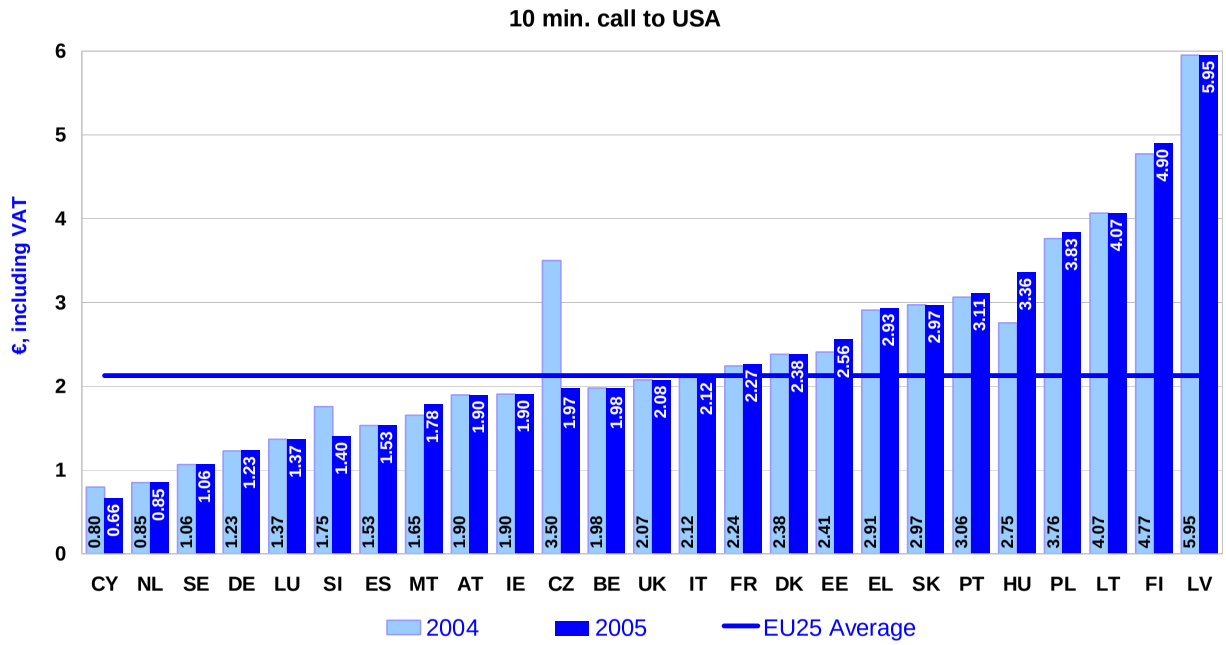

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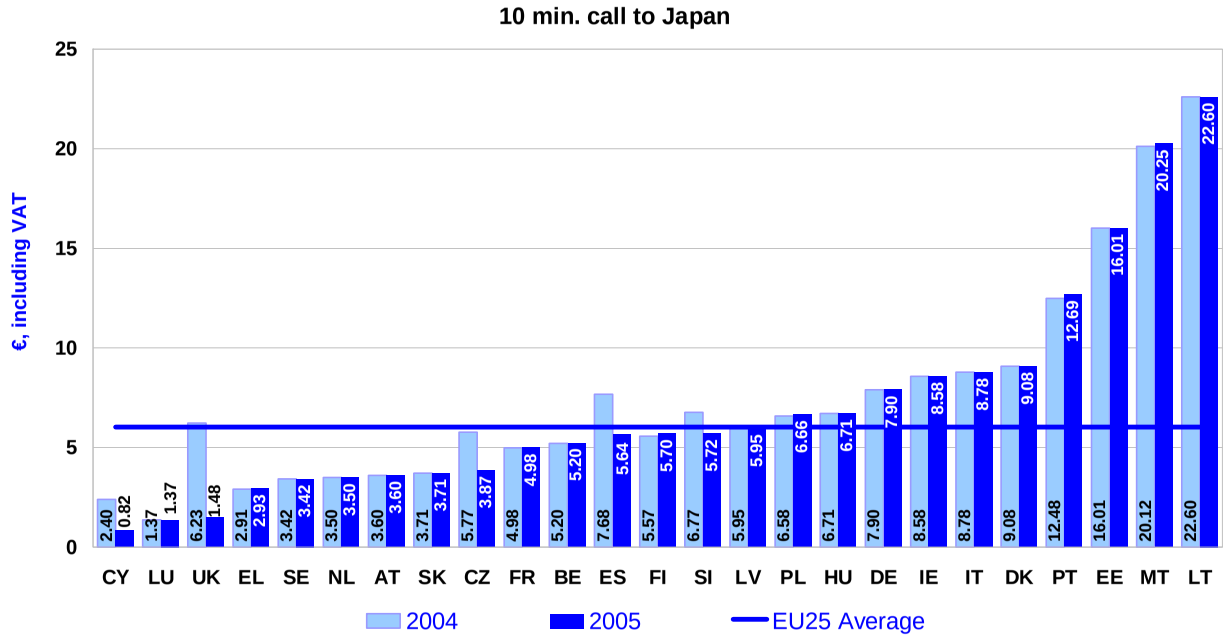

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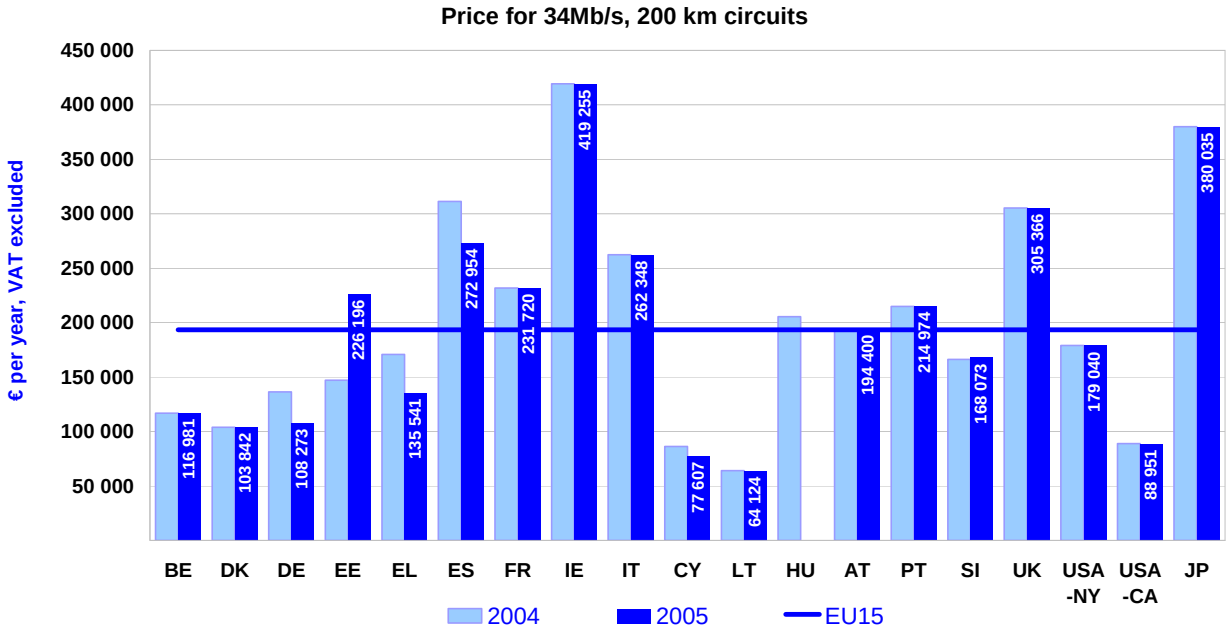

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ANNEX 2

MARKET OVERVIEW

SOURCES OF DATA PRESENTED IN THIS ANNEX

Figures in sections 1 (players in the fixed market), 2 (consumers' choice of fixed operators), 3 (public network interconnection charges), 4 (mobile operators), 5 (Volumes of traffic), 6 (number portability) and 7 (broadband access pricing) were provided by the National Regulatory Authorities (NRAs) in response to a questionnaire on regulatory market data sent by the Commission in June 2005.

Data on mobile subscribers (section 4) refer to the June or October 2005 and come from the NRAs unless otherwise specified.

Data in section 7 on broadband lines are provided by the NRAs and the national ministries through the Electronic Communications Committee (COCOM). Data have been collected since July 2002 three times a year, in January, June and October. The figures in this report refer to 1 October 2005 unless otherwise specified.

Information in sections 8 & 9 (PSTN and retail leased lines prices) is taken from a study carried out for the Commission by Teligen-HI Europe. These data are collected from primary sources (i.e. directly from the incumbent operators and new entrants) and checked by the NRAs. All NRAs, with the exception of Cyprus and Slovakia, provided comments and approved these data.

A draft version of the charts in this annex (exc. Sections 8 & 9) was distributed to the NRAs before this report was finalised, and a validation meeting with representatives from NRAs and National Ministries took place in November 2005.

TABLE OF CONTENTS

1. PLAYERS IN THE FIXED MARKET

1.1. PLAYERS IN THE FIXED MARKET

This section looks at the number of fixed telecommunications operators (fixed voice telephony and network services) in the market. It includes data on the number of notified fixed network operators and public fixed voice telephony operators, the estimated number of players actually active in the market and the incumbents' market shares in the fixed voice telephony market.

Data on operators were provided by the national regulatory authorities and refer to September 2005. The figures include a variety of operators: fixed network operators, service providers, cable operators as well as wireless local loop, and mobile and satellite operators for the fixed part of their networks and services. Data on the incumbents' market shares in the fixed voice telephony market refer to the end of 2004.

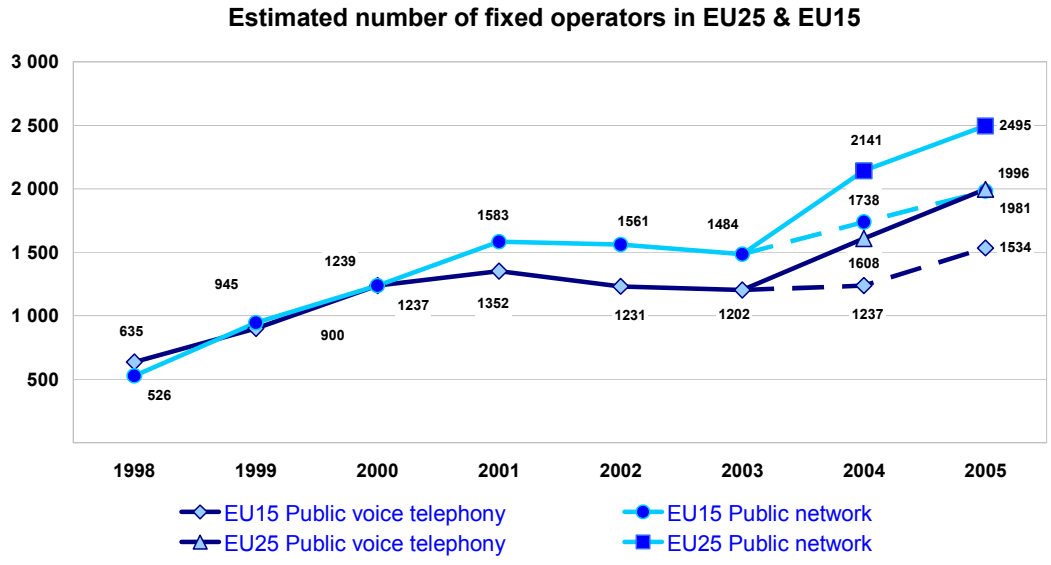
Under the new regulatory framework for electronic communications, operators are only subject to a general authorisation regime. Undertakings may be required to submit a notification but may not be required to obtain an explicit decision or any other administrative act. Granting of individual rights of use is required only for scarce resources such as radio spectrum or numbers.

Given the above, the quality of the information provided by the NRAs on the number of operators is variable, and while a number of NRAs are able to provide very detailed information on the number and characteristics of their national operators, other NRAs no longer have precise information. Therefore, the overall figures on the number of operators should be considered as estimates.

Data show that there has been an increase, both in the number of notified operators as well as in the number of operators actually providing services. At EU25 level, 388 new voice telephony operators have been notified. Almost 50% of the 1996 notified operators were actually providing services (985 operators). In the new Member States (NMS), where the liberalisation process started later than in the EU15, competition is still at an early stage and largely concentrated in the international calls market. With a few exceptions, the national incumbent operator still retains more than 90% of the fixed telephony market.

The total number of major competing operators (i.e. operators that along with the incumbent operator have a combined market share of at least 90% of the global telephony market;) in the EU is around 84. Only in 7 Member States there are more than 5 major competing operators (Figure 5).

Figure 1

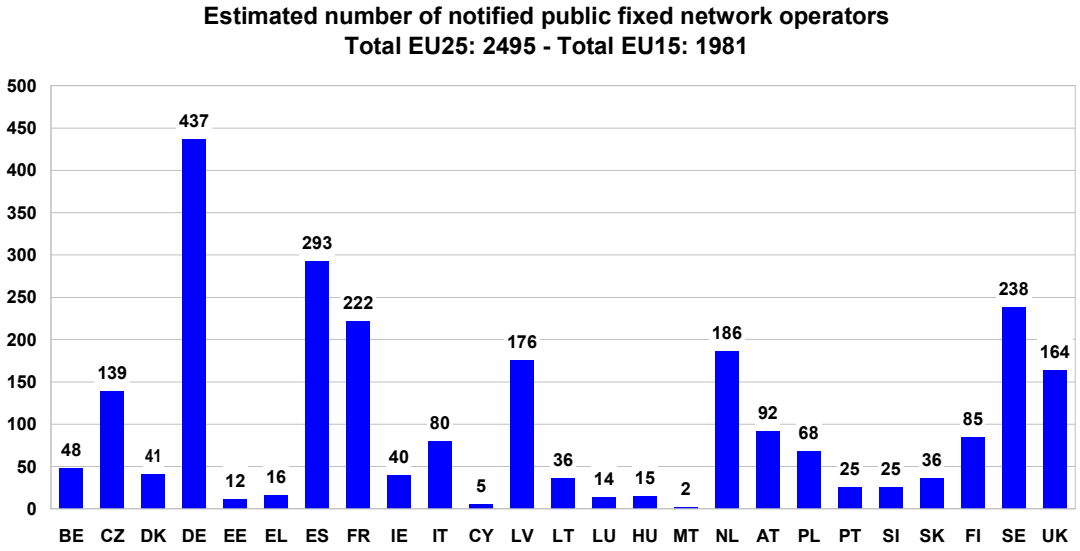


1.2. PUBLIC FIXED NETWORK OPERATORS

The chart below shows the estimated number of network operators. 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 in the whole national territory, whatever the geographical scope of the service. Data do not include service resellers.

As at September 2005 there were a total of 2495 network operators in the EU.

Figure 2



Denmark: The number of operators authorised to offer public voice telephony has been estimated using the number of allocated access codes. All providers offer nationwide services.

Finland: 39 network operators are local incumbents and belong to the Finnet Group. 3 network operators belong to the Elisa Group and 2 others to TeliaSonera.

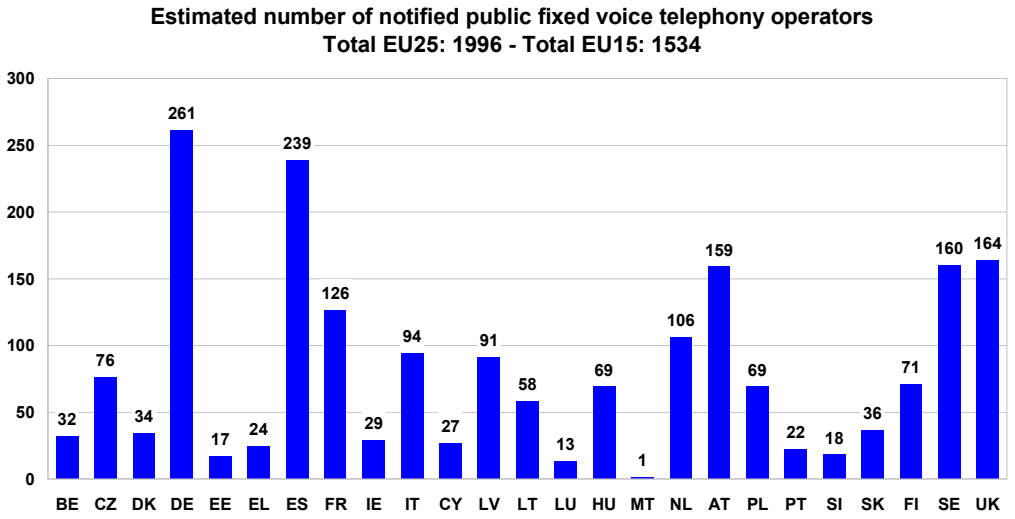
France: Of the 222 operators declared, 170 are in a test phase

United Kingdom: The figure corresponds to the number of companies recorded in the voluntary register for communications providers.

1.3. PUBLIC FIXED VOICE TELEPHONY OPERATORS

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 telephony could be provided by operators on an own self-operated network or on a leased network. In the first case, the operator provides voice telephony over a network fully controlled, operated and (wholly or partially) owned by it; in the second case the operator operates, controls and manages the transmission capacity leased from another operator. Simple call-back and calling card services as well as 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).

Figure 3

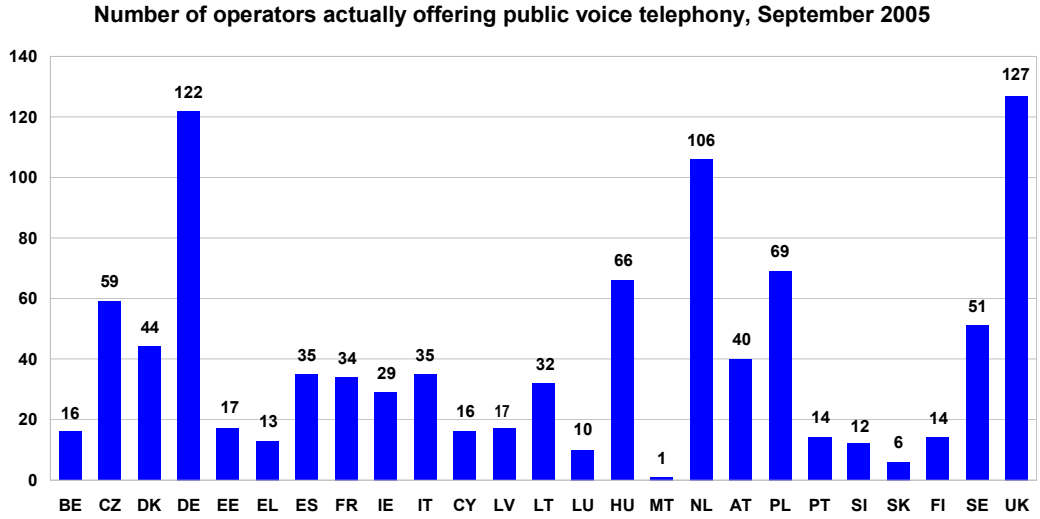


Denmark: Estimated based on the number of allocated access codes. All providers offer nationwide services.
Finland: 40 operators are local incumbents and belong to the Finnet Group. 3 network operators belong to the Elisa Group and 2 others to TeliaSonera.
France: The implementation of a notification system has revealed an increase in the number of voice service providers.
Cyprus: The figure includes all types of service providers
United Kingdom: The figure corresponds to the number of companies recorded in the voluntary register for communications providers.

The number of notified operators only indicates the potential for competition in the market rather than the actual level of competition. For this reason, where possible, an estimate is given of the number of operators that are active in the market. The following chart shows the estimate of the number of operators active in the voice telephony market at September 2005. Figures do not distinguish between local and national operators.

Some operators only offer international calls, while others also offer national and local calls. Figures represent the maximum number of active operators in each country.

Figure 4

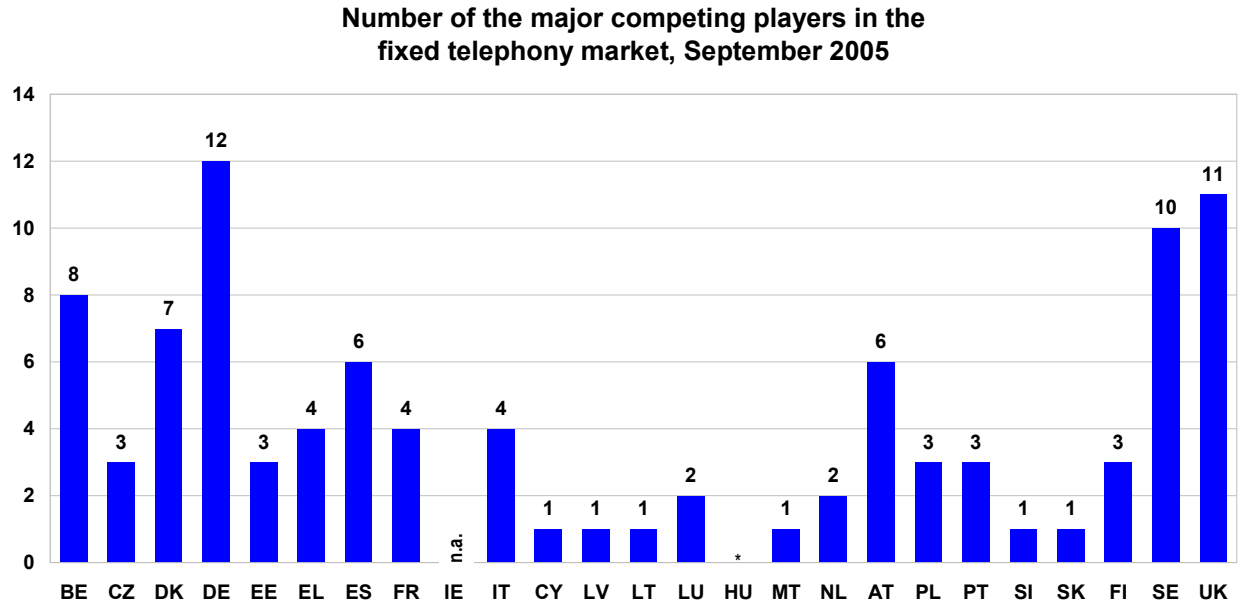


The chart includes cable TV operators that also provide voice telephone services
Netherlands: Data refer to the number of authorised fixed operators.
Cyprus: The figure includes all type of service providers.

Denmark: Minimum figure based on the number of operators known to the NRA. The figure includes all type of service providers and therefore exceeds the number of operators with access code.
Austria: Only operators that gave information on operating revenues for local/national/ international call services. Data from 30/09/2003
Spain: Data from 2004
Sweden: 50 approx. for voice.

Many new entrants concentrate on specific segments of the market or limit their activity to specific geographic areas, thus having a limited impact on the national market as a whole. To get an idea of the number of fixed operators that are effectively competing with the incumbent at national level, the following charts show, for each country, the number of operators that have a combined market share, based on revenues, of at least 90% on the total voice telephony market including all types of calls (Local calls to internet, local phone calls, long-distance and international calls as well as calls to mobile). Only 7 countries have more than 5 competing operators (including the incumbent) with such a combined market share. These figures give an idea of the number of major players operating in each national market, although in many cases, competition is largely asymmetric, with incumbents continuing to hold a strong position. This situation can be observed in the New Member States, where the fixed incumbent still dominates the fixed voice market.

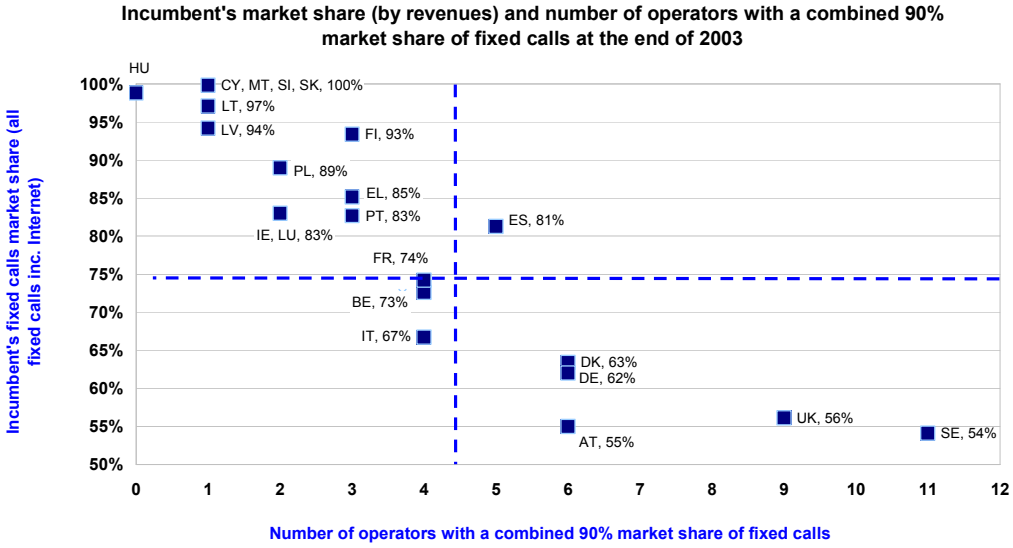
Figure 5



Operators that along with the incumbent operator have a combined market share of at least 90% of the voice market

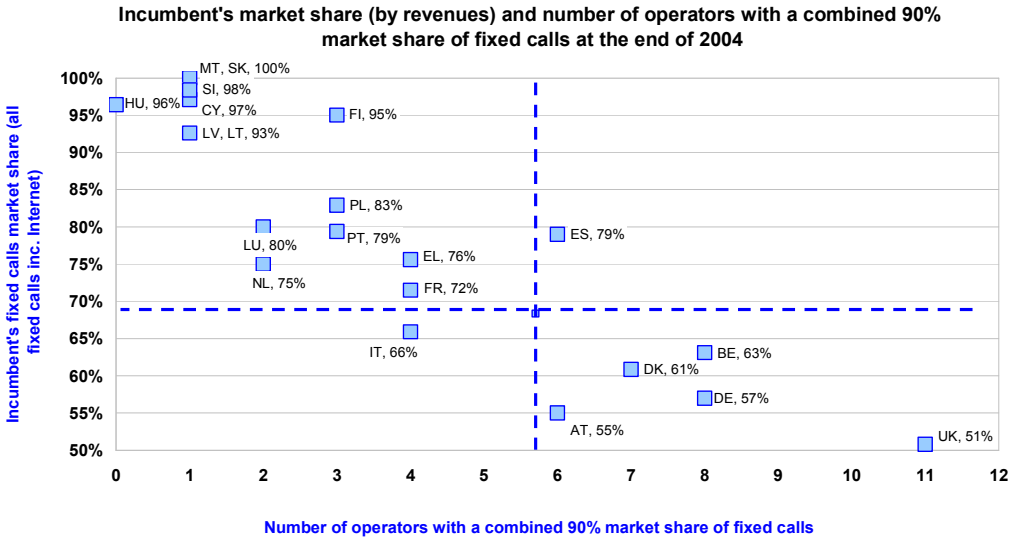
* In Hungary there are 5 fixed incumbent operators, each of them former local monopolies in their primary areas.
Ireland: Confidential information
Finland: The figure includes the major operators only.

Figure 6



Data for the Netherlands not available.
Data on market shares for Estonia and Czech Republic are confidential.
Belgium: No distinction between local and national calls
Denmark, Luxembourg: Market share based on minutes, not on revenues.
Slovakia: Only the incumbent operator was actually providing services.
Finland: The 3 incumbent groupings hold 93.4% of voice market
Sweden: Figure includes VoIP players
Hungary: There are 5 fixed incumbent operators, each of them former local monopolies in their primary areas. The level of competition in these 5 fixed traffic markets was not significant yet.
Portugal: Data on market shares exclude calls to the Internet

Figure 7



Data for Portugal do not include calls to the Internet
Data on market shares for Estonia, Sweden and Czech Republic are confidential. Data on competing players in Ireland is confidential.
Denmark, Luxembourg: Market share based on minutes, not on revenues.
Austria: Values on market share are estimates based on data from Q4/2004
Slovakia: Competition by means of CS only started in August 2005.
Finland: The 3 incumbent groupings hold 95% of the fixed voice market
Hungary: There are 5 fixed incumbent operators, each of them former local monopolies in their primary areas. The figure on market share refers to 2003.
United Kingdom: Data on market shares refer to Q1/2005.

1.4. INCUMBENTS' MARKET SHARE IN THE FIXED VOICE TELEPHONY MARKET

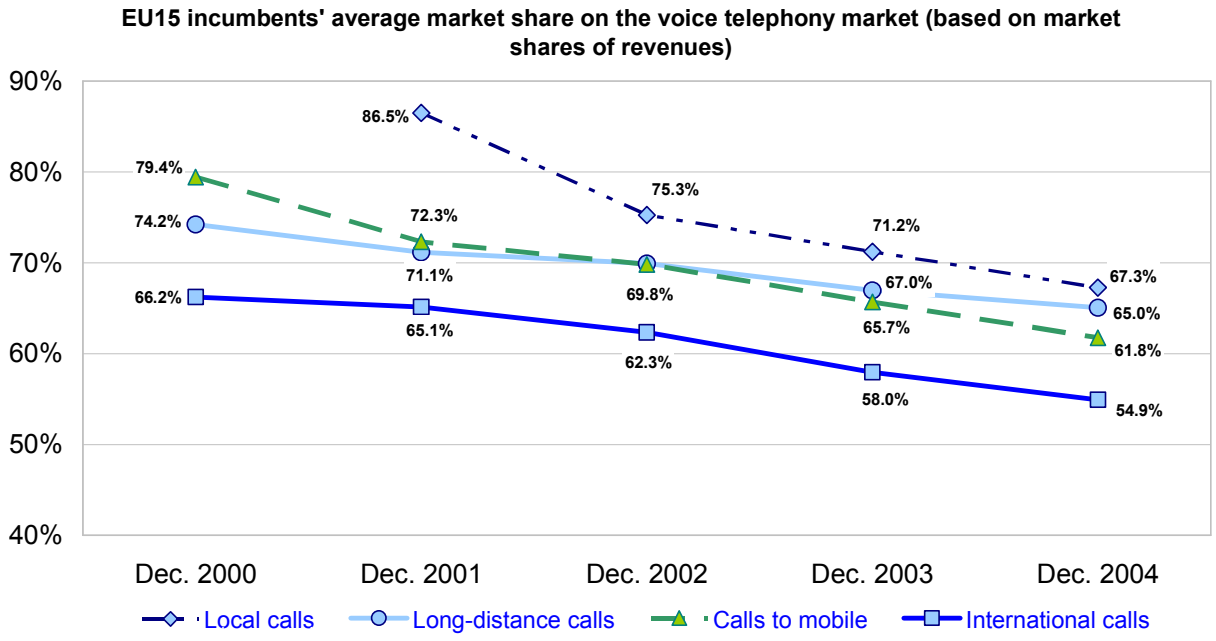
This section shows the incumbents' market share in the fixed voice telephony markets on the basis of both retail revenues and outgoing minutes of traffic. Where possible, figures for local, long-distance, international call, calls to mobile and calls to internet are shown. Not all Member States collect both types of data, and differentiation between the various markets is not always available.

Figures in this section have been provided by NRAs and refer to December 2004, except for United Kingdom (March 2005).

The following charts show the trend for the EU15 and EU25 weighted average of the incumbent's market share in the major segments of the voice telephony market since 2000 and 2003 based on retail revenues.

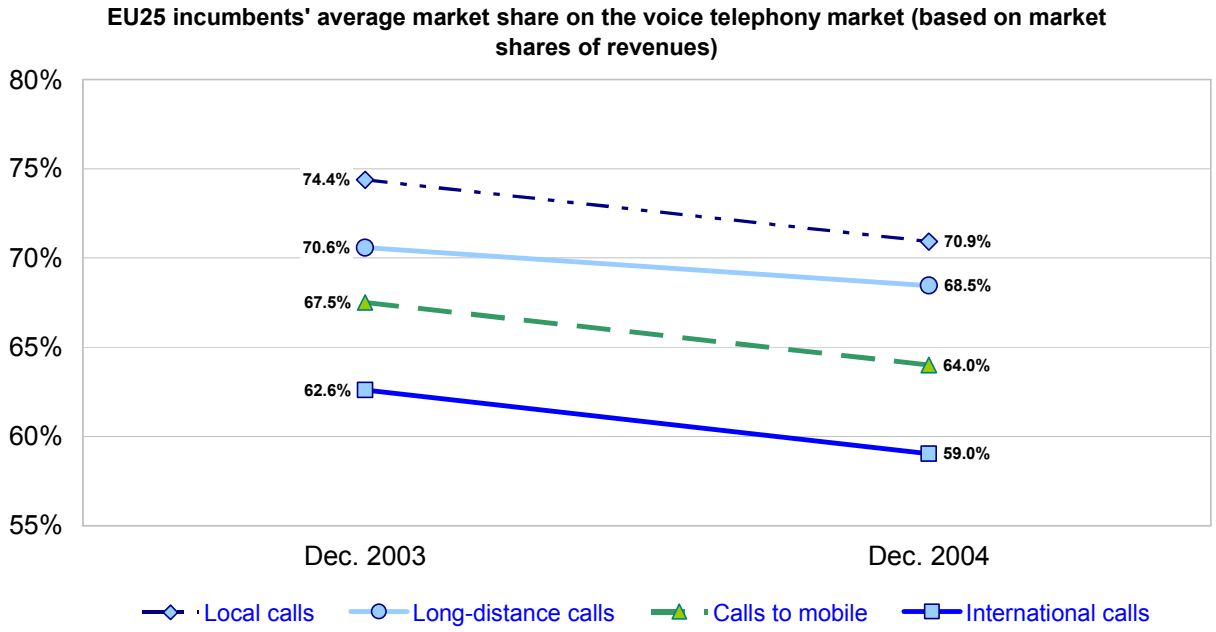
Given that data was not available for all countries and for all types of calls, the average EU15 figure should be considered as indicative. The figure for the local calls market is an average of countries that represent more than 90% of the EU15 population; data for calls to mobile represent 97% of the EU15 population in 2004, around 94% for the period 2003-2001 and 90% in 2000; data for long distance and international calls represent more than 96% of the EU15 population for all the periods considered.

Figure 8



Countries not included in each data point
Dec. 2000: Local: DK, DE, PT, SE; Long distance: PT; Mobile:DK, EL, LU, PT, SE; International:DK, PT, SE
Dec. 2001: Local: DK, PT, SE; Long distance: PT; Mobile: DK, LU, PT; International: PT
Dec. 2002: Local: DK, PT, SE; Mobile: DK, LU
Dec. 2003: Local: DK, LU, PT, SE; Long distance: DK, LU, SE; Mobile: DK, FI; International: DK
Dec. 2004: Local: DK, LU, PT, SE; Long distance: DK, LU, SE; Mobile: DK, FI; International: DK

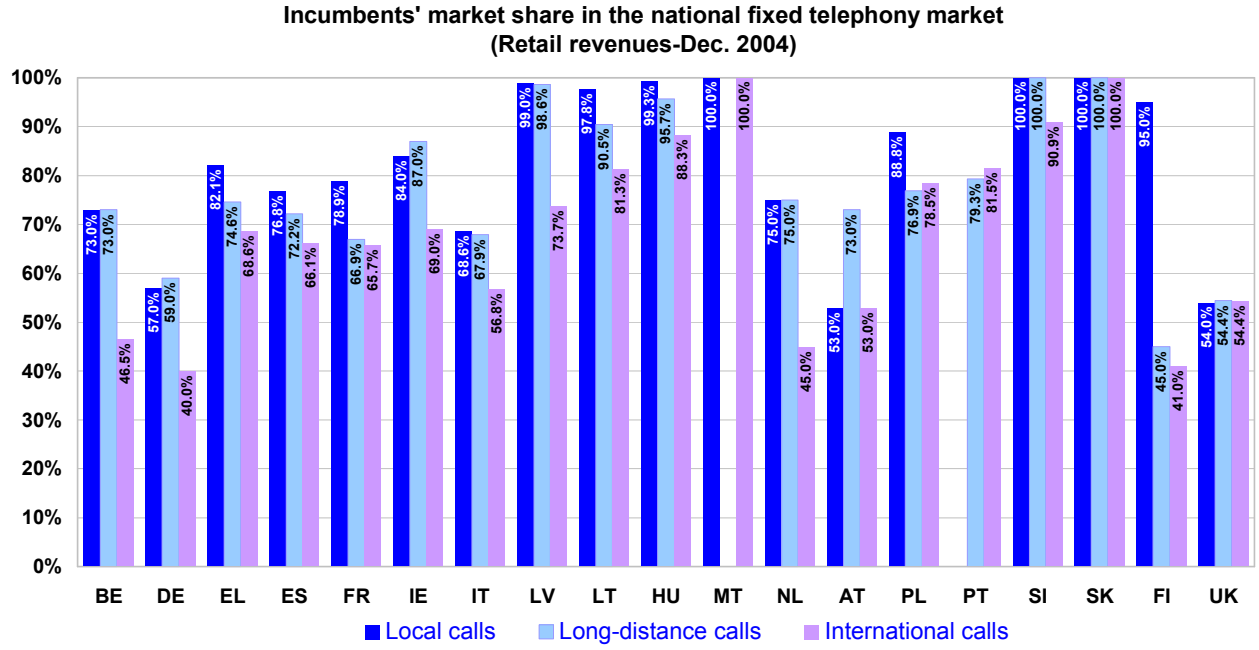
Figure 9



Countries not included in each data point
Dec. 2003: Local: DK, LU, PT, SE, CZ, EE, LT; Long-distance: DK, LU, SE, EE, LT, MT; Mobile: DK, FI, EE, HU, LT; International: DK, E, LT
Dec. 2004: Local: DK, LU, PT, SE, CZ, EE; Long-distance: DK, LU, SE, EE, MT; Mobile: DK, FI, EE; International: DK, EE

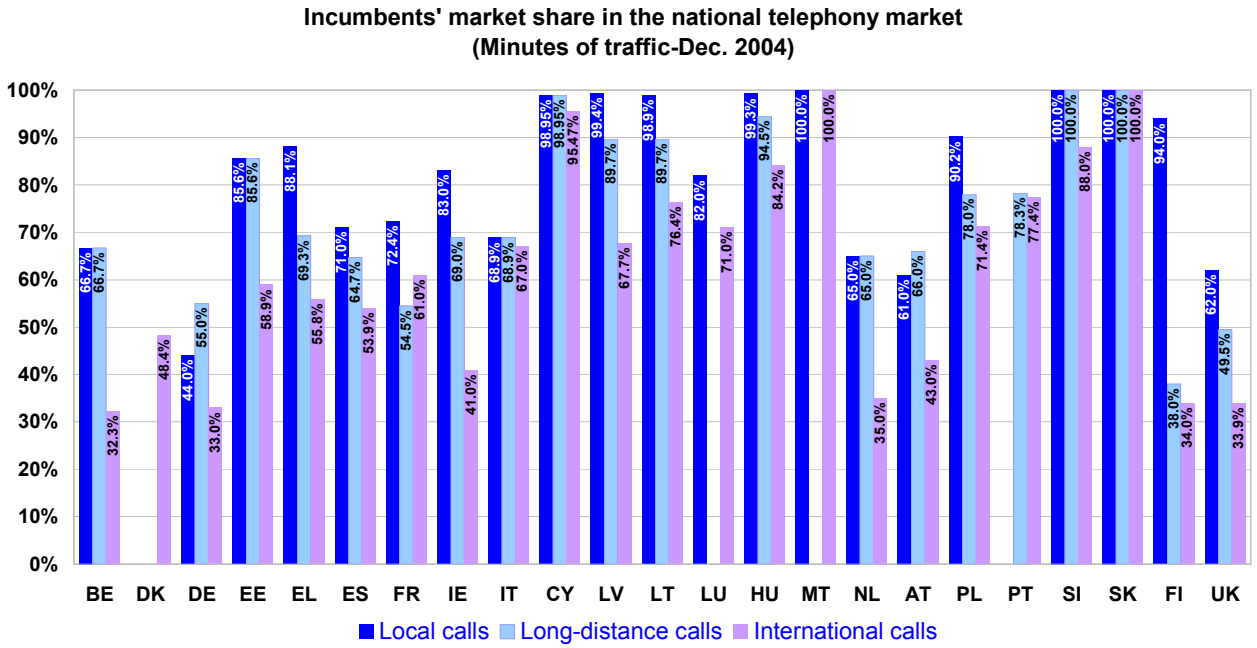
The following two charts show the incumbents' market share in the local, long-distance and international calls market by retail revenues and by minutes of outgoing traffic. The local calls market includes both local phone calls and local calls to internet.

Figure 10



Data for local calls include calls to the internet
Belgium and Slovenia: No distinction between local and national calls
Czech Republic, Estonia, Luxembourg, Sweden: Confidential data
Denmark: Figures not available. No distinction between local and long-distance calls
Greece: Figures published in previous reports include revenues from calls to short codes and retail calling party revenues from shared cost calls
France: Data on local and long-distance calls are NRA estimates
Cyprus: Data not available
Lithuania: Data do not include some alternative operators that cannot split revenues by type of service. The actual market share of the incumbent operator is lower.
Luxembourg: Data on revenues are confidential.
Malta: No distinction between local and national calls. No long-distance calls
The Netherlands: Figures are very rough estimates
Austria: Estimates based on data from Q4/2004
Finland: Estimates based on incomplete data.
Portugal: Long-distance calls include local calls
United Kingdom: Market shares for the quarter to March 2005.

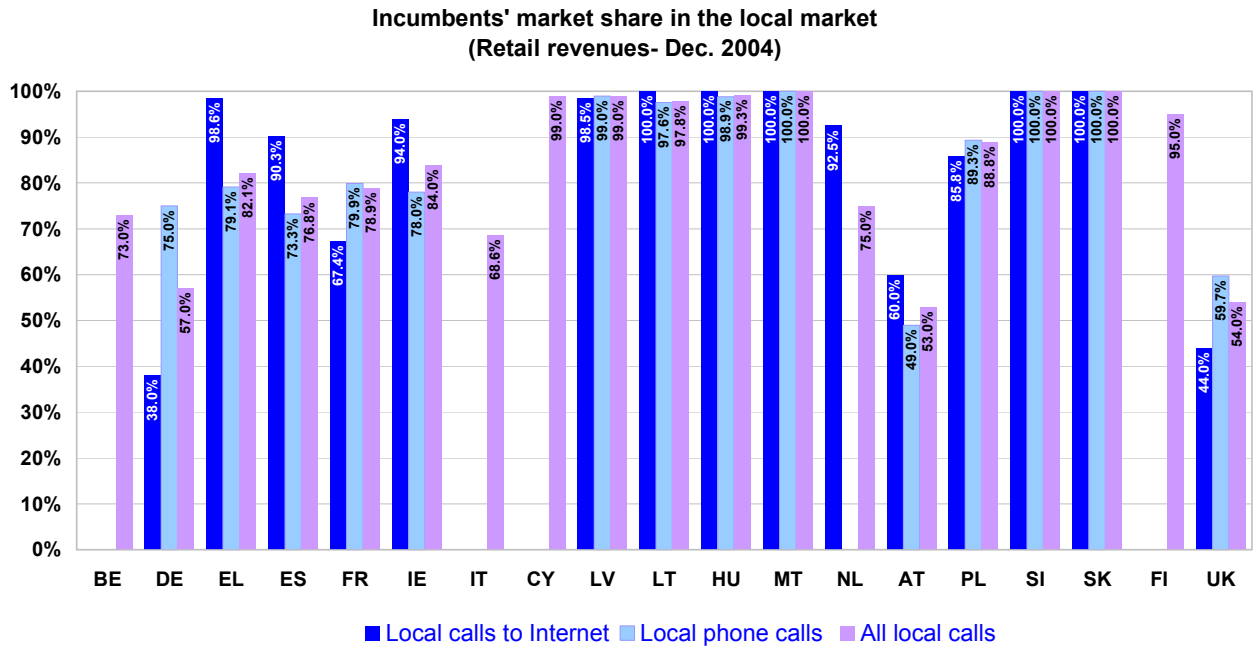
Figure 11



Data for local calls include calls to the internet.
Belgium, Estonia, Cyprus, Luxembourg, Slovenia: No distinction between local and national calls
Czech Republic, Sweden: Confidential data.
Denmark: Detailed data are unavailable. Only a figure for the whole national fixed calls market, including internet, is available (61.36%).There is no distinction between local and long-distance calls
Greece: Figures published in previous reports include revenues from shared cost calls and freephone calls
Lithuania: NRA estimates.
Malta: No distinction between local and national calls. No long-distance calls
The Netherlands: Figures are very rough estimates
Austria: Estimates based on data from Q4/2004
Finland: The figure for local calls is an estimate based on incomplete data. The figure on long-distance calls refers to TeliaSonera only and is an estimate based on incomplete data. The figure for international calls refers to TeliaSonera only.
United Kingdom: Market shares for the quarter to March 2005.

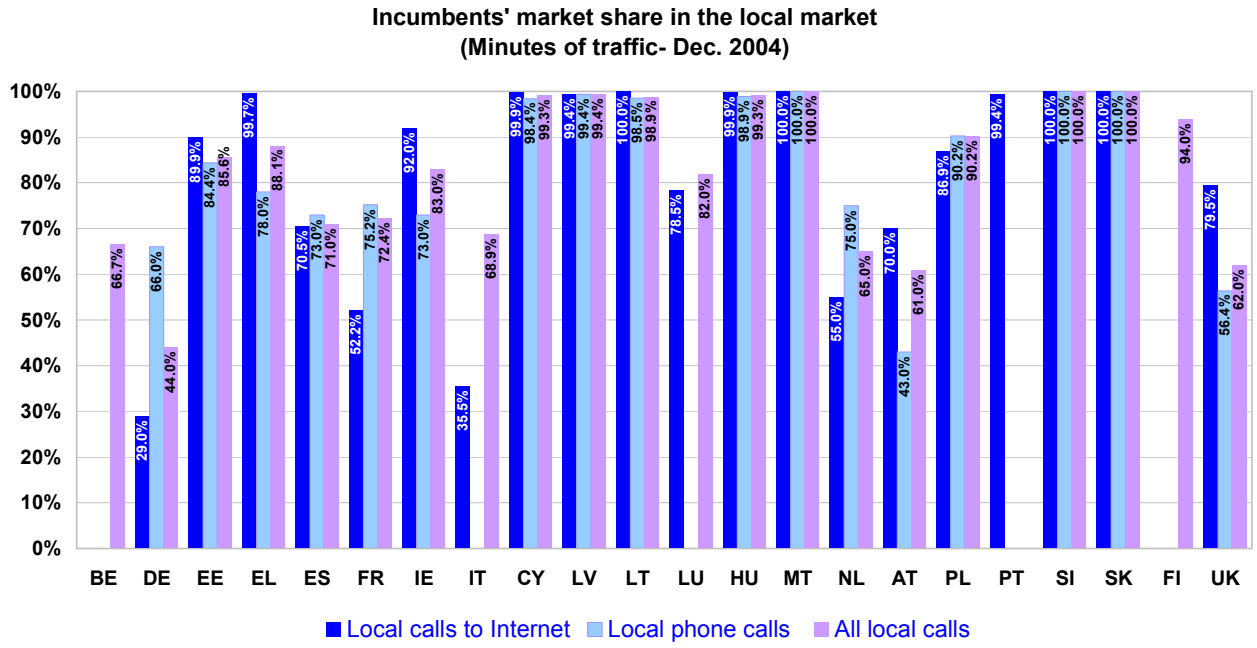
The following charts show the incumbents' market share in the local calls market by retail revenues and by minutes of outgoing traffic. Where possible, separate figures for local phone calls and local calls to internet are provided.

Figure 12



Belgium, Cyprus, Slovenia: No distinction between local and national calls
Czech Republic, Estonia, Luxembourg, Sweden: Confidential data.
Denmark: Figures not available. No distinction between local and long-distance calls
Greece: Figures published in previous reports include revenues from calls to short codes and retail calling party revenues from shared cost calls.
France: Figure on calls to the Internet only includes metered traffic. Data on local calls are NRA estimates.
Lithuania: Data do not include some alternative operators that cannot split revenues by type of service. The actual market share of the incumbent operator is lower
Malta: No distinction between local and national calls. No long-distance calls
The Netherlands: Figures are very rough estimates.
Austria: Estimates based on data from Q4/2004
Portugal: Information on local calls is not available.
Finland: Estimate based on incomplete data. Information on local calls to the Internet is not available.
United Kingdom: Market shares for the quarter to March 2005. Figure on local calls to the Internet refers to special local rate calls and includes some voice traffic.

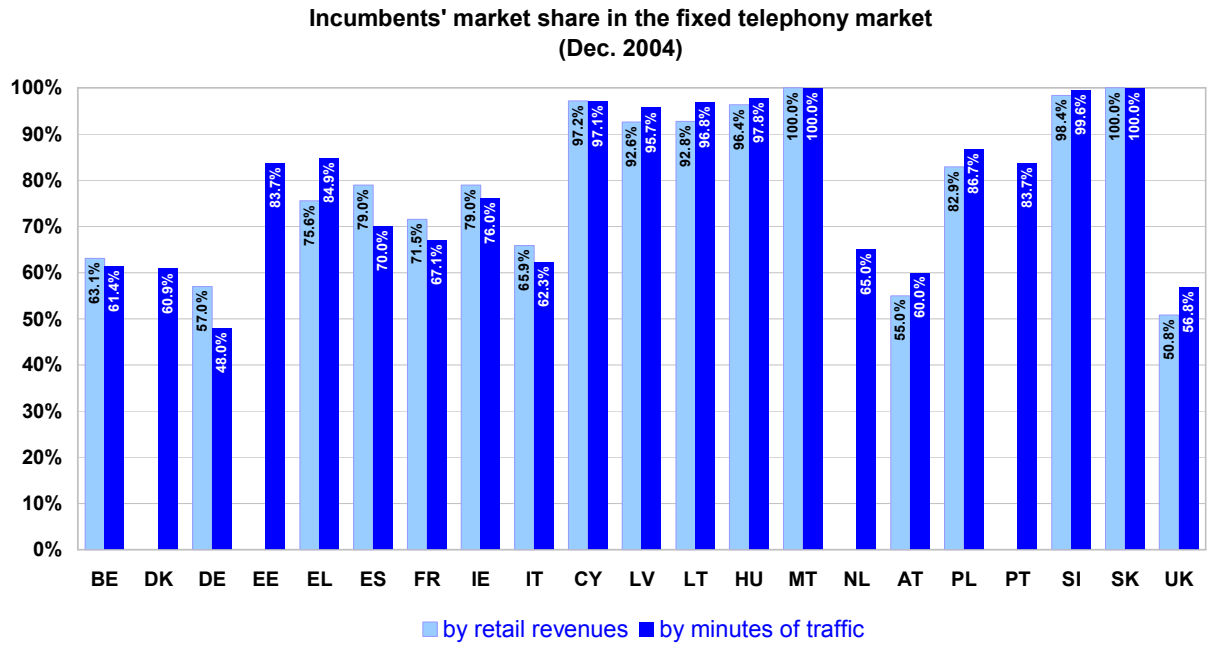
Figure 13



Belgium, Estonia, Cyprus, Luxembourg, Slovenia: No distinction between local and national calls
Czech Republic, Sweden: Confidential data.
Denmark: Figures not available. No distinction between calls to internet and local phone calls
Greece: Figures published in previous reports include revenues from shared cost calls and freephone calls
France: Figure on calls to the Internet only includes metered traffic.
Lithuania: NRA estimates.
Malta: No distinction between local and national calls. No long-distance calls
The Netherlands: Figures are very rough estimates.
Austria: Estimates based on data from Q4/2004
Portugal: Only the information on local calls to the Internet is available
Finland: Estimate based on incomplete data. Information on local calls to the Internet not available.
United Kingdom: Market shares for the quarter to March 2005. Figure on local calls to the Internet refers to special local rate calls and includes some voice traffic and FRIACO calls to OLO ISPs.

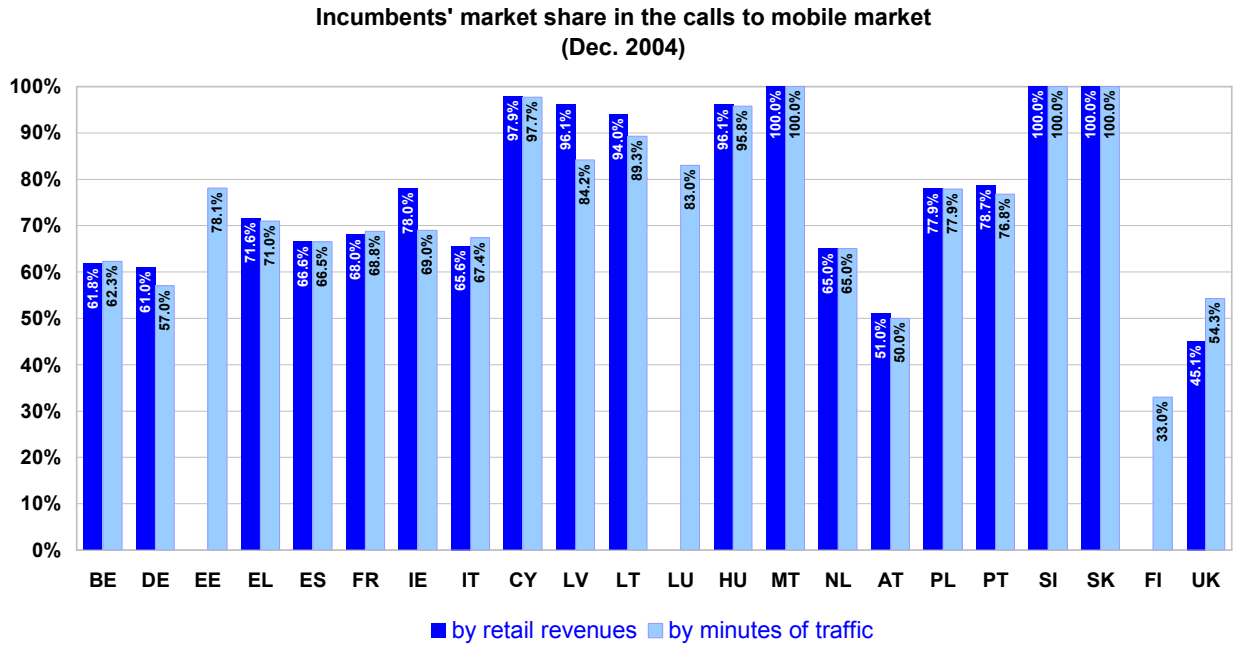
The following charts show the incumbents' market share in the overall fixed market by retail revenues and by minutes of outgoing traffic, and the market share for fixed calls to mobile networks.

Figure 14



Belgium, Cyprus, Luxembourg, Slovenia: No distinction between local and national calls
Czech Republic, Sweden: Confidential data.
Estonia: Data on revenues are confidential.
Greece: Figures on revenues published in previous reports include revenues from calls to short codes and retail calling party revenues from shared cost calls. Figures on traffic published in previous reports include revenues from shared cost calls and freephone calls
Lithuania: Data do not include some alternative operators that cannot split revenues by type of service. The actual market share of the incumbent operator is lower. Data on traffic are NRA estimates.
Luxembourg, Finland : Data not available
The Netherlands: Figures are very rough estimates.
Austria: Estimates based on data from Q4/2004
Portugal: Data on revenues is not available.
United Kingdom: Market shares for the quarter to March 2005. Figures

Figure 15

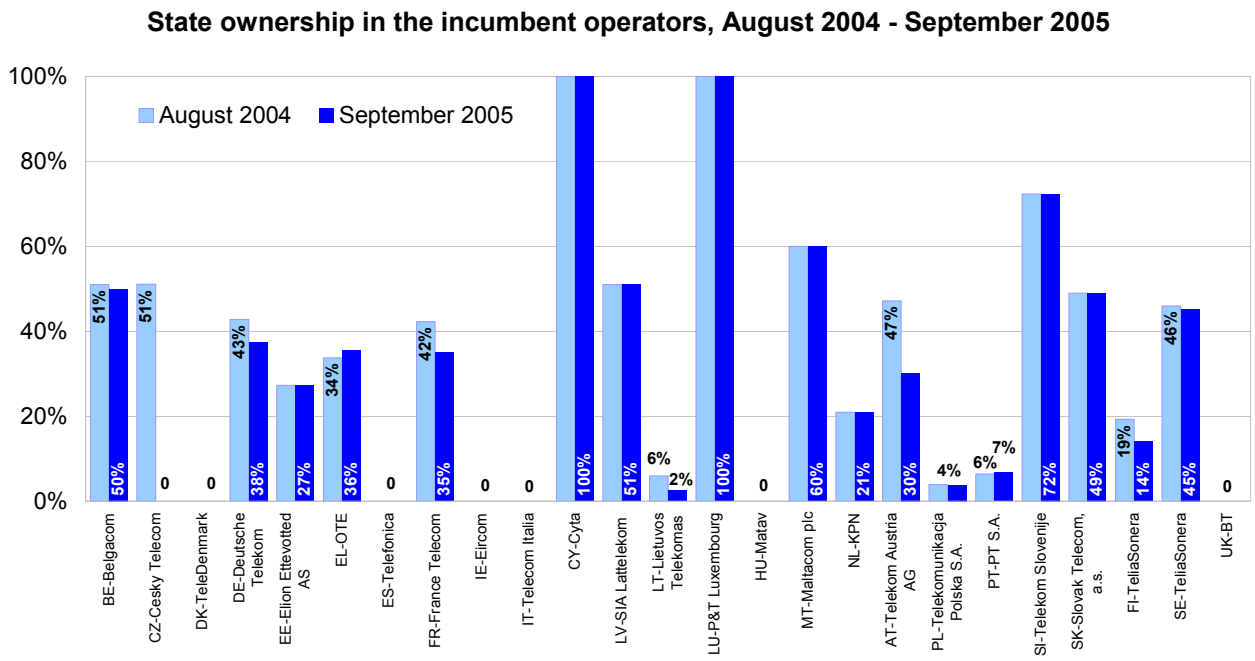


Czech Republic, Sweden: Confidential data.
Denmark: Figures not available
Estonia: Data on revenues are confidential.
Lithuania: Data do not include some alternative operators that cannot split revenues by type of service. The actual market share of the incumbent operator is lower. Data on traffic are NRA estimates.
Luxembourg: Data on revenues are confidential.
The Netherlands: Figures are very rough estimates.
Austria: Estimates based on data from Q4/2004
Finland: Data on revenues not available.
United Kingdom: Market shares for the quarter to March 2005.

1.5. public ownership of the incumbent operator

The chart below shows the share of state ownership in the incumbent operators in 2004 and 2005. Only in Cyprus and Luxembourg is the incumbent fixed operator fully state owned. In seven countries the incumbent is fully privatised (Czech Republic, Denmark, Spain, Ireland, Italy, Hungary and the United Kingdom), although in some cases a golden share mechanism exists. In most other countries the state ownership is still significant at around 40%, with 4 countries (Belgium, Latvia, Malta and Slovenia) where the State owns more than 50% of shares.

Figure 16



Belgium: 50% + 1 share
France: Approx.
Estonia: The Estonian Government owns 27.28% of Estonian Telecom, which is 100% owner of Elion Ettevotted AS
Hungary: The figure refers to Magyar Telekom Rt. The Hungarian State keeps one golden share.
Netherlands: The State had 14.2% of shares in KPN as at 1 November 2005. The Dutch State has one golden share.
Poland: No golden share
Portugal: The Portuguese State has a golden share in Portugal Telecom

2. CONSUMERS' CHOICE OF FIXED OPERATORS

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

The data presented below have been provided by the national regulatory authorities and, unless otherwise indicated, report the position as at September 2005. Figures for countries not included in the charts are not available. Figures are not always comparable with those published in previous reports due to changes in the methodologies and/or in the classifications used by the Member States. Most Member States revised their methodologies in 2004 resulting in lower figures than those reported in previous reports for both local calls and long-distance/international calls.

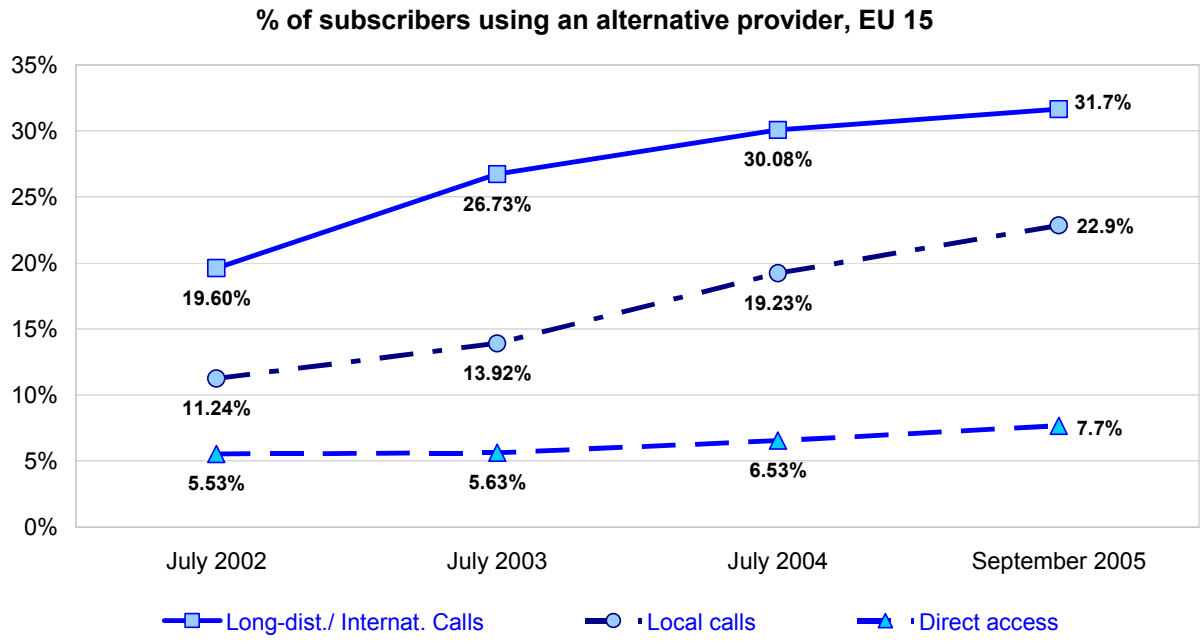
Information on consumers' use of alternative providers is unavailable in a number of New Member States.

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

Incumbents' customers are more and more aware of the possibility of using an alternative provider, either by dialling a call-by-call prefix (*carrier selection*) or by choosing to route all calls by default to the network of an alternative operator (*carrier pre-selection*). The use of an alternative operator through carrier selection/carrier pre-selection does not exclude the possibility of also using the incumbent's services. *Direct access* is also available to users through alternative operators' proprietary wireline/wireless access or through unbundled local loops leased from the incumbent.

As at September 2005, almost 32% of EU15 subscribers used an alternative provider to route long-distance and international calls, while almost 23% were using alternative providers for local calls. At the same time, direct access from alternative providers was used by 7.7% of EU15 subscribers. Since last year, the percentage of subscribers using an alternative provider has grown by 1.2 percentage points for direct access, 1.6 points for long-distance/international calls and by 3.7 points for local calls.

Figure 17



Member States not included in the EU15 weighted average:
Local: 2005: Netherlands; 2004: Netherlands; 2003: Ireland, Italy, Netherlands, Austria; 2002: Ireland, Italy, Netherlands, Austria, France
Long distance/int.: 2005: Netherlands; 2004: Netherlands (data for United Kingdom refer to 2003); 2003: Ireland, Netherlands, Italy, Austria; 2002: Ireland, Netherlands, Italy, Austria, Germany, and France.
Direct access: 2005: Netherlands; 2004: Ireland, Netherlands; 2003: Ireland, Netherlands, Austria; 2002: Ireland, Netherlands, Austria, France, Portugal.

The methodology for the calculation of the percentage of subscribers (residential + business) actually using a provider other than the incumbent operator is the following:

1- LOCAL CALLS: x:y

X = sum of all alternative operators' subscribers (residential + business) with CPS contract + sum of all alternative operators' subscribers (residential + business) with direct access for voice telephony (ULL and proprietary infrastructure)

Y = total number of residential + business subscribers of the incumbent and new entrants, with a standard/party/group telephone lines access. Direct telephone line access provided by an alternative operator can either be through proprietary infrastructure or full ULL .

2-LONG DISTANCE & INTERNATIONAL CALLS: x:y

X = sum of all alternative operators' subscribers (residential + business) with CPS contract + 50% of the sum of all alternative operators' subscribers (residential + business) with CS contract + sum of all alternative operators' subscribers (residential + business) with direct access for voice telephony (ULL and proprietary infrastructure).

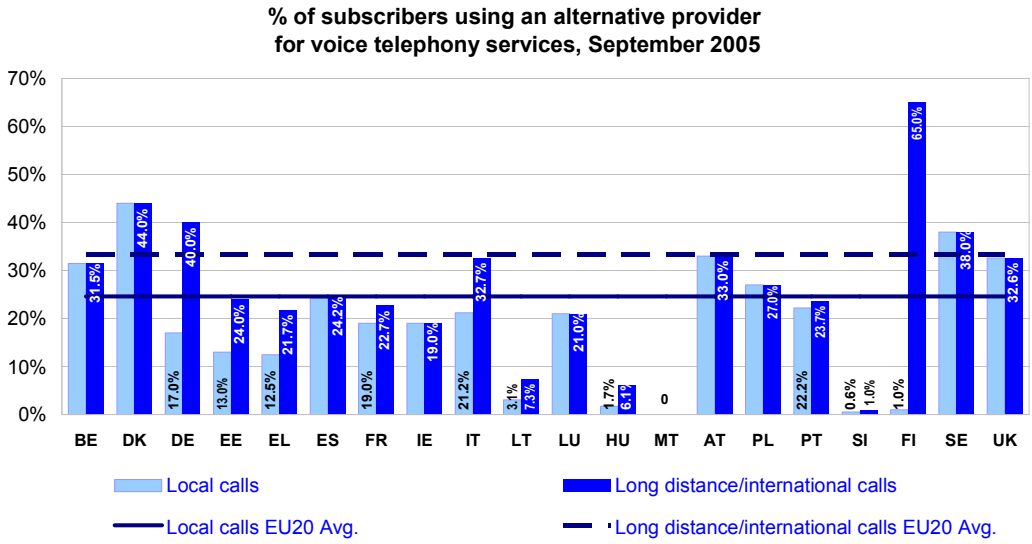
Y = total number of residential and business subscribers of the incumbent and new entrants, with a standard/party/group telephone lines access. Direct telephone line access provided by an alternative operator can either be through proprietary infrastructure or full ULL (in the latter case, please consider the number of unbundled active lines, and not the total number of unbundled lines).

3-DIRECT ACCESS

Total number of subscribers with direct access, fully ULL connection or with a cable access owned by an alternative operator

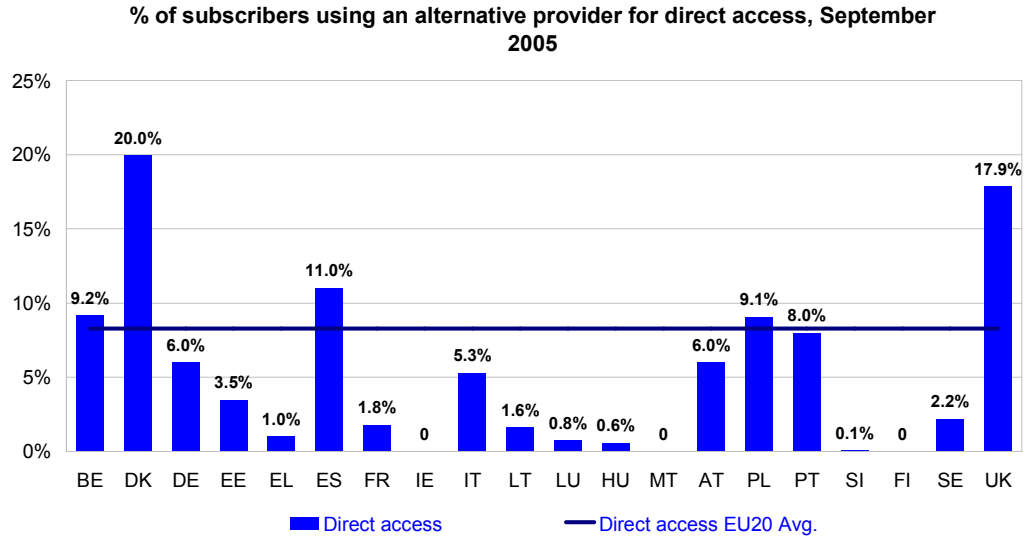
The following charts show the % of subscribers using an alternative provider for voice telephony services through carrier selection, carrier pre-selection and direct access. Where available, separate figures for local and long-distance/international calls are given.

Figure 18



Greece: Data refer to 31/12/2004.
Belgium, Denmark, Spain, Ireland, Luxembourg, Austria, Poland, Sweden and United Kingdom: Data do not distinguish between local, long-distance and international calls. Data for Belgium refer to 1/01/2005. Data for Denmark refer to 1/06/2005. Data for Spain refer to 1/07/2004. Data for Austria are estimates based on 2003 and 2004 data.
Germany: Data for national and international calls refer to July 2004.
Estonia: No distinction between local and national calls. The 24% figure refers to international calls.
Lithuania: No distinction between local and national calls. The 7.3% figure refers to international calls.
Malta: No alternative operators
Czech Republic, Cyprus, Latvia, Netherlands, Slovakia: No data available

Figure 19



Belgium, Greece: Data refer to 31/12/2004
Data for Austria are estimates based on 2003 and 2004 data.
Data for Spain refer to 1/07/2004.
Denmark: Direct access inc. PSTN, ISDN and ULL.
France: Shared access lines have not been included.
Malta: No alternative operators
Czech Republic, Cyprus, Latvia, Netherlands, Slovakia: No data available

2.2. FACILITIES USED BY NEW ENTRANTS FOR THE PROVISION OF VOICE TELEPHONY

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

Data have been provided by the national regulatory authorities and refer to September 2005.

Alternative operators can route users to their network either through a carrier selection system (CS), i.e. user dials a prefix on a call-by-call basis, or by carrier pre-selection (CPS), where the user's calls are routed to the new entrants' network on an automatic basis. New entrants can also provide direct access to users through proprietary wire/wireless access or through unbundled local loops leased from the incumbent.

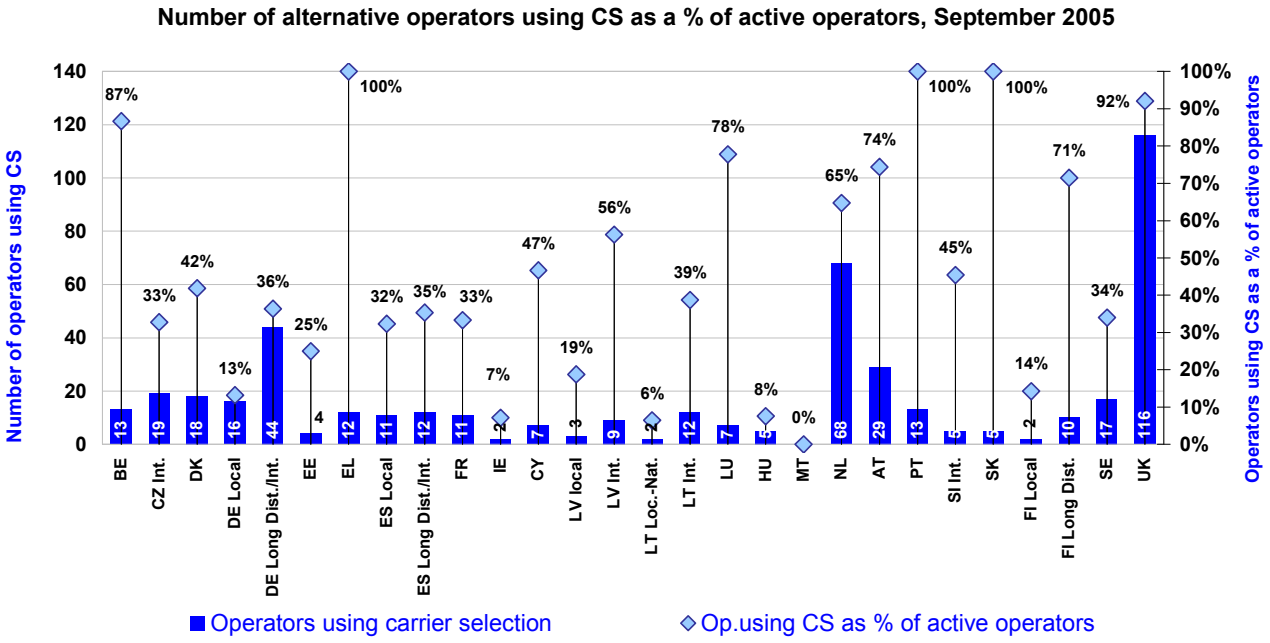
These facilities are not mutually exclusive and very often the same operator uses the three at the same time depending on the type of customers (business or residential), the type of services (local or long-distance/international calls), the geographical area, the availability of ULL, etc. The following figures should therefore be read separately and not aggregated as country totals.

As at 1 October 2005, 985 operators were effectively providing voice telephone service at EU25 level, 150 more than in 2004. Of these, at least 438 offered their services using carrier selection and 373 through carrier pre-selection. As indicated above, many operators use carrier selection and carrier pre-selection at the same time. This is in line with the figures for previous years.

The following two charts show the number of operators using carrier selection and/or carrier pre-selection by Member State at September 2005. Where possible, separate figures for types of calls are given; in the other cases separate data were not available or operators do not differentiate the data by type of calls. In a number of countries operators do not differentiate between local and national calls.

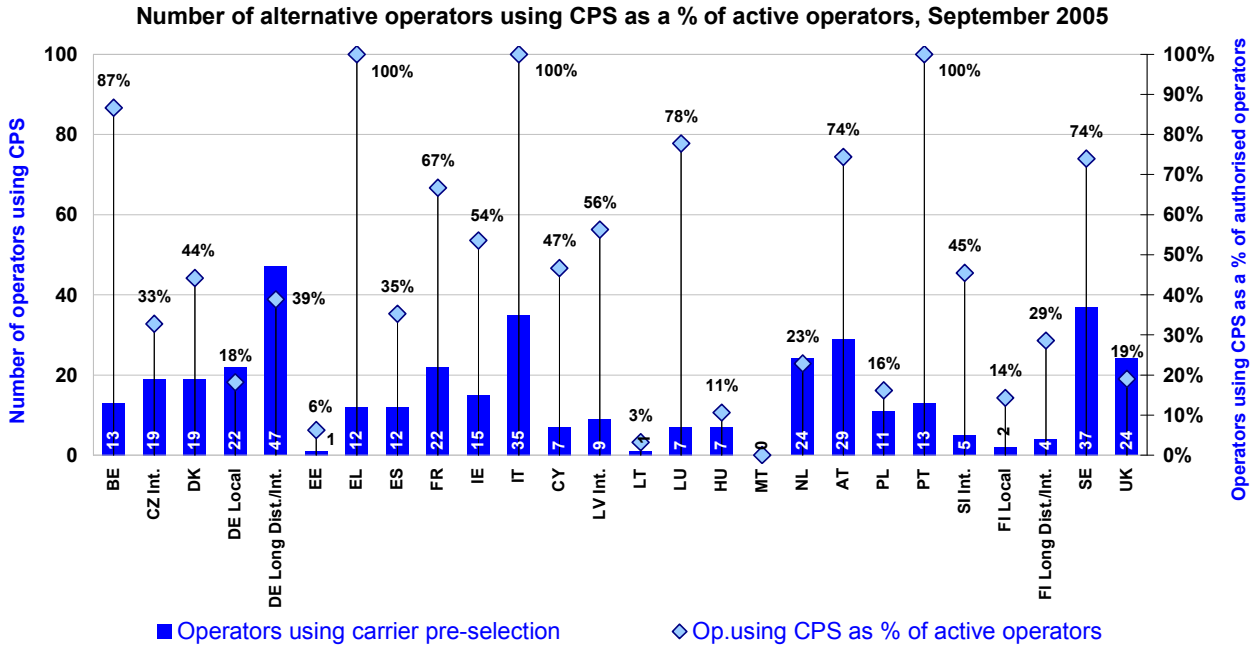
The following charts also show an estimate of the number of operators using carrier selection and/or carrier pre-selection as a percentage of the number of active operators. The incumbent operator has been excluded from the list of active operators. The figures do not show to what extent the operators are offering services to residential and/or business users; nation-wide or only in local areas; in some cases it is not possible to know whether operators offer all types of calls or only long-distance and international calls.

Figure 20



Czech Republic: Information on CS for local calls not available.
Denmark: Data as at 1 July 2005. No distinction between local, long-distance and international calls.
Ireland, UK: No distinction between local, long-distance and international calls.
Malta: No alternative operators
Poland: Data on CS not available
Belgium, Czech Republic, Estonia, Italy, Luxembourg, Latvia, Netherlands: No distinction between local and long distance calls. Data for NL refer to 2004
Austria: Data refer to 30/09/2003.
Spain: Data refer to 2004
Slovenia: CS is only available for international calls
Slovakia: CS available since June 2005

Figure 21



Belgium: No distinction between local and national calls.
Denmark: Data as at 1 July 2005. No distinction between local, long-distance and international calls
Estonia**,** Latvia: No distinction between local and national calls
Spain: Data refer to 2004
Ireland, Italy, United Kingdom: No distinction between local, long-distance and international calls
Malta: No alternative operators
Netherlands: No distinction between local and long distance calls. Data refer to 2004
Austria: Data refer to 30/09/2003.
Sweden: Estimated
Slovenia: CPS is only available for international calls.
Slovakia: CPS not available

3. PUBLIC NETWORK INTERCONNECTION

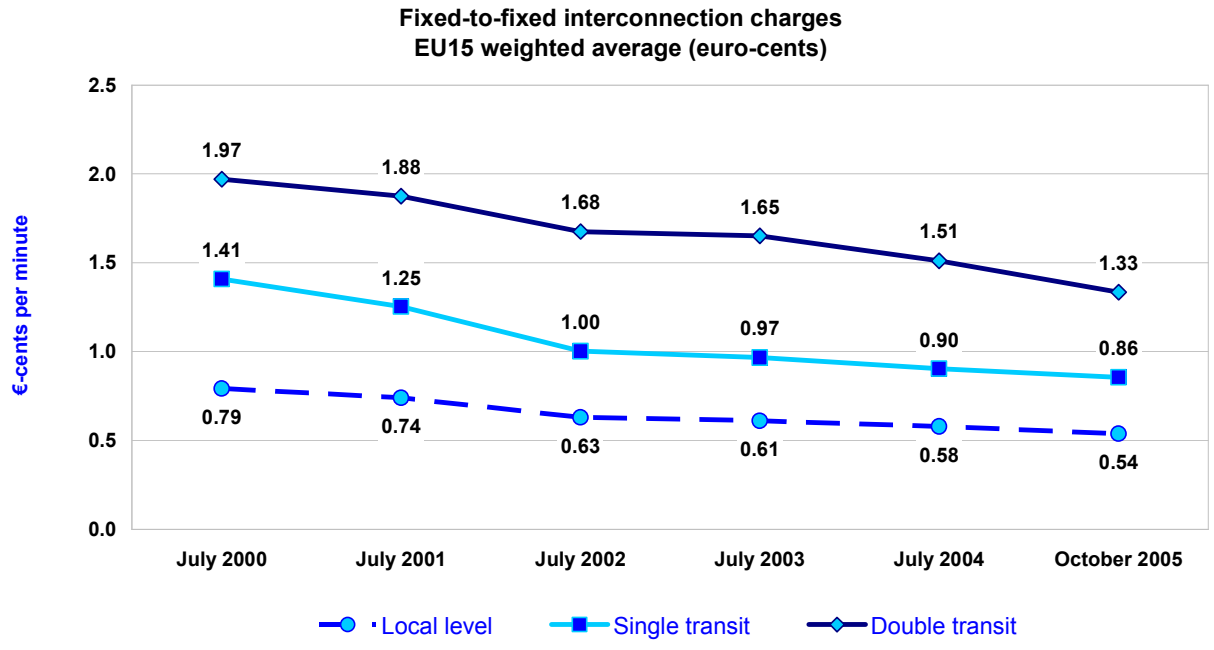
3.1. FIXED-TO-FIXED INTERCONNECTION CHARGES

This section analyses the interconnection charges for call termination on the incumbent's fixed network. The figures show the charges per minute based on the first three minutes of a call at peak-time, VAT excluded.

The figures may have been approved by the NRA or simply agreed between operators, where the legal framework does not require NRA approval. The following chart shows the EU15 weighted average for the interconnection charges since 2000 for local level, single and double transit. The exchange rates for 2005 have been applied to the years 2000-2004 for the non euro-zone countries. Since August 2000, the EU weighted average charge for call termination on fixed networks has decreased by 39% for single transit and by 32% for local level and double transit. Major reductions took place between 2000 and 2002 and again during the past 2 years, especially as regards double transit, with annual reductions of 8% in 2004 and 12% in 2005. A number of New Member States have seen significant reductions in their interconnection rate levels. Among this generalised downward trend, the major changes since last year have occurred in Slovakia (-56%), the United Kingdom (-34%) and Greece (-16%) for local level termination, Latvia (-52%), Malta (-50%), Slovakia (-49%) and Sweden (-40%) for single transit, and Latvia (-79%), the United Kingdom (-59%), Slovakia (-53%) and Malta (-50%) for double transit call termination.

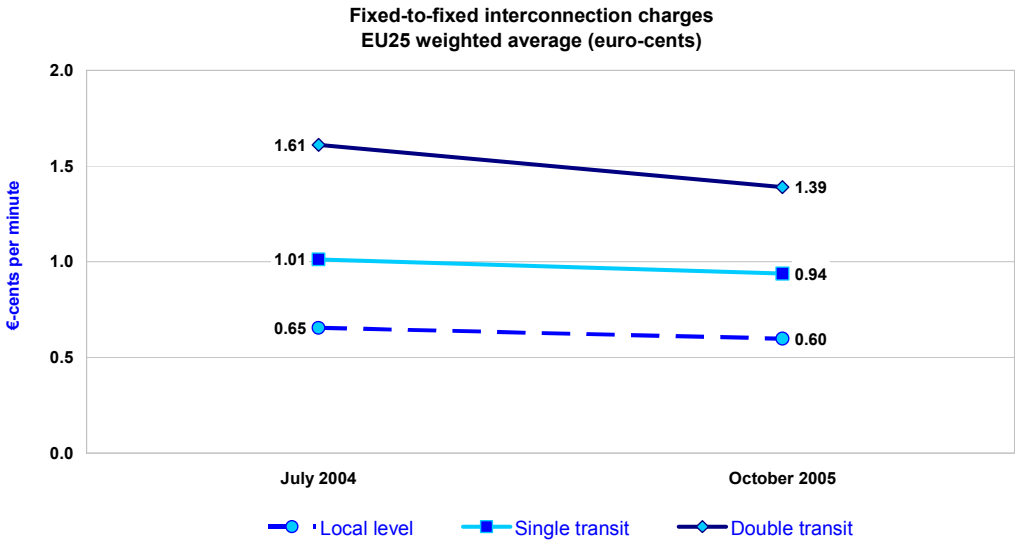
There is a strong correlation between the charge level and the timing of liberalisation of the market. Interconnection charges, for most of the new Member States, are still higher than those for EU15.

Figure 22



EU15 average for local level and double transit in 2005 does not include Finland.

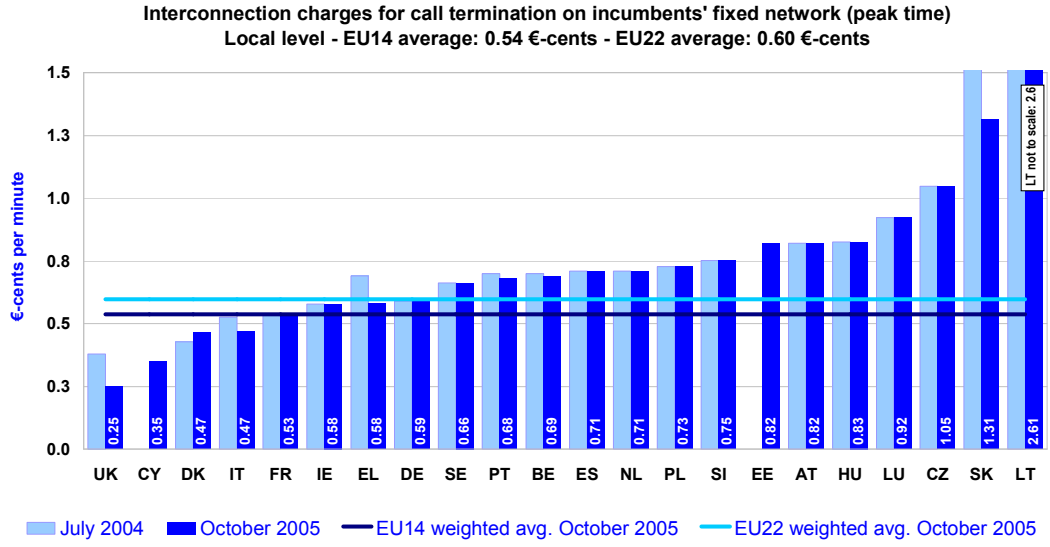
Figure 23



Local level: CY and LV not included in the 2004 average. FI, LV and MT not included in the 2005 average.
Single transit: All MS included in the 2004 average. LT not included in the 2005 average.
Double transit: All MS included in the 2004 average. FI not included in the 2005 average.

The following three charts show the interconnection charges for local level, single and double transit as of 1 October 2005. The values at July 2004 are also shown.

Figure 24



Germany: Valid until 31.05.2006

Spain: Interconnection fees have been revised with effect from 1 November 2005. Price of capacity based interconnection (2 Mb/s): 1 326.11 €/month local, 1 863 €/month metropolitan. In real terms capacity based interconnection prices are half of time based interconnection.

Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report

Latvia, Malta: Interconnection at local level not offered.

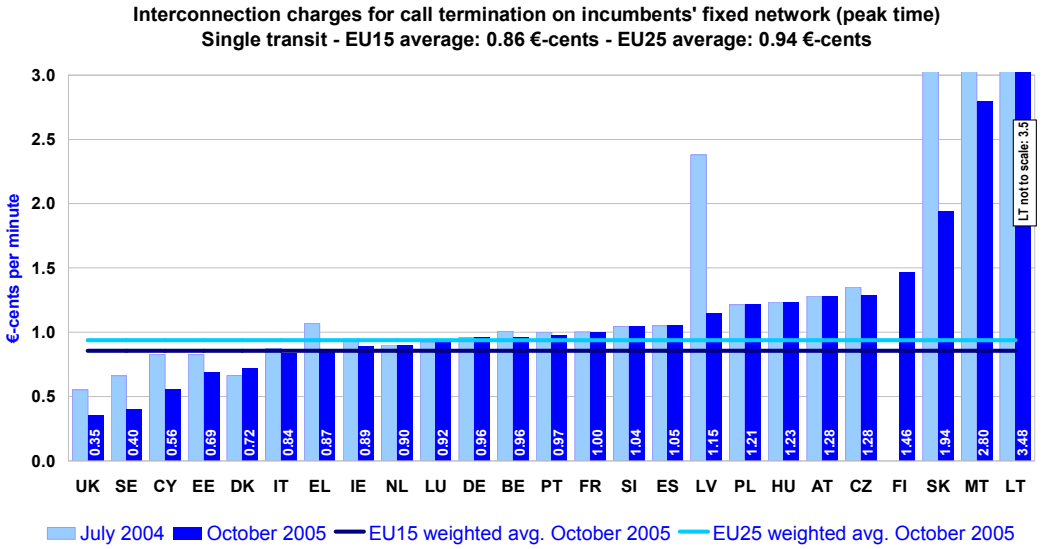
Finland: Charges of 44 SMP operators vary between 0,01025 € - 0,0152 €. The average charge for local level interconnection is not available. In 2004 FICORA informed only of Elisa's and TeliaSonera's charges. Therefore charges are not directly comparable. Price comparison of termination charges can be found at FICORA's web pages: http://www.ficora.fi/suomi/tele/tahintavertailu.htm

Hungary: Prices refer to the main incumbent operator Matav

Netherlands: Tariff for KPN's terminating services. For KPN's originating service a different tariff applies: 0,70 €

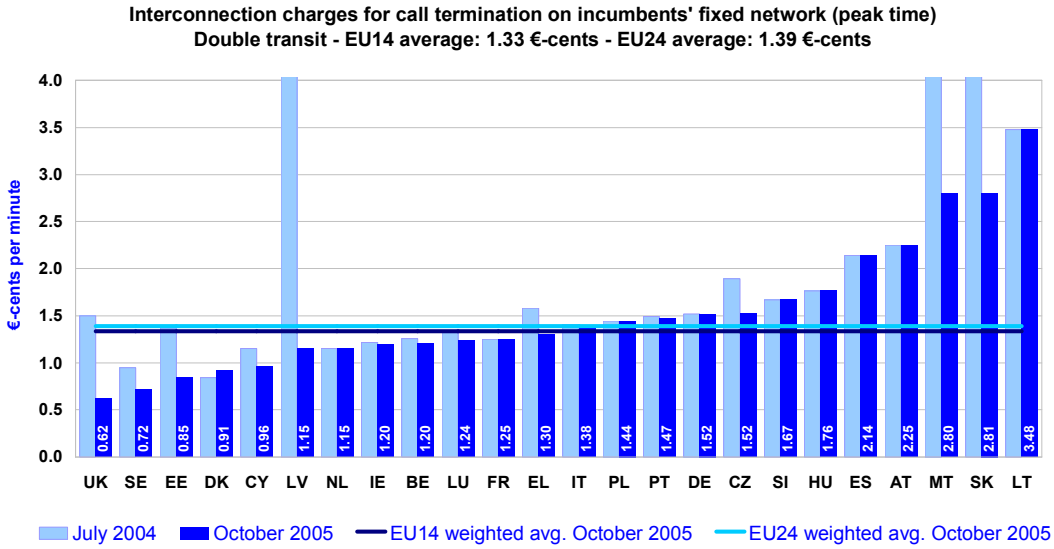
Slovakia: Peak prices cannot be compared with other MS because there are 3 interconnect times. Prices should be reduced by 12% for the data to be comparable.

Figure 25



Germany: Valid until 31.05.2006
Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report
Spain: Interconnection fees have been revised with effect from 1 November 2005. Price of capacity based interconnection (2 Mb/s): 2 213 €/month. In real terms capacity based interconnection prices are half of time based interconnection.In real terms capacity based interconnection prices are half of time based interconnection.
Hungary: Prices refer to the main incumbent operator Matav
Malta: Only one interconnection level.
Netherlands: Tariff for KPN's terminating services. For KPN's originating service a different tariff applies: 1.06 €
Slovakia: Peak prices cannot be compared with other MS because there are 3 interconnect times. Prices should be reduced by 12% for the data to be comparable.
Finland: Charges of 44 SMP operators vary between 0,01026 € - 0,0152 €. Average charge of single transit is 0,014627 € and median 0,01513 €. In 2004 FICORA informed only of Elisa's and TeliaSonera's charges. Therefore charges are not directly comparable. Price comparison of termination charges can be found at FICORA's web pages: http://www.ficora.fi/suomi/tele/tahintavertailu.htm

Figure 26



Germany: Valid until 31.05.2006
Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report
Spain: Interconnection fees have been revised with effect from 1 November 2005. Price of capacity based interconnection (2 Mb/s): 3 186 €/month. In real terms capacity based interconnection prices are half of time based interconnection.In real terms capacity based interconnection prices are half of time based interconnection.
Finland: The charges of the 46 SMP operators differ.
Hungary: Prices refer to the main incumbent operator Matav
Malta: Only one interconnection level.
Netherlands: Tariff for KPN's terminating services. For KPN's originating service a different tariff applies: 1.50 €
Slovakia: Peak prices cannot be compared with other MS because there are 3 interconnect times. Prices should be reduced by 12% for the data to be comparable.
Finland: Double transit charges are not regulated. Information of double transit charges is confidential.

3.2. FIXED-TO-MOBILE INTERCONNECTION CHARGES

This section shows the per-minute interconnection charges for fixed call termination on the networks of mobile operators. **Charges for call termination on the networks of 3G operators are not included**.

In the following charts information is shown for 76 mobile operators in the EU (representing almost 100% of the EU mobile market). A total of 50 operators have been designated as having significant market power in the national market for interconnection (SMP). Only in Denmark, Germany, Estonia and Slovakia there are no SMP designated operators. There were 34 SMP operators in July 2004. Given the different status of implementation of the new regulatory framework in each Member State[1], in some countries SMP designation is made under the old framework, while in other countries it is based on the market analysis carried out by the national regulatory authorities. SMP operators cover 73% of the EU mobile market in terms of subscribers, up from 62% in July 2004. Charges are for calls originated in the same countries.

In Finland fixed to mobile charges only apply when the call is made through a prefix code or carrier pre-selection. In other cases, local operators determine the local network charges and mobile operators determine the mobile call charges.

In Estonia charges for two operators may change depending on the volume of calls (below or above 3 million minutes per month). In the charts below the second option is presented. In Spain interconnection fees have been revised with effect from 1 November 2005.

The per-minute interconnection fees are based on the first three minutes of a call at peak rate, except for the Netherlands, where an average peak/off-peak rate is given. In Lithuania the figure is an average based on the interconnection fees of the three mobile operators.

Data have been collected by the NRA, and refer to October 2005. Data for Germany was taken from Cullen International.

The following chart shows the trend in the weighted average fixed-to-mobile interconnection fees for SMP and non SMP mobile operators in the EU25 between July 2004 and October 2005. The 2005 exchange rates have been applied to the non euro-zone countries for 2004.

[1] At 1 October 2005.

Figure 27

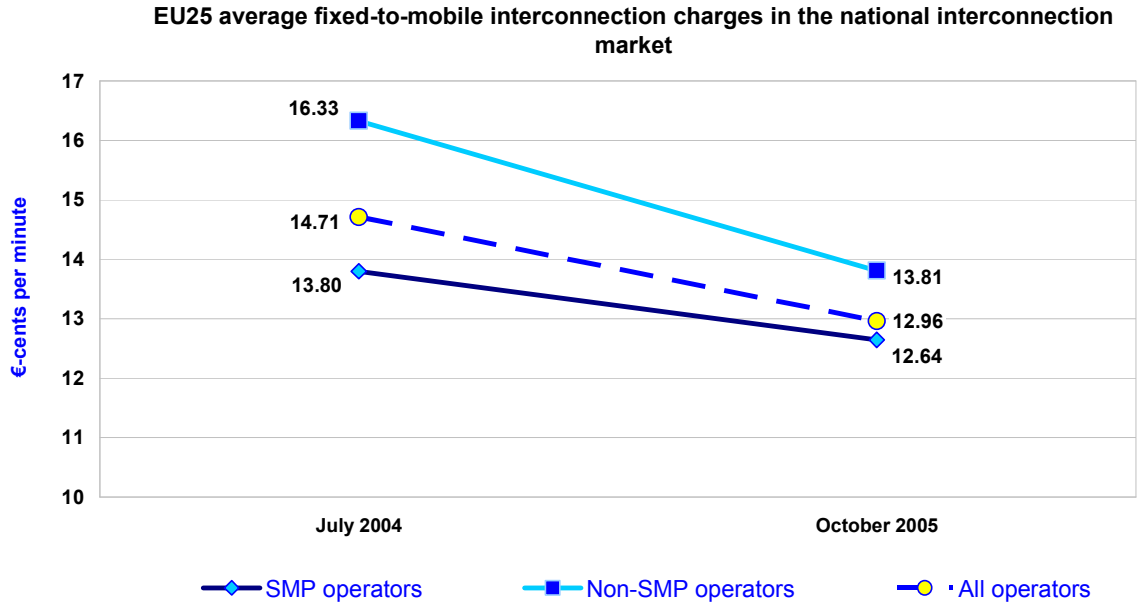
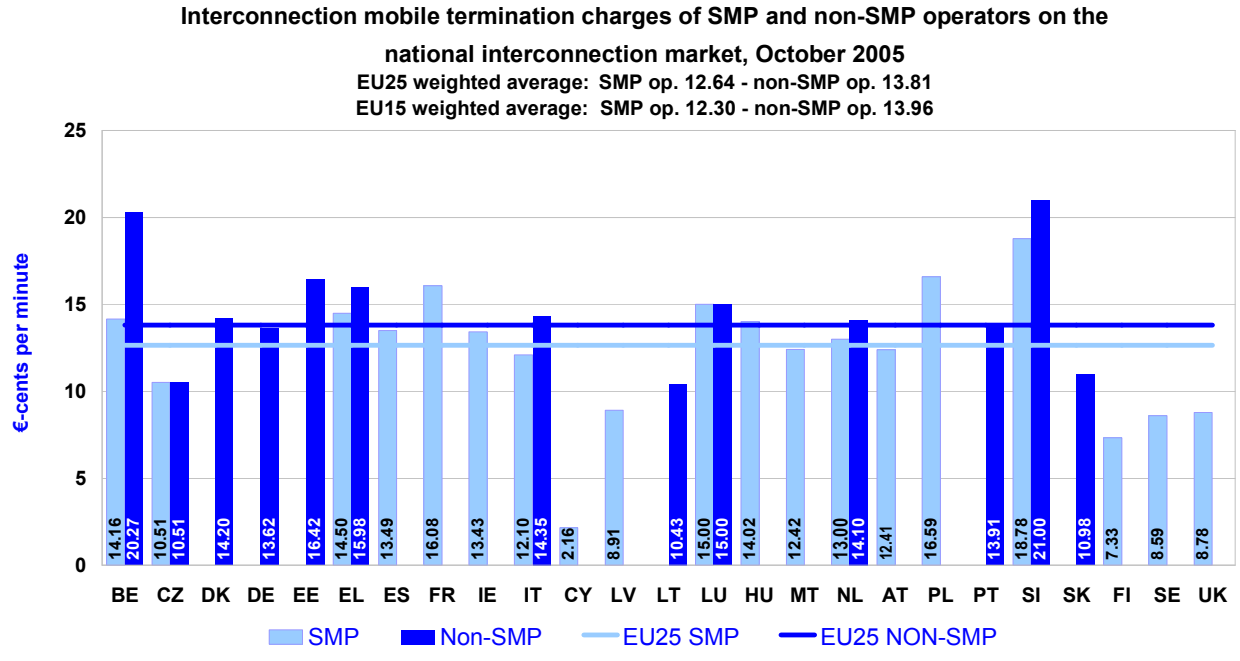


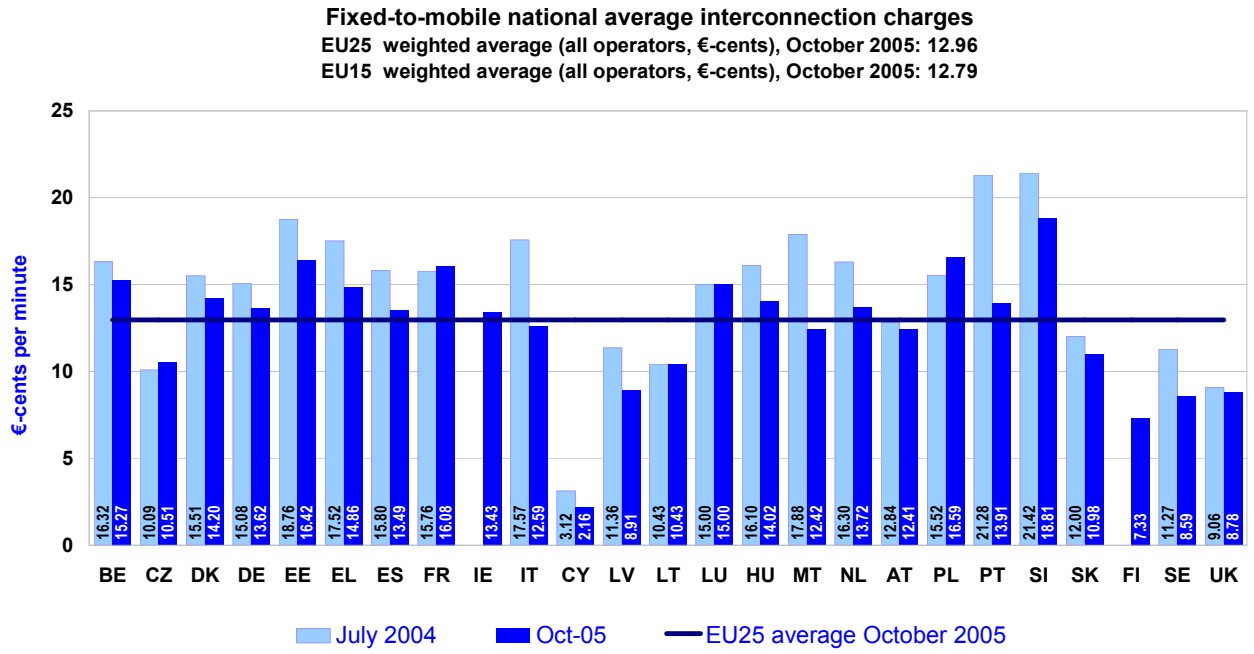
Figure 28 shows the national weighted average for SMP and non-SMP operators. The EU25 weighted average of fixed-to-mobile interconnection charges for the SMP operators in the interconnection market is 12.64 €-cents. For the non-SMP operators the average fee is 13.81. If all mobile operators were considered, the average charge would be 12.96 (Figure 27). Values for each country are weighted average prices based on the number of subscribers and the termination rate of each operator.

Figure 28



Czech Republic: RIO price list
Germany: Data from Cullen International Cross Country Analysis
France: Mainland operators only. Overseas operators not included

Figure 29



Czech Republic: RIO price list
Germany: Data from Cullen International Cross Country Analysis
France: Mainland operators only. Overseas operators not included
Ireland, Finland: 2004 data not comparable

The following chart shows the trend in the weighted average fixed-to-mobile interconnection fees for SMP and non SMP mobile operators in the EU15 between July 2001 and October 2005. The 2005 exchange rates have been applied to the non euro-zone countries for previous years. The figure for 2001 for non-SMP operators is not available.

Following the notifications of SMP further to the market analysis process, in 2005 the difference between SMP and non-SMP average charges has dropped. This decrease has been driven by a higher number of operators having been designated SMP and also because the reduction in the termination charges of non-SMP operators has been higher than that of SMP operators. In 2003 call termination on non-SMP operators was on average 17% more expensive (2.7 €-cents), while in 2005 this difference had gone down to 13% (1.66 €-cents).

Between 2004 and 2005 the average termination rate for SMP operators has decreased by 10%, while the reduction for the non SMP operators was 15%.

The increase in the number of SMP designated operators signalled in the last report has continued and EU15 SMP operators now cover 73% of subscribers, against 62 in 2004, 45% in 2003 and 41% in 2002.

Despite the continuing decline in the interconnection charges, their level remains on average more than 9 times higher than the average fixed-to-fixed interconnection charges (double transit).

Figure 30

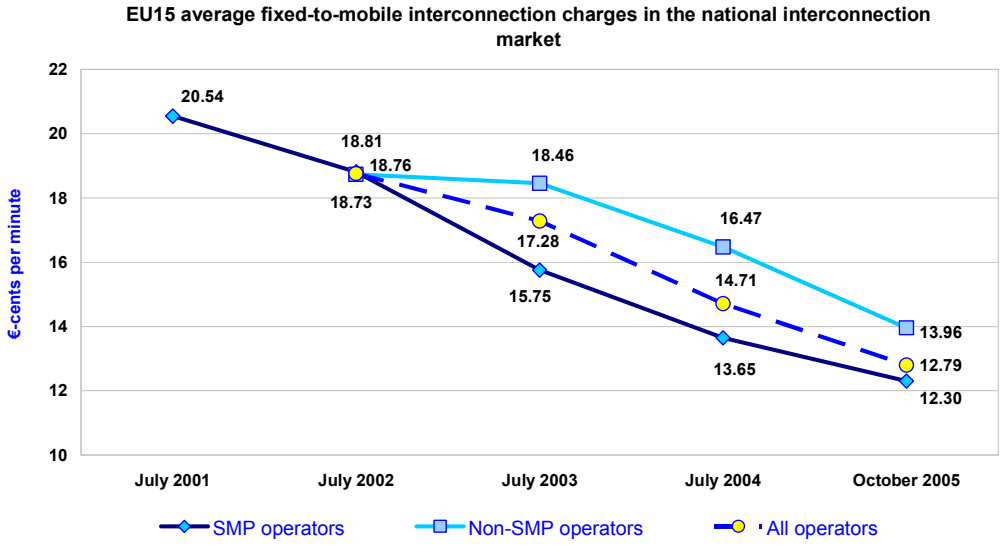
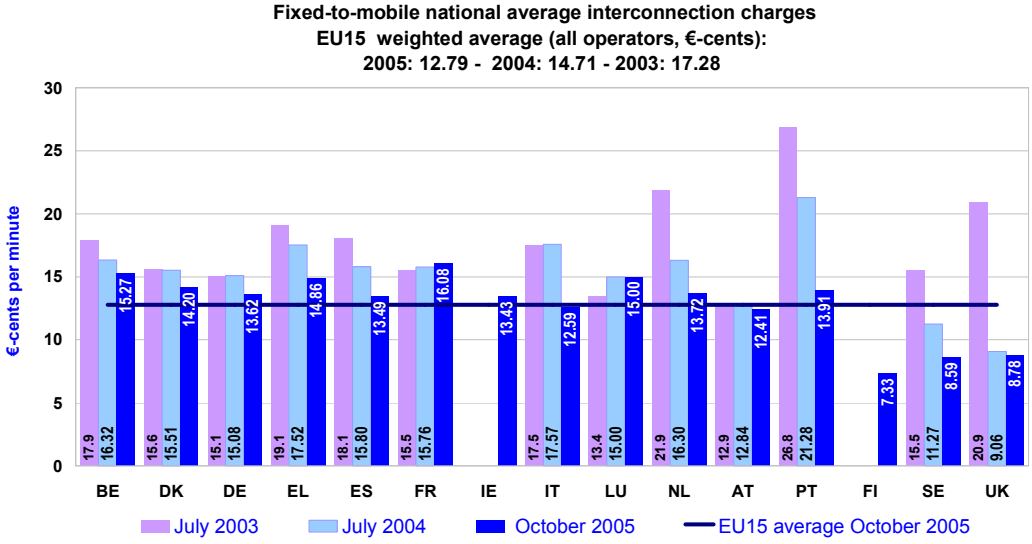


Figure 31 shows the average national mobile termination charge in the EU15 for the last three years. At EU15 level there has been a 26% reduction. The most significant cuts have occurred in Portugal (-34%), Italy (-28%) and Sweden (-23%). Termination charges have decreased or remained stable in all Member States except France, where prices have increased.

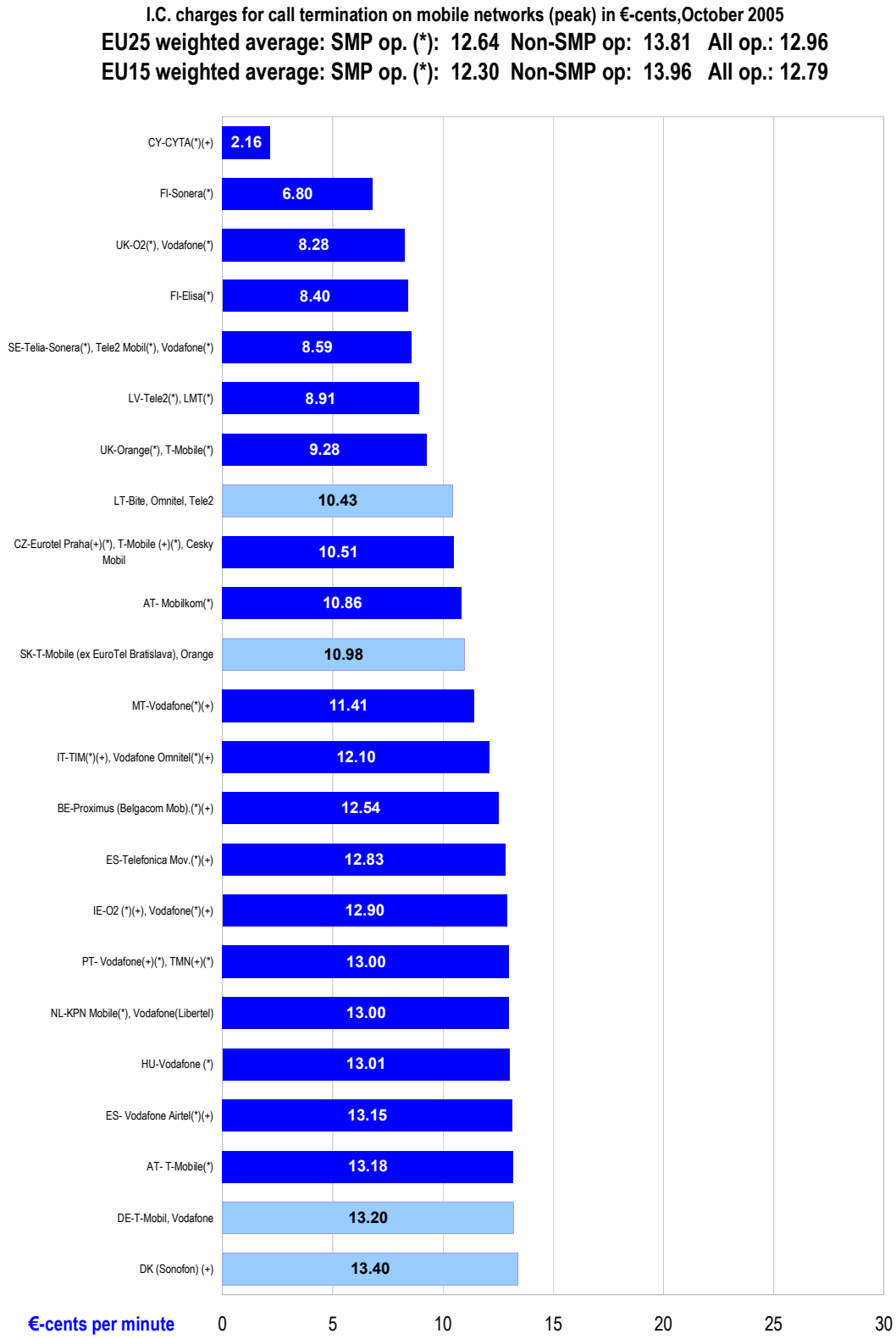
Figure 31



Germany: Data from Cullen International Cross Country Analysis
France: Mainland operators only. Overseas operators not included
Ireland, Finland: 2003 & 2004 data not comparable

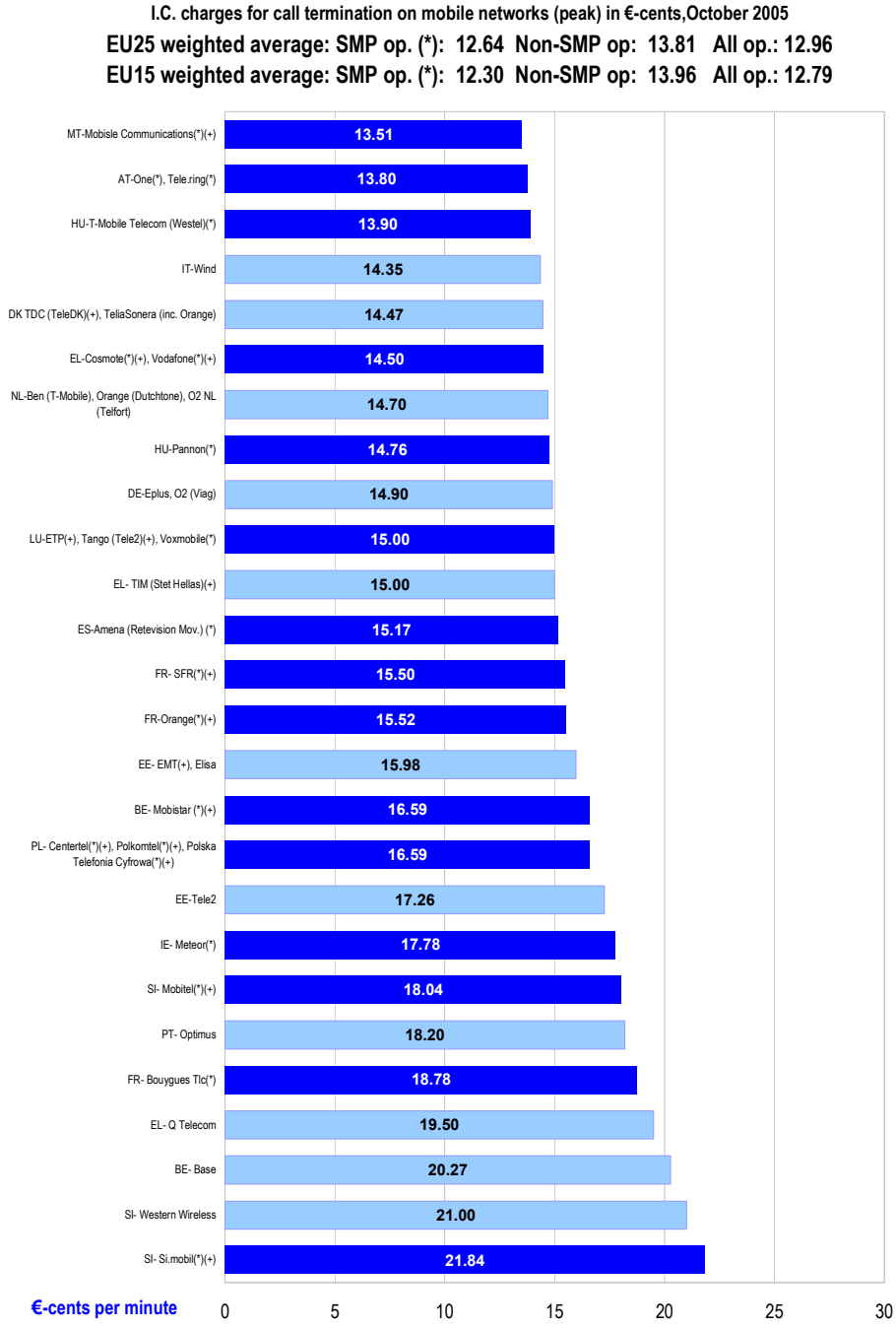
The following charts show the individual fixed-to-mobile interconnection charges for 77 mobile operators in the EU. In Cyprus charges are as cheap as 2.2 € cents, whereas the most expensive fee is found in Slovenia at 21.8 € cents. If the termination fee in Cyprus is excluded, the differential of the most expensive termination fee from the cheapest expressed as a percentage of the cheapest fee is 176%, similar to that of 2004.

Figure 32



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

Figure 33



Legend:
(*) SMP operators in the national interconnection market
(+) SMP operators in the national mobile market
Czech Republic: RIO price list
Germany: Data from Cullen International Cross Country Analysis (August 2005, Table 29, Page 158)
Estonia: 2.50 EEK/min (15.98 €cents) if call volume is 3 or over 3 million minutes per month and 2.70 EEK/min (17.26 €cents) if call volume is less than 3 million minutes per month.
Greece: Minimum call duration is 30 seconds.
Spain: A new set of interconnection tariffs is applied since 1 November 2005.
France: Mainland operators. Overseas operators not included
Figures for the Netherlands are not comparable since they represent an average peak/off-peak rate. Figures for Lithuania represent an average based on the interconnection fees of the three mobile operators
Poland: URTiP's 2003 decision on SMP designation in the mobile termination market has been appealed by operators.
In Finland fixed to mobile charges only apply when the call is made through a prefix code or carrier pre-selection.

3.3. LEASED LINES 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.

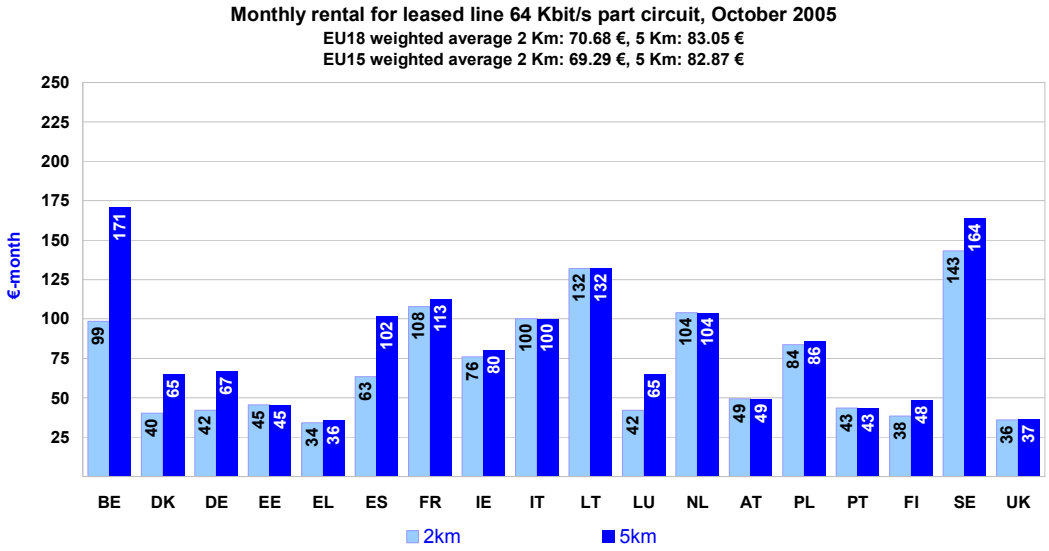
The distance refers to the radial distance between the customer local end leased line and the point of interconnection.

It should be noted that in some cases data include the handover costs, while in other cases these costs are excluded.

National Regulatory Authorities have provided these figures through the questionnaire for the 11th Implementation Report. Figures indicate the position in October 2005.

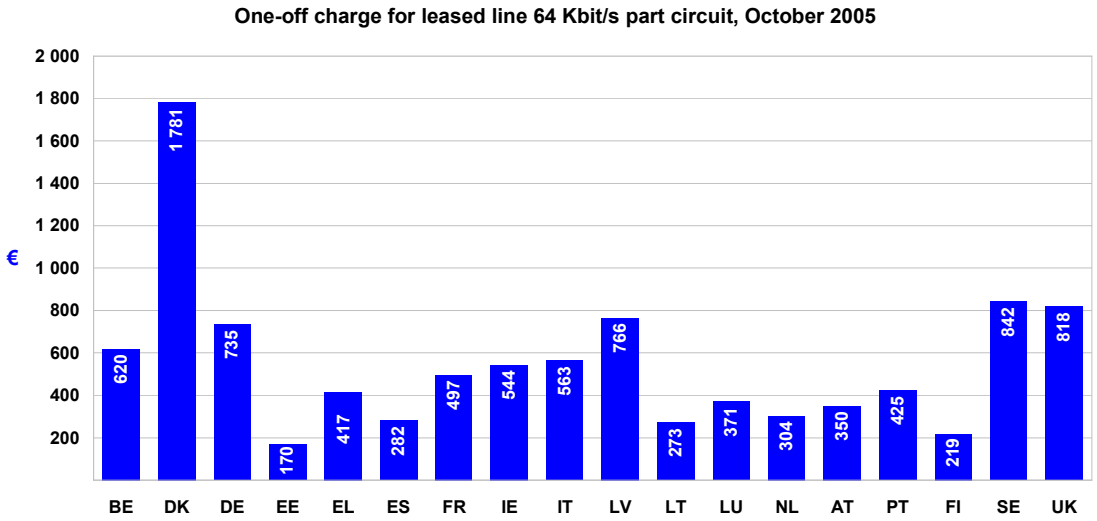
3.3.1. 64 Kbit/s part circuit

Figure 34



Czech Republic: Individual price
Denmark: Figures from TDC referring to 2 resp. 5 km, while TDC for some of the products sets a price depending on actual distance
Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report
Estonia: Customer to node circuit. Additional nodo-to-node circuit (up to 6 Km) is EEK 475 (€30.35)
Ireland: Based on the price of a partial private circuit with a tail circuit of 2Kms and exlcuding the cost of transport links
Latvia: IC circuits not offered
Lithuania: Price is determined by the traffic and not by the length of the line
Luxembourg: Minimum price for 5Km. circuits (€65 to €83)
Malta: Price for local end part circuit is not offered
The Netherlands: For 64kbit there is no local service offer. Only a regional service offer is available.
Finland: Average of seven operators (TeliaSonera Finland, Elisa, Vaasan Läänin Puhelin*, Kokkolan puhelin*, Lännen Puhelin*, Päijät-Hämeen Puihelin* and KPY Verkot*). *=Part of the Finnet-group. Prices are not directly comparable becase of the variations in pricing methods in different geographical areas.
Slovenia: IC circuits not offered
Slovakia: 64 Kb/s IC circuits not available
United Kingdom: The rates listed are the monthly circuit rental (standard maintenance) and include a proportion (1/12th) of the local end fixed charge (calculated for each of 2 and 5 km)
Cyprus, Hungary: Data not available

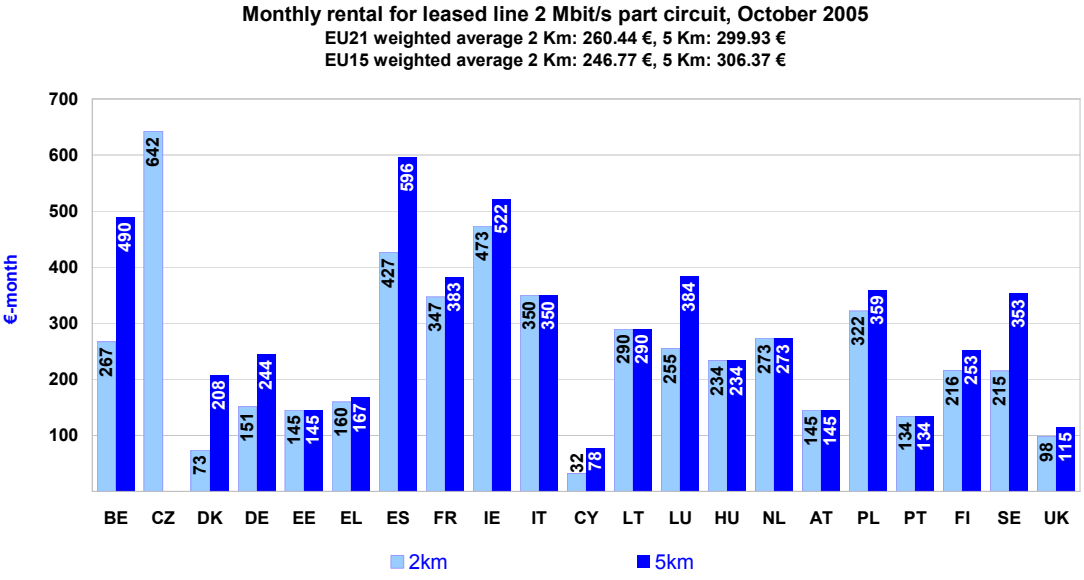
Figure 35



Czech Republic: Individual price
Denmark: Weighted average of the one-off connection costs
Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report
Slovakia: 64 Kb/s IC circuits not available
Cyprus, Hungary, Poland: No data available
Malta: Price for local end part circuit is not offered
Austria: Price for a one-year contract. Otherwise price is € 700
Slovenia: IC circuits not offered

3.3.2. 2 Mbit/s part circuit

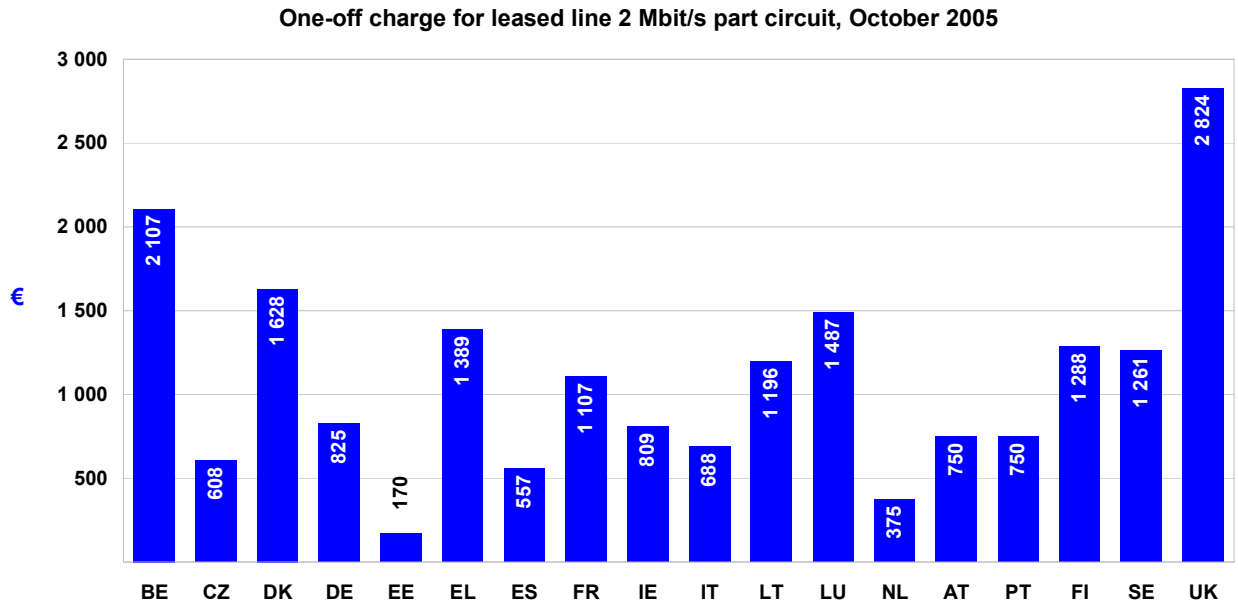
Figure 36



Czech Republic: Individual price for circuits longer than 2 Kms
Denmark: Figures from TDC referring to 2 resp. 5 km, while TDC for some of the products sets a price depending on actual distance.
Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report
Estonia: Customer to node circuit. Additional nodo-to-node circuit (up to 6 Km) is EEK 1562 (€99.83)
Ireland: Based on the price of a partial private circuit with a tail circuit of 2Kms and excluding the cost of transport links
Malta: Price for local end part circuit is not offered
Latvia: IC circuits not offered

Lithuania: Price is determined by the traffic and not by the length of the line
Luxembourg: Minimum price for 5Km. circuits (€384 to €587)
The Netherlands: For 2Mbit/s there is no km-dependent charge. The service is offered at a standard charge from the end-user location to the local exchange office.
Finland: Average of seven operators (TeliaSonera Finland, Elisa, Vaasan Läänin Puhelin*, Kokkolan puhelin*, Lännen Puhelin*, Päijät-Hämeen Puihelin* and KPY Verkot*). *=Part of the Finnet-group. Prices are not directly comparable because of the variations in pricing methods in different geographical areas.
United Kingdom: The rates listed are the monthly circuit rental (standard maintenance) and include a proportion (1/12th) of the local end fixed charge (calculated for each of 2 and 5 km)
Slovakia: 34 Mb/s IC circuits not available
Slovenia: IC circuits not offered

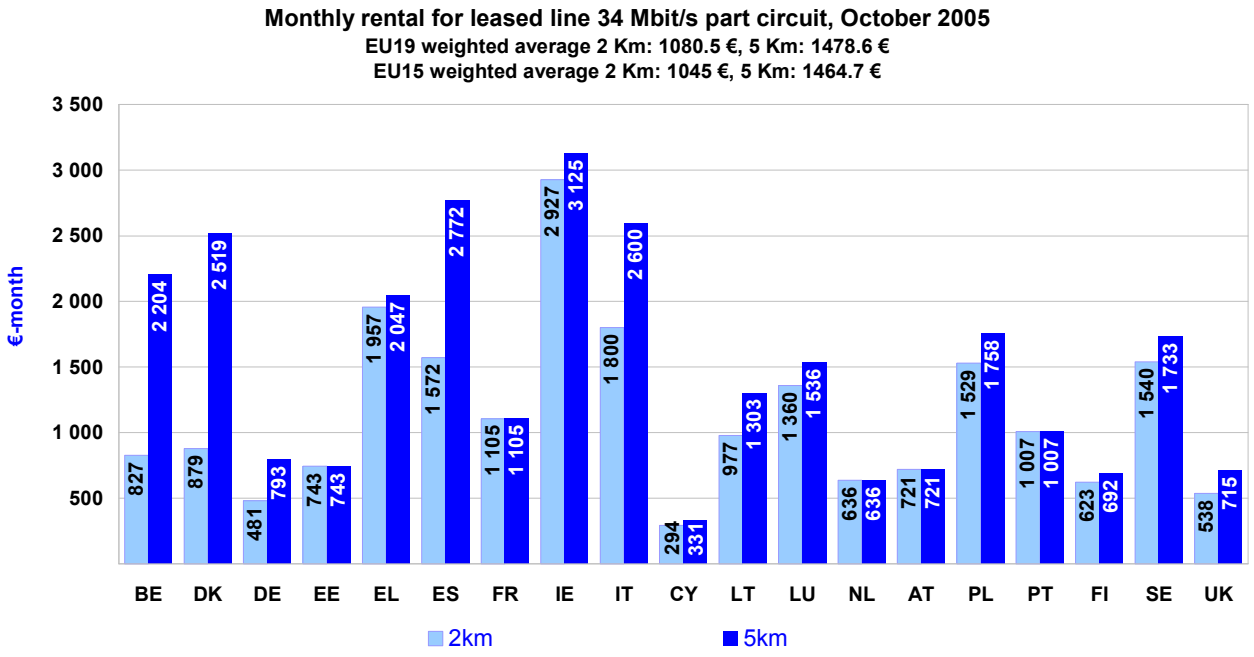
Figure 37



Denmark: Weighted average of the one-off connection costs
Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report
Latvia: IC circuits not offered
Cyprus, Hungary, Poland: Data not available
Malta: Price for local end part circuit is not offered
Austria: Price for a one-year contract. Otherwise price is € 1500
Slovakia: 2 Mb/s IC circuits not available
Slovenia: IC circuits not offered

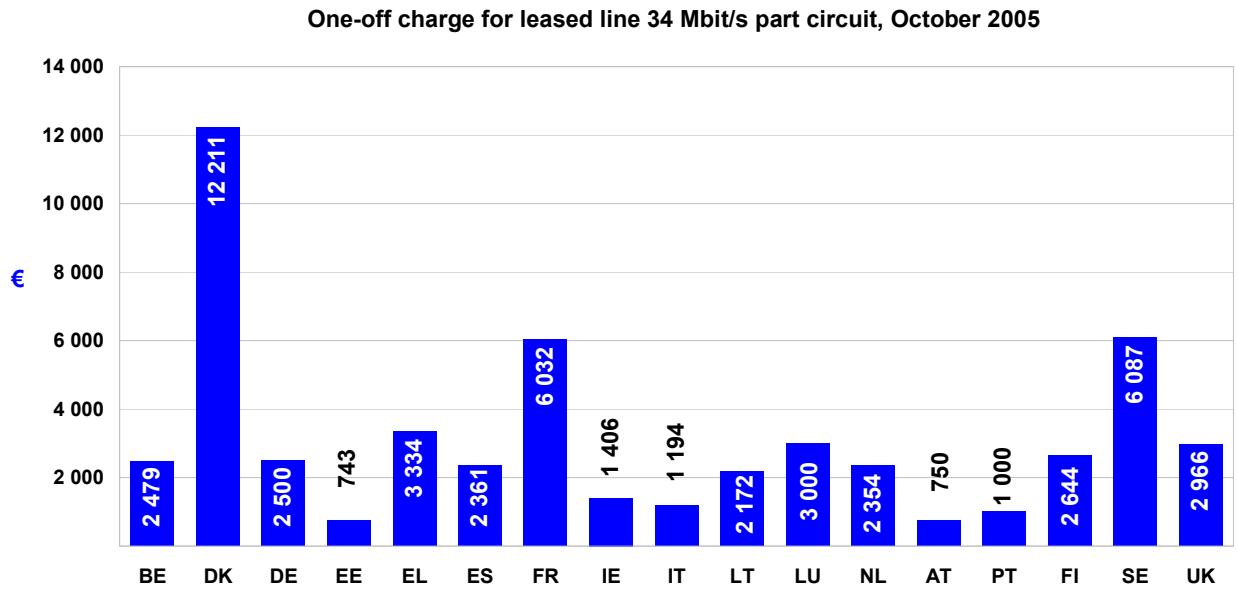
3.3.3. 34 Mbit/s part circuit

Figure 38



Czech Republic: Individual price
Denmark: Figures from TDC referring to 2 resp. 5 km, while TDC for some of the products sets a price depending on actual distance.
Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report
Estonia: Customer to node circuit.
Ireland: Based on the price of a partial private circuit with a tail circuit of 2Kms and excluding the cost of transport links
France: Price list only available for 64Kb/s and 2Mb/s. There is no 34 Mbit/s standard price offer.
Latvia: IC circuits not offered
Lithuania: Price is determined by the traffic
Luxembourg: Minimum price for 5Km. circuits (€1536 to €1711)
The Netherlands: A 34Mbit/s service is only offered at a fibre access. For the purpose of calculating a tariff a third of the costs of a 155Mbit/s service is included to determine the tariff of a 34 Mbit/s service.
Malta: Price for local end part circuit is not offered
Hungary: Data not available
Finland: Average of three operators (TeliaSonera Finland, Elisa, Kokkolan Puhelin). Prices are not directly comparable becase of the variations in pricing methods in different geographical areas.
United Kingdom: The rates listed are the monthly circuit rental (standard maintenance) and include a proportion (1/12th) of the local end fixed charge (calculated for each of 2 and 5 km)
Slovakia: 34 Mb/s IC circuits not available
Slovenia: IC circuits not offered

Figure 39



Denmark: Weighted average of the one-off connection costs
Greece: The audit for cost orientation based on LRAIC+/CCA for the year 2005 was in progress during the drafting of the report
France: There is no 34 Mbit/s standard price offer
Price in the Netherlands is an average of 2 times 34 Mbit/s in a 155 Mbit/s fibre access service and a 155 Mbit/s broadband access group.
Czech Republic, Cyprus, Hungary, Poland: Data not available
Latvia: IC circuits not offered
Malta: Price for local end part circuit is not offered
Austria: Price for a one-year contract. Otherwise price is € 1500
Slovakia: 34 Mb/s IC circuits not available
Slovenia: IC circuits not offered

4. MOBILE MARKET

4.1. 2G MOBILE PENETRATION

This section provides information on the number of mobile subscribers and the penetration rate for mobile telephony services in each Member State. The growth in the penetration rate since 2004 is also shown.

The table below indicates the source of the data and the reference date.

Where available, data have been provided by the National Regulatory Authorities (NRAs). For those countries where NRAs did not have up to date information, figures are estimates from the "European Mobile Communications" database.

The EU average is a weighted average.

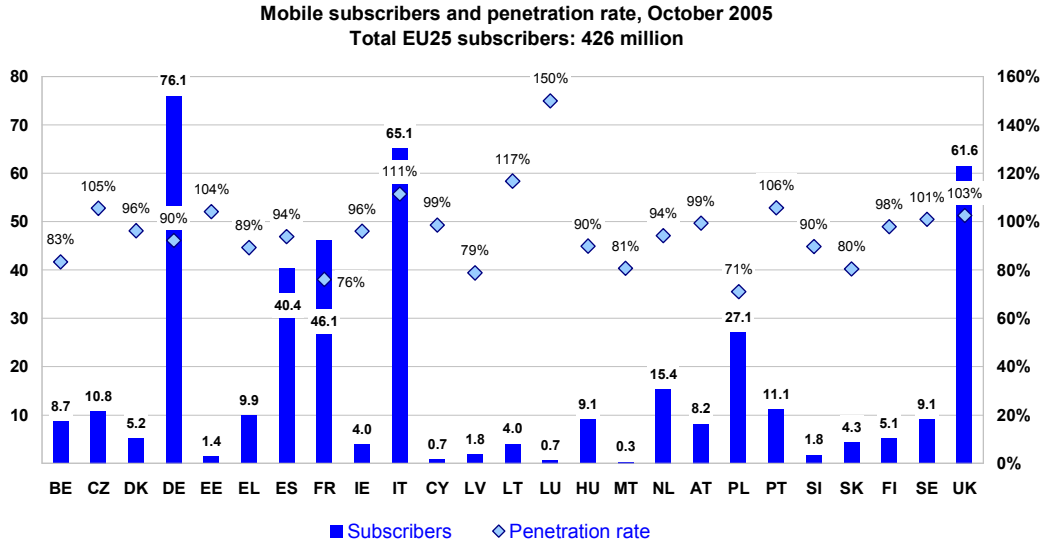
It should be noted that operators and regulators use different methods to count the number of subscribers. Some regulators distinguish between the overall number of mobile subscribers and the number of active subscribers. The table indicates where this information is available. Some operators consider the total number of users that have made or received a call or sent an SMS in the last 9 or 6 months, whereas others only consider the active users of the last 3 months. This has an impact in the penetration rate, especially in small countries.

MOBILE SUBSCRIBERS					
	2004	**Source data**	**2005**	**Source data**	**Comments 2005**
BE	July	NRA	July	NRA	Split -pre-paid/post-paid is an estimate
CZ	July	NRA	July	NRA	Split -pre-paid/post-paid not available for one operator
DK	July	NRA	July	NRA	
DE	October	NRA (e)	October	NRA (e)	Split -pre-paid/post-paid is an estimate
EE	October	NRA	October	NRA	
EL	July	NRA	July	NRA	Figures refer to active subscribers
ES	July	NRA	July	NRA	
FR	October	NRA	October	NRA	
IE	October	EMC	October	NRA	
IT	October	EMC	October	EMC	
CY	October	NRA	October	NRA	
LV	October	NRA	October	NRA	
LT	October	NRA	October	NRA	Figures refer to active subscribers
LU	October	EMC	October	EMC	
HU	September	NRA	October	NRA	
MT	October	NRA	October	NRA	
NL	July	EMC	July	EMC	
AT	October	EMC	October	EMC	
PL	October	NRA	October	NRA	
PT	October	NRA	October	NRA	
SI	Data not comparable	NRA	October	NRA	
SK	October	EMC	October	NRA	
FI	October	NRA (e)	October	NRA (e)	Split -pre-paid/post-paid not available
SE	October	NRA (e)	October	NRA (e)	Based on EMC data
UK	July	NRA	July	NRA	

The following chart shows the absolute number of mobile subscribers in each Member State (columns) and the penetration rate (dots), measured as the number of subscribers per 100 population.

Figures include analogue subscribers and 3G subscribers.

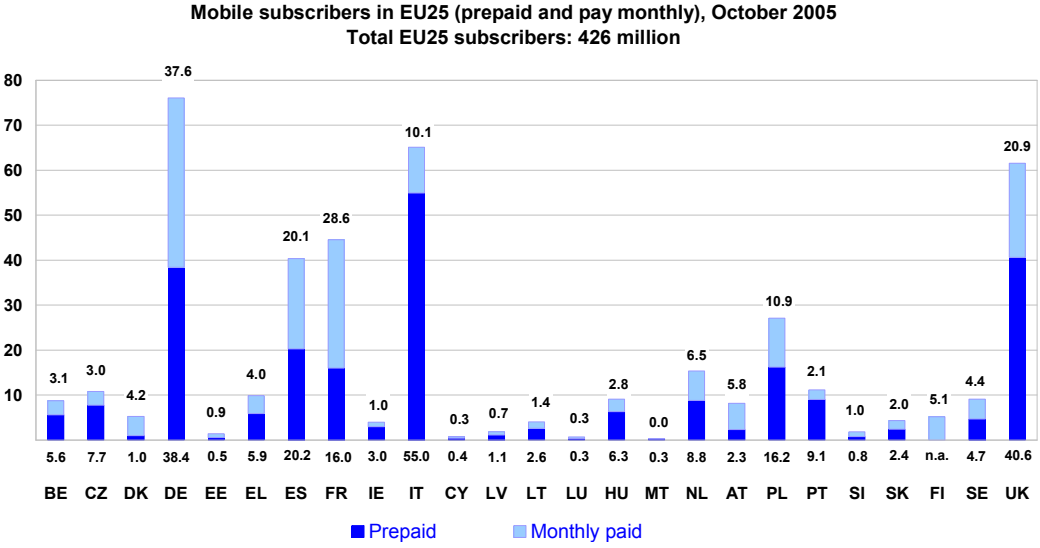
Figure 40



3G subscribers are included
BE, CZ, DK, EL, ES, NL, UK: July 2005
France: National market (mainland France and overseas departments)
Luxembourg: The penetration rate has been calculated on the basis of the national population only, without including trans-national commuters.
Sweden: The definition of pre-paid active subscribers has changed resulting in a 20% reduction in the number of pre-paid subscribers compared to previous years.

The following chart shows the number of subscribers and the split between post-paid and pre-paid subscribers.

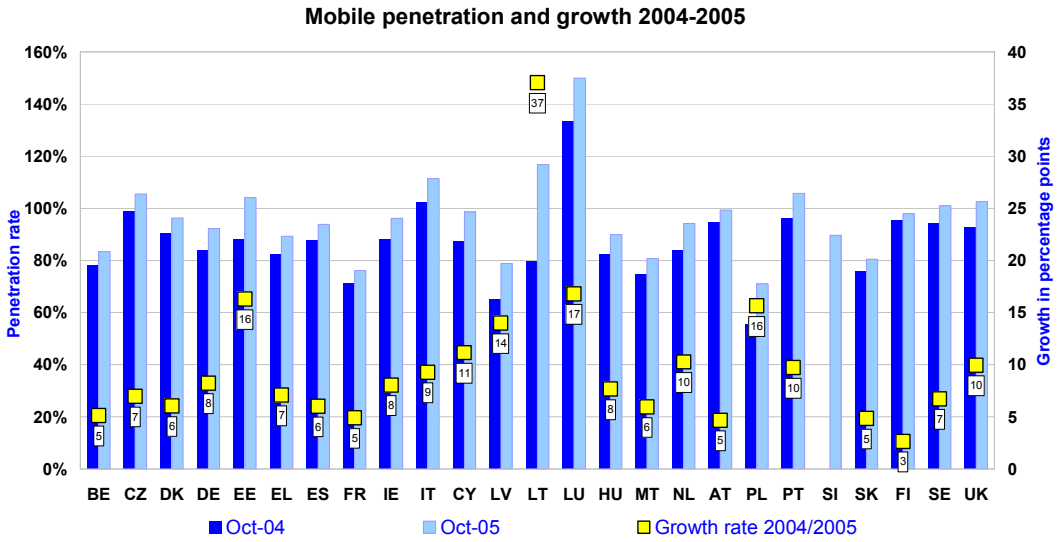
Figure 41



3G subscribers are included
BE, CZ, DK, EL, ES, NL, UK: July 2005
France: Mainland market only
Finland: Split pre-paid/post-paid not available
Luxembourg: The penetration rate has been calculated on the basis of the national population only, without including trans-national commuters.
Sweden: The definition of pre-paid active subscribers has changed resulting in a 20% reduction in the number of pre-paid subscribers compared to previous years.

Figure 42 displays the growth in mobile penetration expressed in percentage points. Data refer to October 2005 unless otherwise indicated.

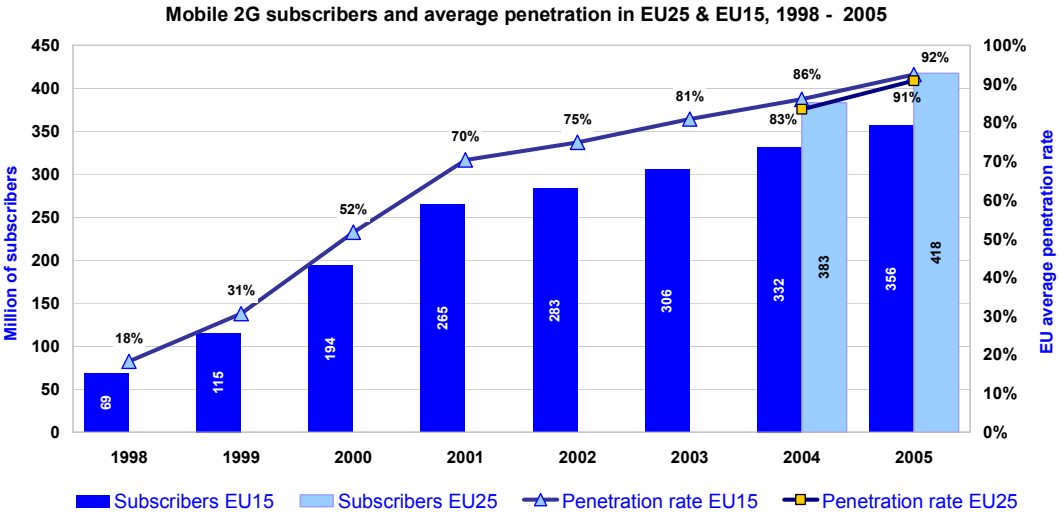
Figure 42



3G subscribers are included
BE, CZ, DK, EL, ES, NL, UK: July 2004-July 2005
Luxembourg: The penetration rate has been calculated on the basis of the national population only, without including trans-national commuters.
Sweden: The figure for 2004 has been adjusted to enable comparison with 2005.

The chart below displays the number of 2G subscribers in the EU between 1998 and 2005. Where possible, 3G subscribers have been excluded in order to compare the penetration rate in the past three years.

Figure 43



The figure for 2005 is overestimated since it includes 3G subscribers in a number of countries where the split 2G/3G is not available
BE, CZ, DK, EL, ES, NL, UK: July 2005

4.2. PLAYERS IN THE MOBILE MARKET

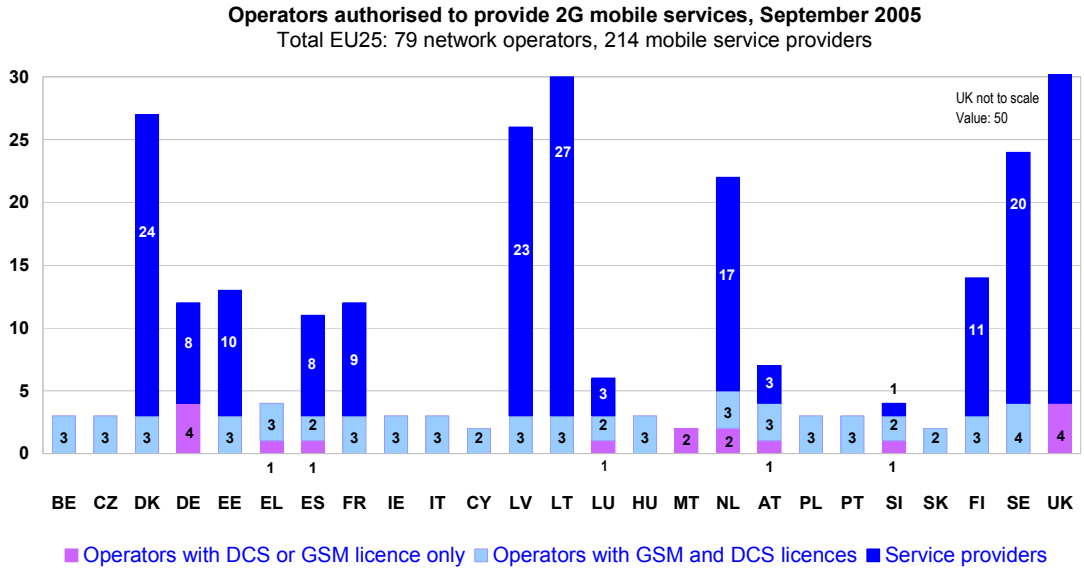
This section shows the number of mobile licences granted in each Member State for the provision of analogue, GSM 900, DCS 1800 and UMTS services.

The data on the number of licensed operators have been provided by the national regulatory authorities and refer to the situation in September 2005.

The following chart shows the number of operators licensed to provide digital mobile services (second-generation). 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 has been included where available (without distinction between local and national coverage). 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.

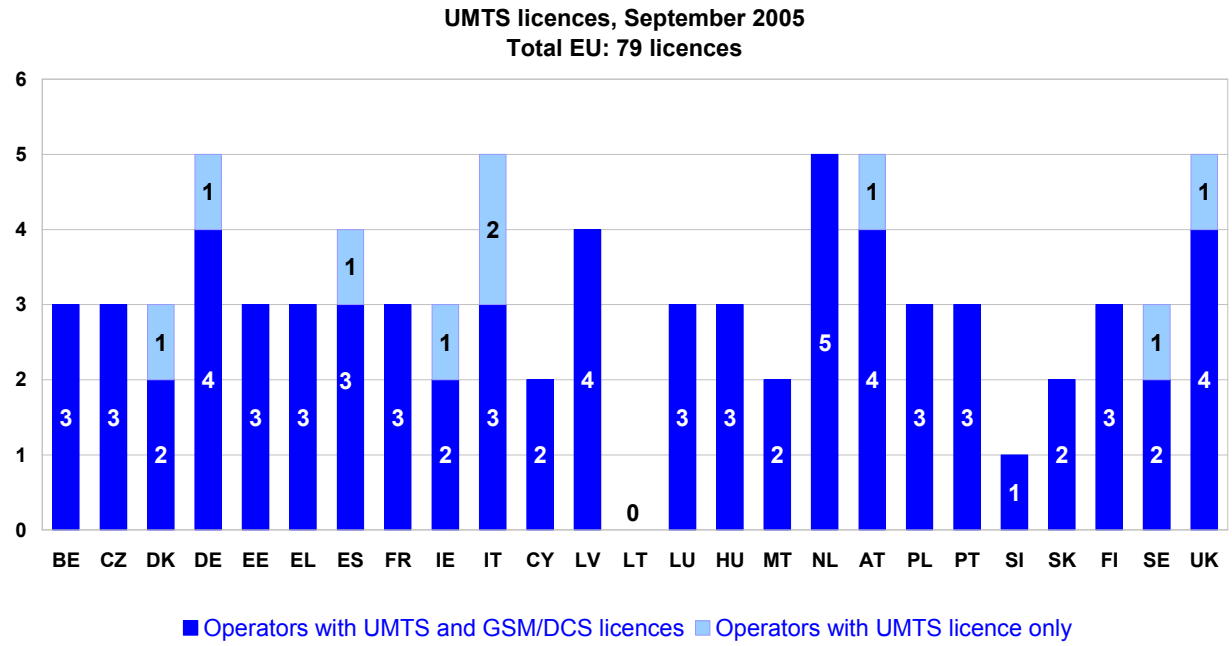
Figure 44



The Netherlands: 1 MVNO + 16 resellers
Estonia: Only 4 MVNOs are active
Lithuania: Only 4 service providers are active
Finland: Operators in the Aland Islands are not included

4.3. 3G PLAYERS

Figure 45



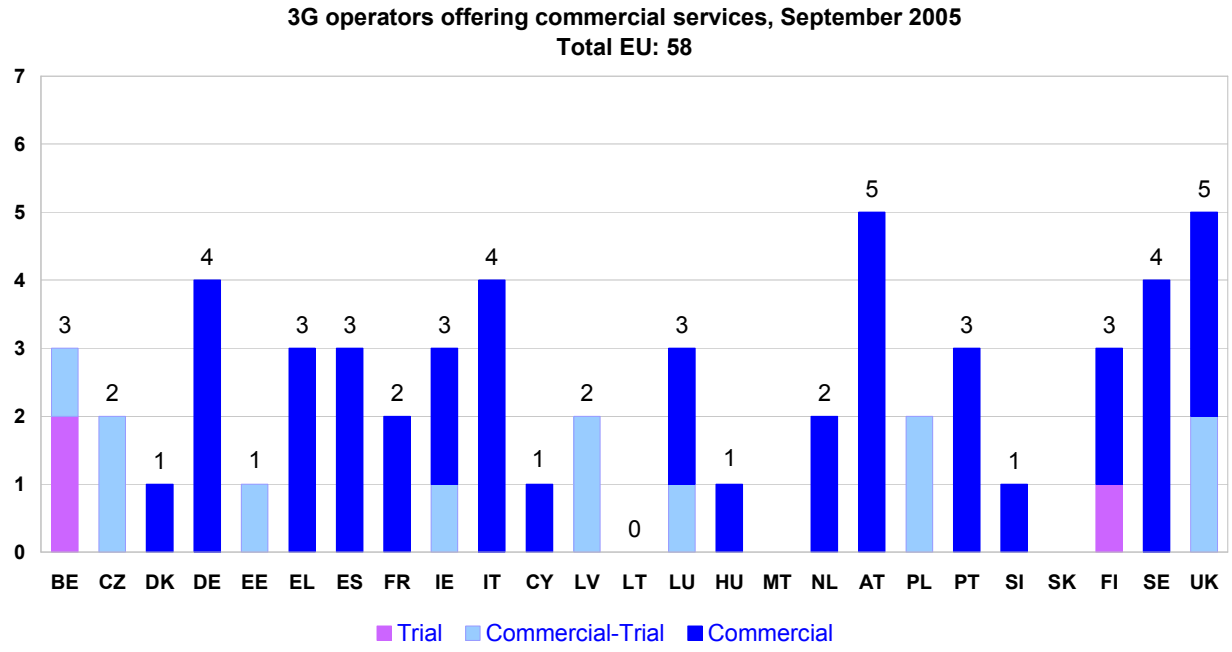
Latvia: Including one CDMA licence
Lithuania: Licence for trials in 2004. There were no 3G operators in 2005. The tender for 3G licences was announced on 17 November 2005.
Finland: Figures do not include local operators
Sweden: 1 UMTS license is held by "Svenska UMTS Licens AB", a company fully owned by "Sbenska UMTS-nat AB", shared 50 per cent each by Tele2 and Telia.

Figure 46 shows the status of the launch of 3G services (trial and commercial). The following categories are presented:

- Trial: Tests with a closed group of selected users
- Commercial-trial: Trials open to any users with special price packages.
- Commercial: Fully commercial services open to any users at standard tariffs.

Services can be provided by means of data-cards or handsets or both together.

Figure 46



Denmark: In November 2005 a second operator launched commercial services. At least two service providers have launched commercial services using this operator's network
Estonia: Commercial operations started on 22 October 2005
France: In November 2005 a third operator launched commercial services
Finland: Operators in the Aland Islands are not included
Lithuania: Licence for trials in 2004. There were no 3G operators in 2005. The tender for 3G licences was announced on 17 November 2005.

4.4. 2G OPERATORS' MARKET SHARES

The following charts show the market shares, based on subscribers, of the leading operator and the main competitors in the second generation mobile market.

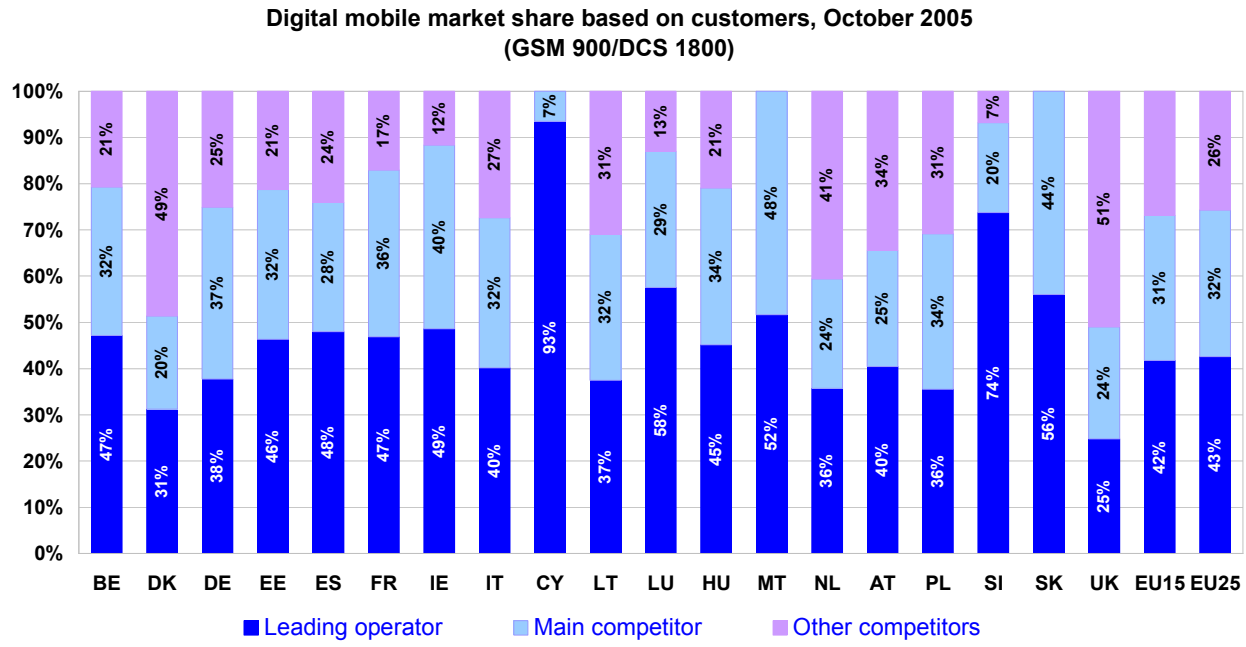
Operators' market shares have been calculated for the overall mobile market (including analogue, DCS 1800/GSM 900 and UMTS subscribers). There are analogue subscribers in Czech Republic, Italy, Poland, Slovenia, Slovakia and Sweden.

Data concerning market shares are based on the data supplied by the NRAs. Data on market shares in Czech Republic, Greece, Latvia, Portugal, Finland and Sweden are confidential.

In a few countries there exist discount mobile operators which are partially or fully owned by other mobile operators. Mobile customers that have signed-up with these discount operators have been considered separately.

In the United Kingdom, Ireland, Latvia and Lithuania the fixed incumbent operator does not have a mobile subsidiary. In all other countires, with the exception of Luxembourg, Hungary, Malta, Poland and Slovakia, the leading operator is a subsidiary of the incumbent fixed network operator. Figure 47 shows the shares of the leading operator, the main competitor and the other competitors in the mobile market.

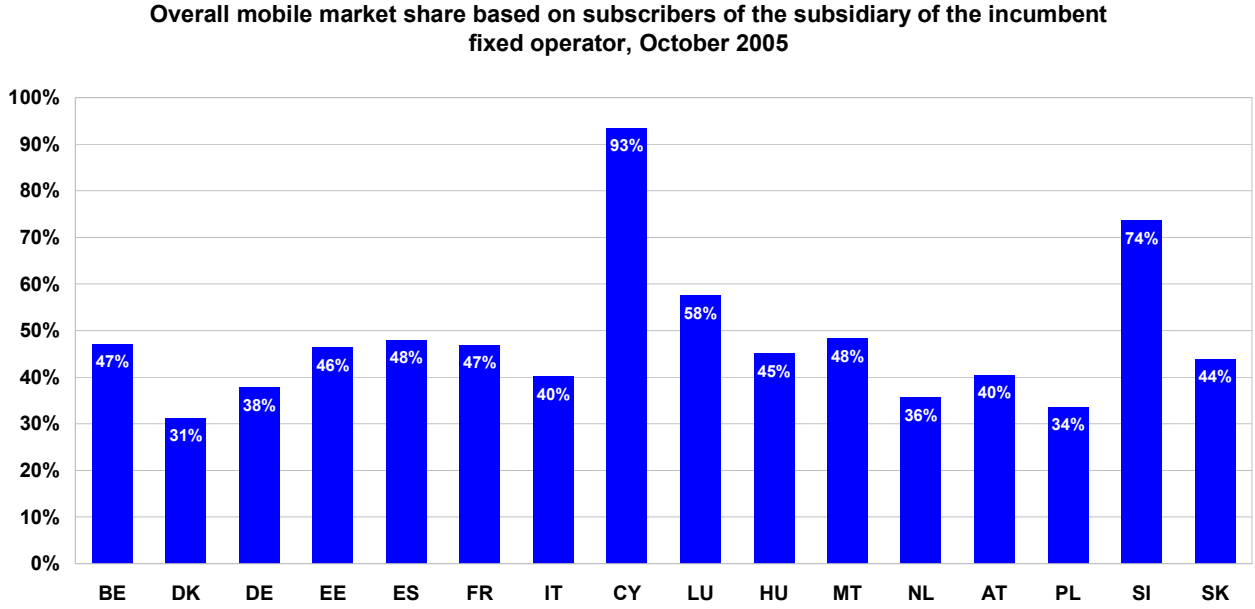
Figure 47



Data on market shares in CZ, EL, LV, PT, FI and SE are confidential

The following chart shows the market share, in terms of subscribers, of the mobile subsidiary of the incumbent fixed operator. In the United Kingdom, Ireland, Latvia and Lithuania the fixed incumbent operator does not have a mobile subsidiary. As stated above, users of discount mobile operators controlled by the mobile subsidiaries of the incumbent fixed operators have not been included in the chart below.

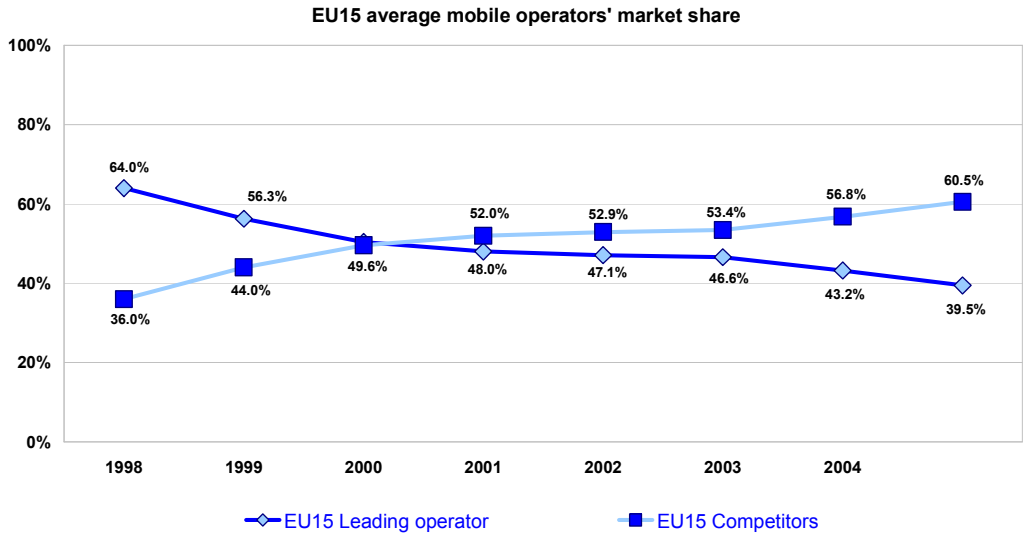
Figure 48



Data on market shares in CZ, EL, PT, FI and SE are confidential
No mobile subsidiary of the fixed incumbent operator in IE, LV, LT and UK

Competition in the mobile sector is intensifying. Figure 49 shows that the average market share of leading operators, based on subscribers in the EU15 Member States, has dropped from 43.2% last year to 39.5% this year.

Figure 49



4.5. MOBILE BASKET

The analysis of national (as opposed to roaming) mobile services is based on the OECD baskets for digital mobile services. Due to significant changes in usage patterns, the OECD baskets have been redefined with effect from August 2002. The new baskets are not comparable 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 revised baskets are used in this analysis. There are 3 different baskets, based on low, medium and high usage levels. All packages analysed in this study are Post-Paid packages. Some of the main properties of the new OECD baskets are:

- Low usage basket with:
  25 outgoing calls per month + 30 SMS
  42% of calls are to fixed line phones, 58% to mobile phones
- Medium usage basket with:
  75 outgoing calls per month + 35 SMS messages
  36% of calls are to fixed line phones, 64% to mobile phones
- High usage basket with:
  150 outgoing calls per month + 42 SMS messages
  40% of calls are to fixed line phones, 60% to mobile phones

Each basket also has a unique definition of time of day distribution and call duration, and includes the monthly rental, and any registration charges distributed over 3 years.

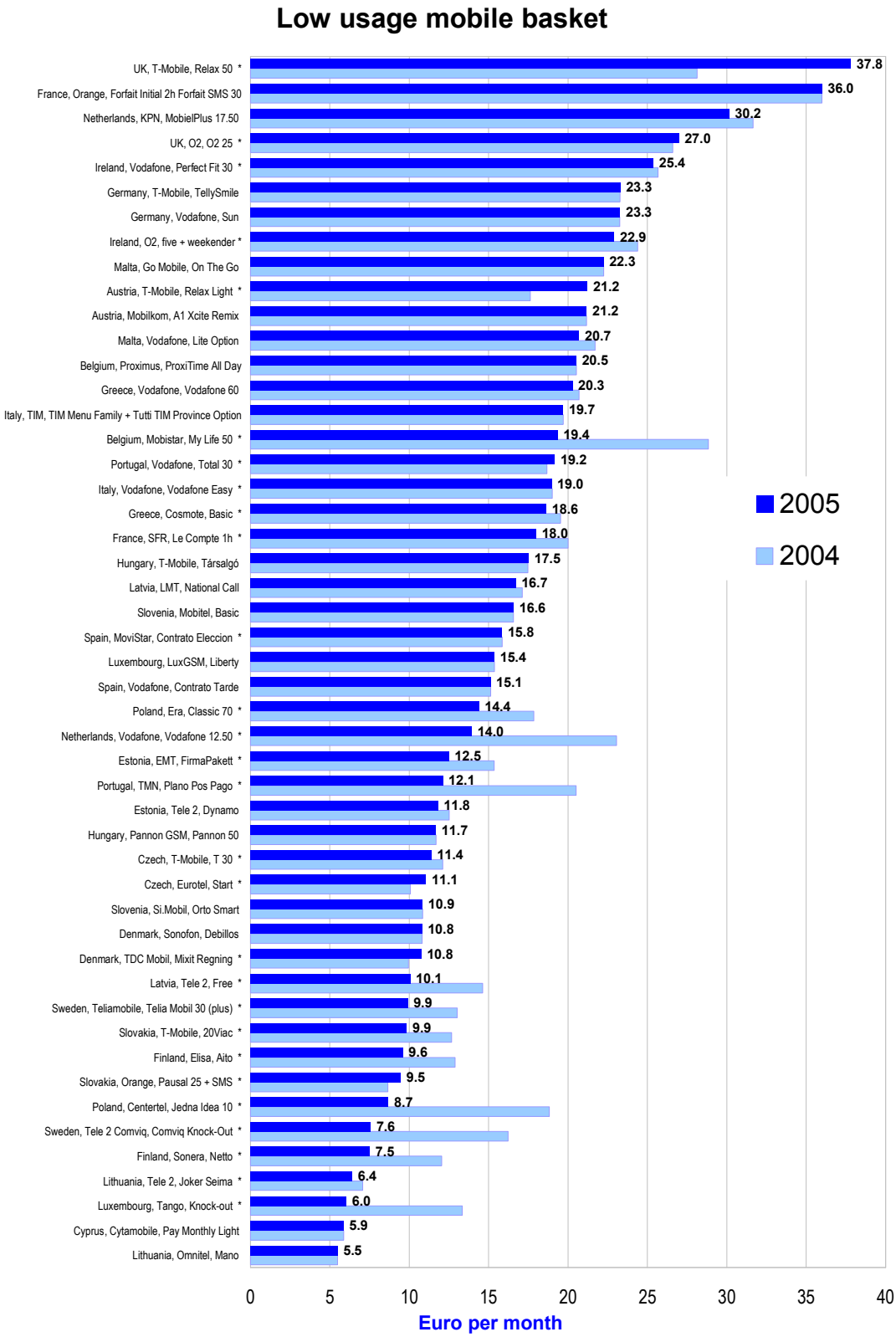
The two most prominent operators in each country are covered, based on available subscriber numbers. All relevant packages from each operator are considered, but the final results presented here only show the cheapest package for each basket.

The asterisk (*) behind the package name means that the package name and its structure have changed between 2004 and 2005. The package chosen at any time is the cheapest package from that provider for the usage profile in question. This may give rise to significant price changes over time.

The balance of fixed and usage in the mobile baskets varies considerably between countries, as the preferred packages in some countries contain a lot of calling time included in the fixed charge.

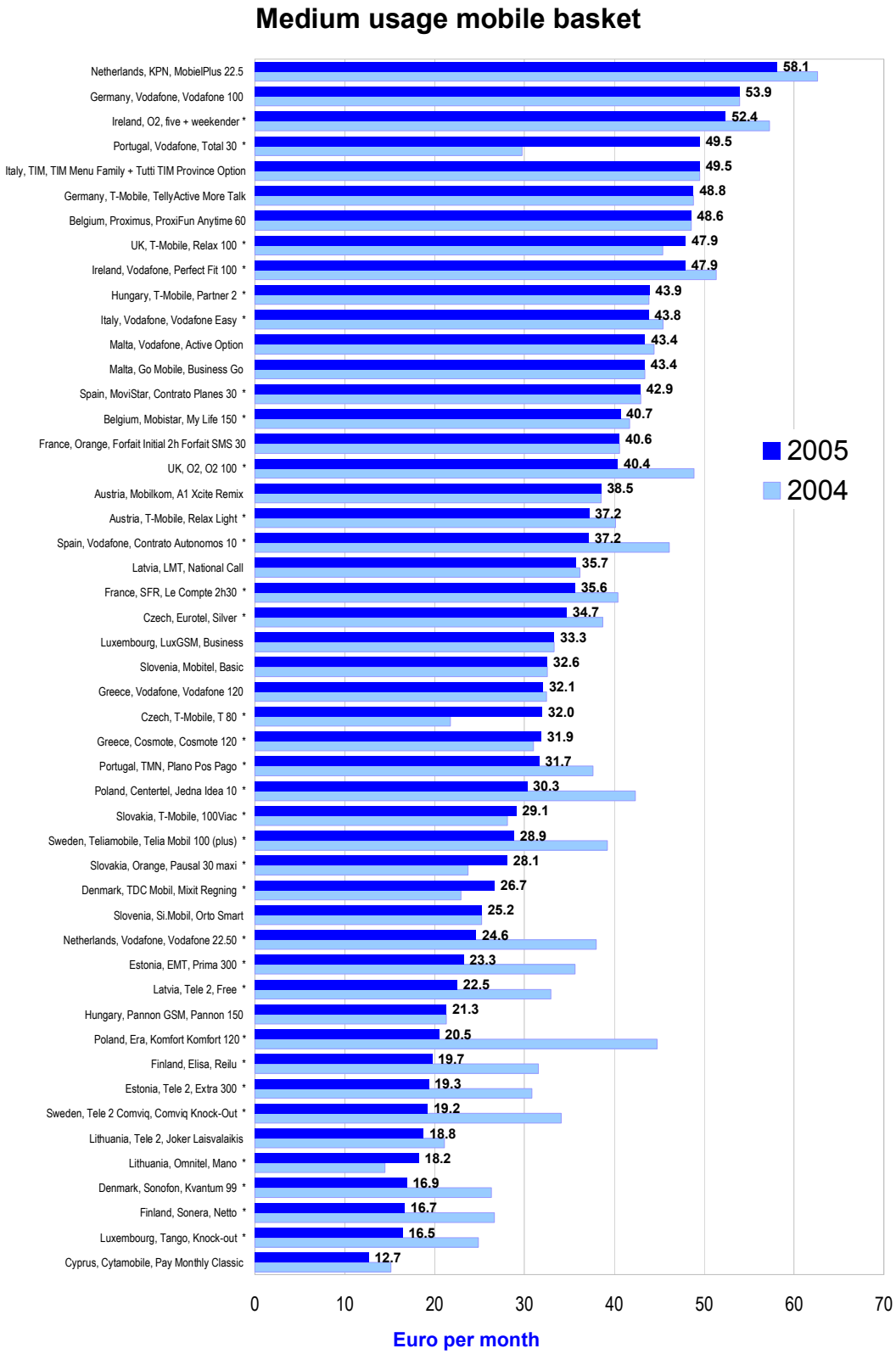
A full description of the methodology can be found at the end of this report.

Figure 50



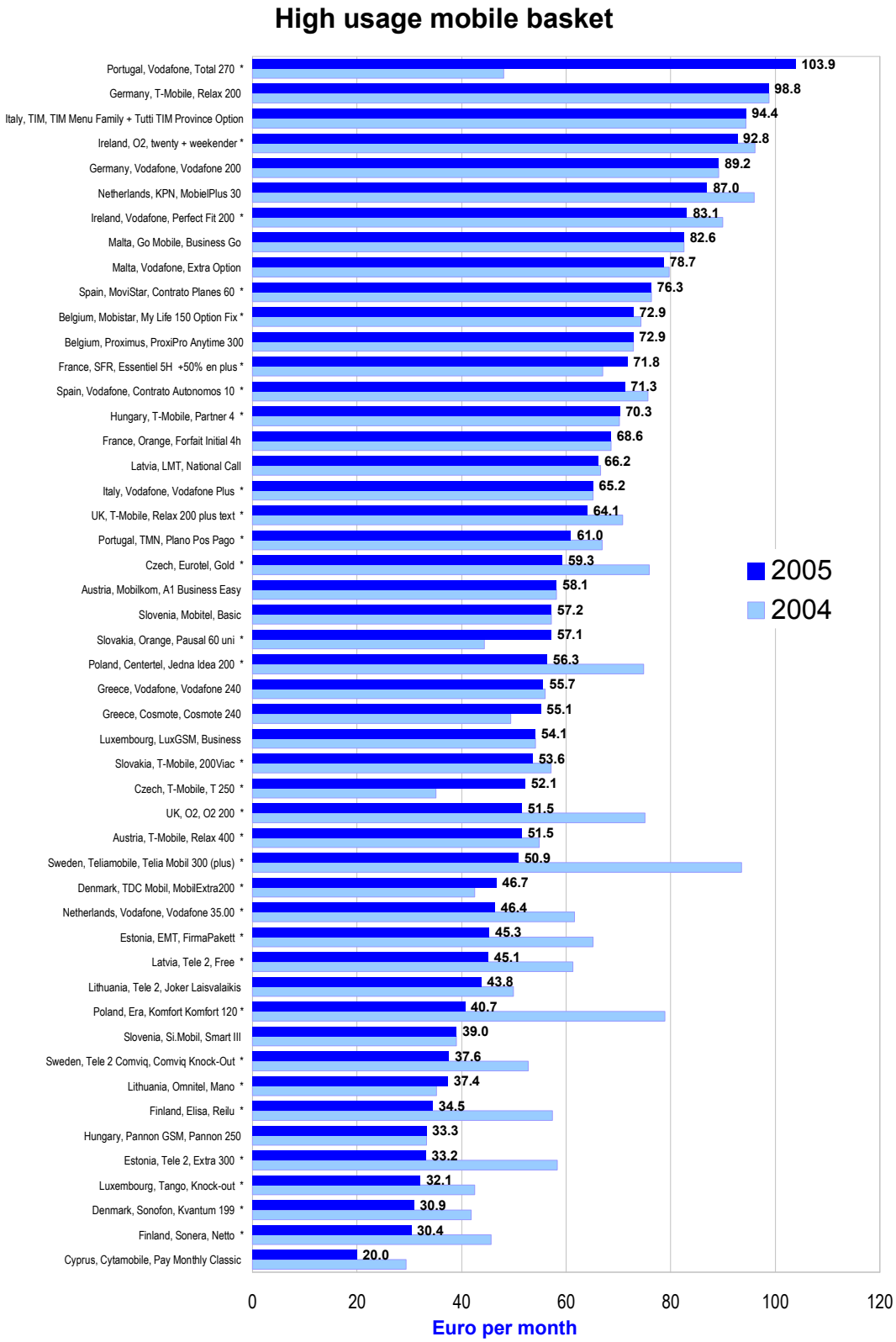
Entries with an asterisk (*) after the name have changed the package name and structure since last year.

Figure 51



Entries with an asterisk (*) after the name have changed the package name and structure since last year.

Figure 52



Entries with an asterisk (*) after the name have changed the package name and structure since last year

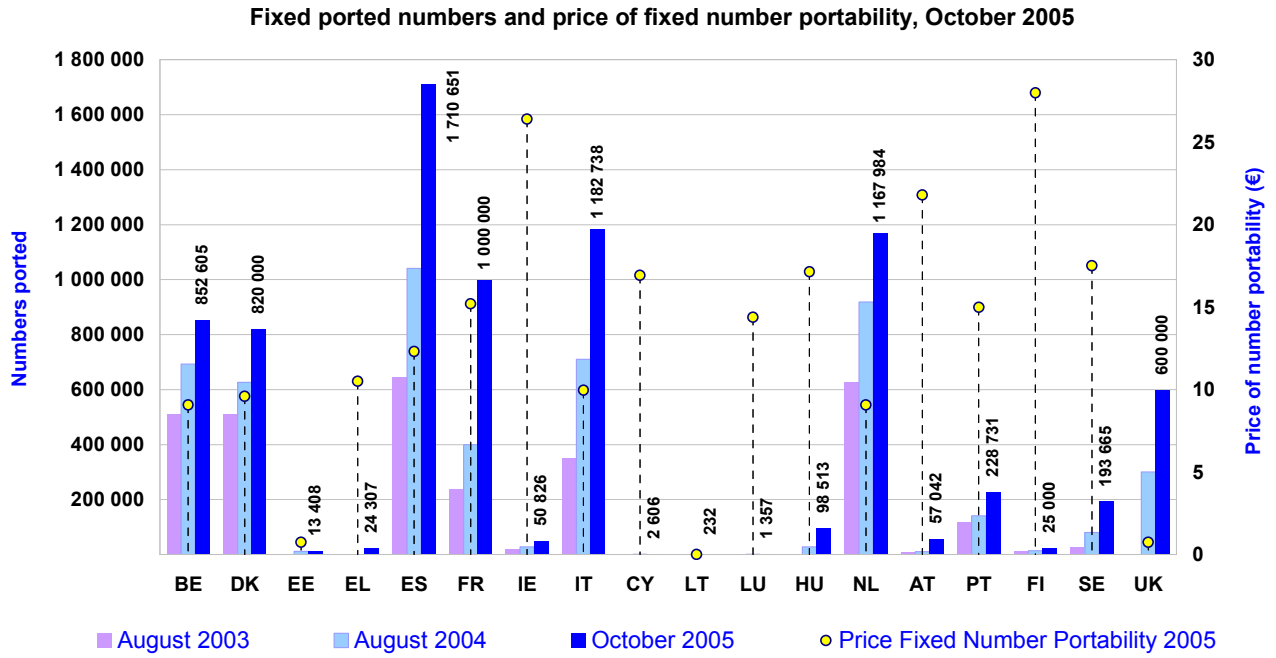
5. NUMBER PORTABILITY

5.1. FIXED NUMBER PORTABILITY

Fixed number portability (FNP) enables subscribers to retain their number when they move from one operator to another. Although it was slow to take off, there has been major increase in numbers ported during this year suggesting a more competitive environment where customers are changing operator in greater numbers.

Prices for fixed number portability refer to the amount charged by the incumbent to the recipient operators for porting a telephone number. This price may vary depending on a number of factors.

Figure 53

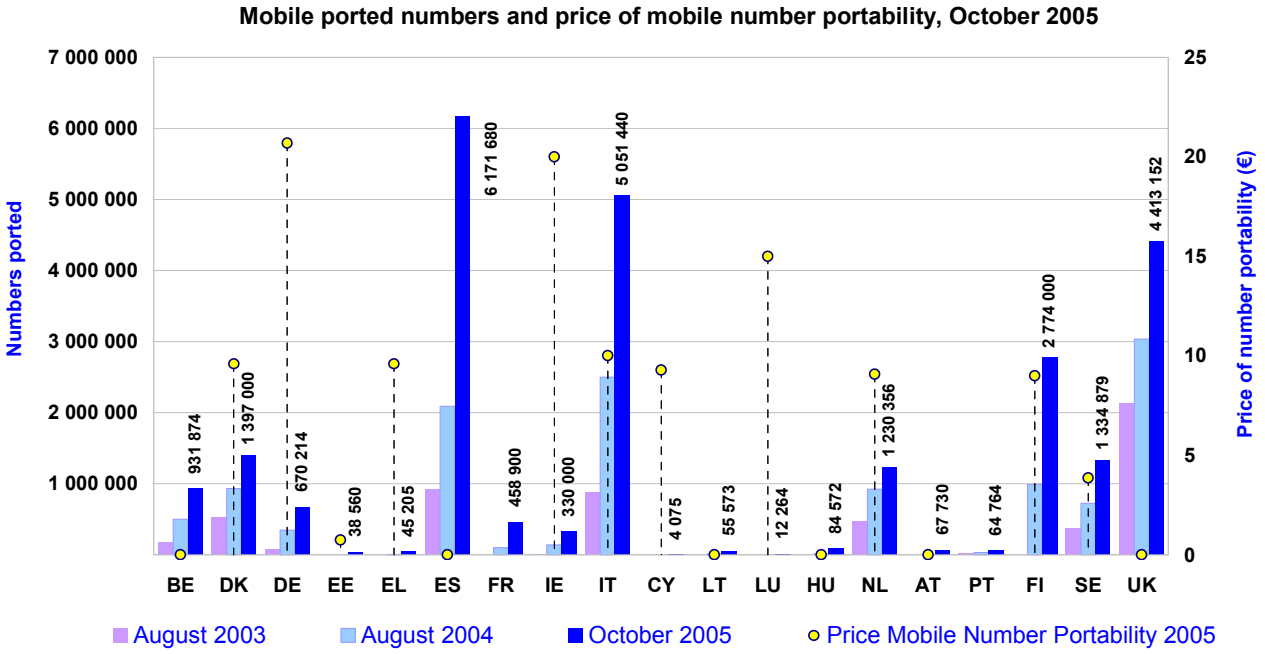


Belgium: Figures refer to July 2005 and include non-geographic numbers. Price refers to a simple installation. For a complex installation there is a € 89.7 one-off fee.
Czech Republic: Data not comparable.
Denmark: Figures refer to July 2005 and include non-geographic numbers. Numbers that have been ported repetitively are counted several times
Spain, Greece and Netherlands: Figures include non-geographic numbers.
Germany, Slovenia: Data not available. In Germany the price is € 6.74
France: Maximum price is € 15.
France, Italy, Lithuania, Austria, Portugal, Sweden: Geographic numbers only.
Ireland: Geographic numbers only. Price for a single line. Price falls to € 3.96 per line for orders above 100 lines.
Cyprus: Data as at 1 June 2005
Hungary, Portugal: The figure does not refer to aggregated portings. If the same number has been ported twice in the same year only one transaction is recorded.
Netherlands: The price for number portability (€ 9.08 incl. VAT) refers to the maximum amount each recipient-operator (fixed and mobile) is allowed to charge to the end user for the administrative costs regarding the porting of the number.
Latvia, Malta, Poland and Slovakia: Fixed number portability not available
Finland: The price is an average, as charges vary according to each operator, from 10 to 151 euros.
Sweden: Aggregated number of transactions for geographic-numbers only. The exact amount of ported numbers is not available.
France, United Kingdom: NRA estimates.

5.2. MOBILE NUMBER PORTABILITY

Mobile number portability (MNP) only became compulsory in the EU with the entry into force of the new regulatory framework on 25 July 2003. However, many Member States had already introduced MNP in advance to develop competition on the mobile market. Mobile number portability (MNP) allows subscribers to retain their number when they move from one operator to another. The number of ported numbers has increased significantly during the year.

Figure 54



Belgium: Figures refer to July 2005. Price refers to a simple installation. For a complex installation there is a € 23.41 one-off fee.
Denmark: Numbers that have been ported repetitively are counted several times.
Ireland: Data refer to July 2005
Cyprus: Data refer to June 2005
Netherlands: The price for number portability (€ 9.08 incl. VAT) refers to the maximum amount each recipient-operator (fixed and mobile) is allowed to charge to the end user for the administrative costs regarding the porting of the number.
Czech Republic, Latvia, Malta, Poland, Slovakia: Mobile number portability unavailable
France, Hungary, Austria and United Kingdom: Price is subject to commercial negotiation. In France the maximum price is € 15.
Hungary: The figure does not refer to aggregated portings. If the same number has been ported twice in the same year only one transaction is recorded.
Slovenia: Data not available.
Finland, Sweden: Number of transactions. The exact amount of ported numbers is not available.

6. BROADBAND ACCESS AND PRICING

6.1. BROADBAND ACCESS DEFINITIONS

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 has been provided by 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 on a regular basis in January, July and October. Unless otherwise stated, the data below refer to the market situation at 1 October 2005.

The definitions used in the charts and data below are as follows: :

- Fully unbundled lines: Fully unbundled lines supplied to other operators, excluding experimental lines. In the case of full unbundling, a copper pair is rented to a third party for its exclusive use. As fully unbundled lines (ULL) supplied by the incumbent operator to the 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.

- Shared access lines supplied by the incumbent to new entrants: Shared access lines supplied to other operators, excluding experimental lines. In the case of shared access, the incumbent continues to provide telephony service, while the new entrant delivers high-speed data services over that same local loop.

- Bitstream access: Supplied to new entrants. Bitstream access refers to the situation where the incumbent installs a high-speed access link to the customer premises and then makes this access link available to third parties, to enable them to provide high-speed services to customers. Bitstream depends in part on the PSTN and may include other networks such as the ATM network. Bitstream access is a wholesale product that consists of the provision of transmission capacity in such a way as to allow new entrants to offer their own, value-added services to their clients. The incumbent may also provide transmission services to its competitor, to carry traffic to a 'higher' level in the network hierarchy where new entrants may already have a broadband point of presence.

- Simple resale: 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. Resale offers are not a substitute for bitstream access because they do not allow new entrants to differentiate their services from those of the incumbent (i.e. where the new entrant simply resells the end-to-end service provided to him by the incumbent on a wholesale basis).

- Incumbent's DSL lines: Provided to end users by the incumbent, its subsidiaries or partners (for example an associated company such as a joint venture providing ISP services),

- WLL: Internet broadband connections by means of wireless local loop (sometimes referred to as fixed wireless access)

- Cable modem: Internet broadband connections by means of cable TV access

- L.L.: Internet broadband connections by means of dedicated capacity (Leased Lines) provided over metallic copper pairs, including tail ends or partial circuits. “Incumbent's leased lines” includes only retail lines and excludes lines provided to other operators. “New entrants' leased lines” includes all retail lines provided to end users, even if based on wholesale lines supplied by the incumbent.

- Other: Internet broadband connections by means of 3G, satellite, fibre optic, powerline communications, etc.

- Retail access: Access provided to end users.

- Incumbents are defined as the organisations enjoying special and exclusive rights or *de facto* monopoly for provision of voice telephony services before liberalisation, regardless of the role played in the provision of access by means of technologies alternative to the PSTN.

- “New entrants” refers to alternative telecommunications operators, as well as internet service providers (ISPs).

- Broadband capacity: Capacity equal to, or higher than, 144 Kbit/s.

6.2. WHOLESALE ACCESS

This section shows the availability of wholesale access lines supplied by incumbent operators to new entrants. Separate figures are provided for fully unbundled lines, shared access and bitstream access.

Data from the New Member States are included when available. As can be seen from the table at the end of this section, data are not always available, especially as regards wholesale lines.

The table below shows the number of agreements between operators for ULL, shared access, bitstream and resale as at 1 October 2003, 2004 and 2005.

Table 1 Number of agreements for full ULL, shared access, bitstream access and resale, 2003-2005.

	N. of agreements on fully unbundled lines			N. of agreements on shared lines			N. of agreements on Bitstream access			N. agreements on resale lines		
	Oct. 03	**Oct. 04**	**Oct. 05**	**Oct. 03**	**Oct. 04**	**Oct. 05**	**Oct. 03**	**Oct. 04**	**Oct. 05**	**Oct. 03**	**Oct. 04**	**Oct. 05**
BE	8	8	8	8	8	8	10	11	11	22	25	27
CZ	0	4	4	0	2	4	0	0	n.a.	0	21	19
DK	13	17	17	4	10	6	9	10	11	0	0	10
DE	81	86	99	7	9	16	0	0	3	0	8	n.a.
EE	0	7	n.a.	0	0		0	0		21	3	1
EL	7	11	12	0	1	1	0	8	10	0	0	
ES	9	11	13	9	11	12	37	30	30	n.a.	n.a.	n.a.
FR	9	13	21	9	13	21	5	5	5	20	20	20
IE	1	3	3	1	3	3	2	8	9	-	0	
IT	31	27	26	2	4	6	150	211	234	0	0	
CY	0	n.a.		0	n.a.		0	n.a.		n.a.	n.a.	n.a.
LV	0	0	2	0	1	2	0	0	11	0	11	
LT	0	0		0	0		0	17	16	0	0	
LU	2	3	3	2	3	4	0	0		1	4	5
HU	0	2	6	0	0	1	0	18	17	0	0	
MT	0	0		0	0		0	0		0	16	19
NL	12	12	10	12	12	10	1	1	1	0	0	
AT	17	20	26	0	20	26	38	38	38	0	0	
PL	0	0		0	0		0	0		0	0	
PT	4	2	2	n.a.	1	1	8	9	8	0	0	
SI	0	0		0	1	3	0	4	10	0	0	3
SK	0	0		0	0		0	0		0	0	
FI	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
SE	74	116	122	74	116	122	26	26	26	12	n.a.	n.a.
UK	57	59	44	7	12	22	n.a.	28	49	602	801	780
EU	**325**	**401**	**418**	**135**	**227**	**268**	**286**	**424**	**489**	**678**	**909**	**884**

Figure 55 shows the distribution of wholesale access lines supplied by the incumbent operators to new entrants. There has been a huge surge of 100% in wholesale unbundled local loops (fully unbundled lines and shared access lines), from 4.3 million in October 2004 to more than 8.7 million, in October 2005, representing 5% of the PSTN lines in the EU15. This increase comprises approximately 2.4 million fully unbundled lines and 2 million shared access lines. The number of shared access lines increased from 1 534 956 to 3 558 205 lines, while fully unbundled lines went up from 2 814 201 to 5 212 691.

Figure 55

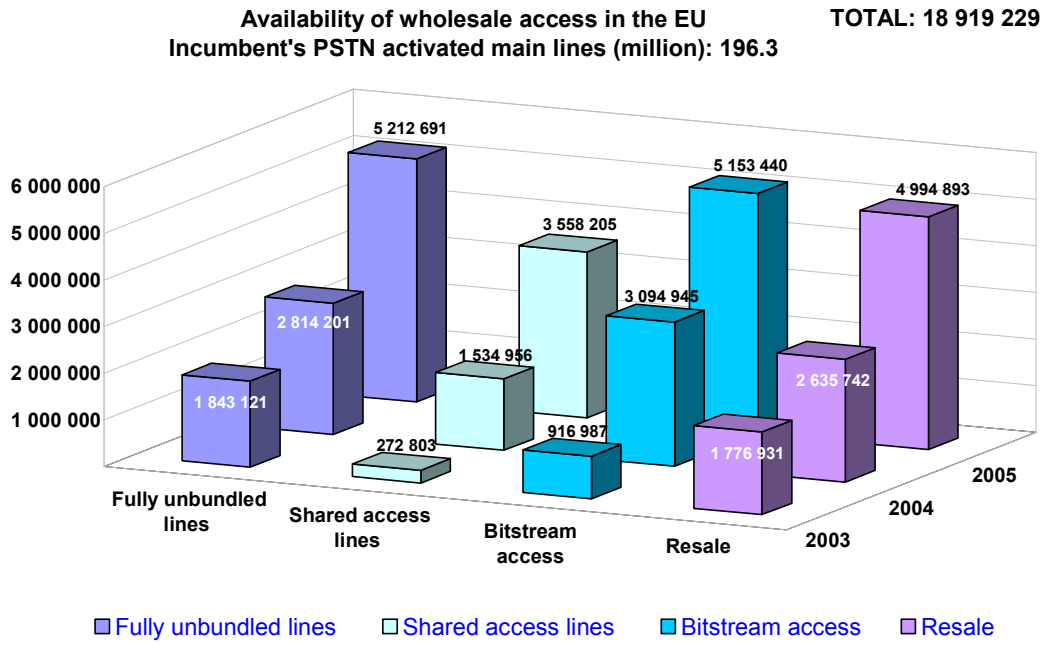


Figure 56

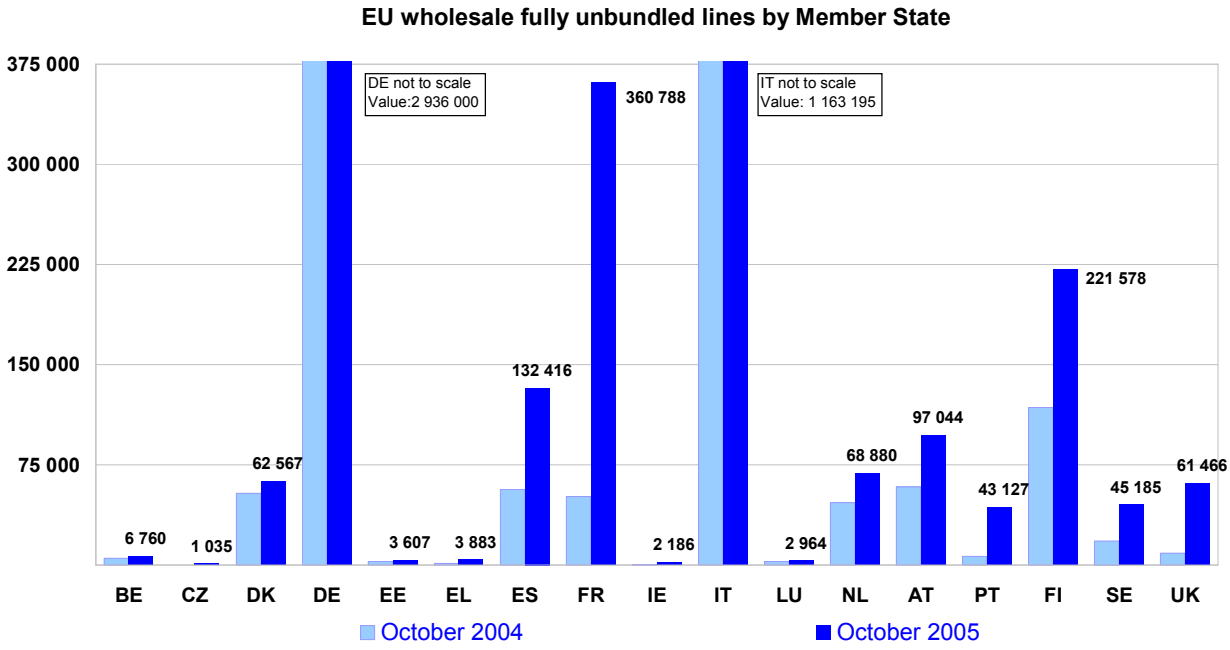


Figure 57

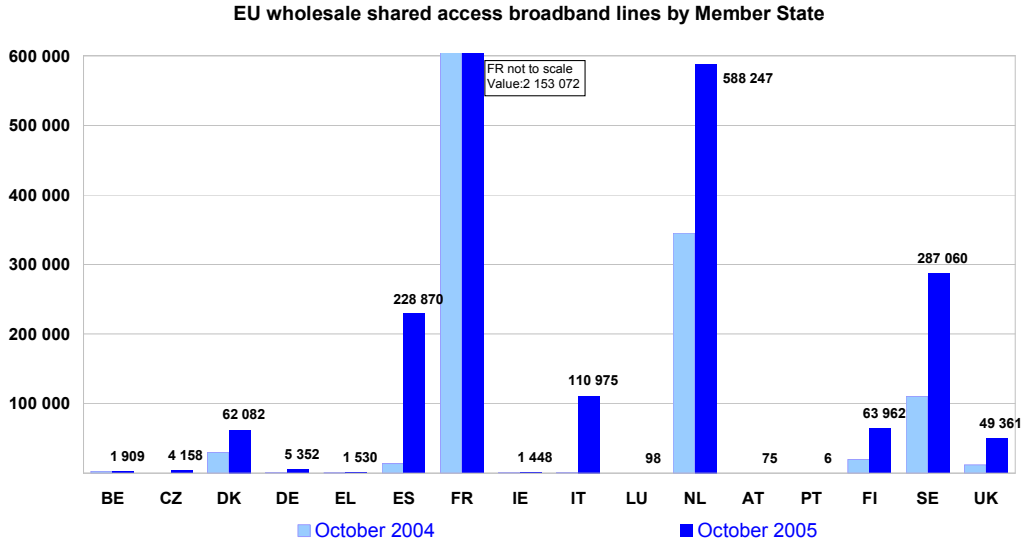
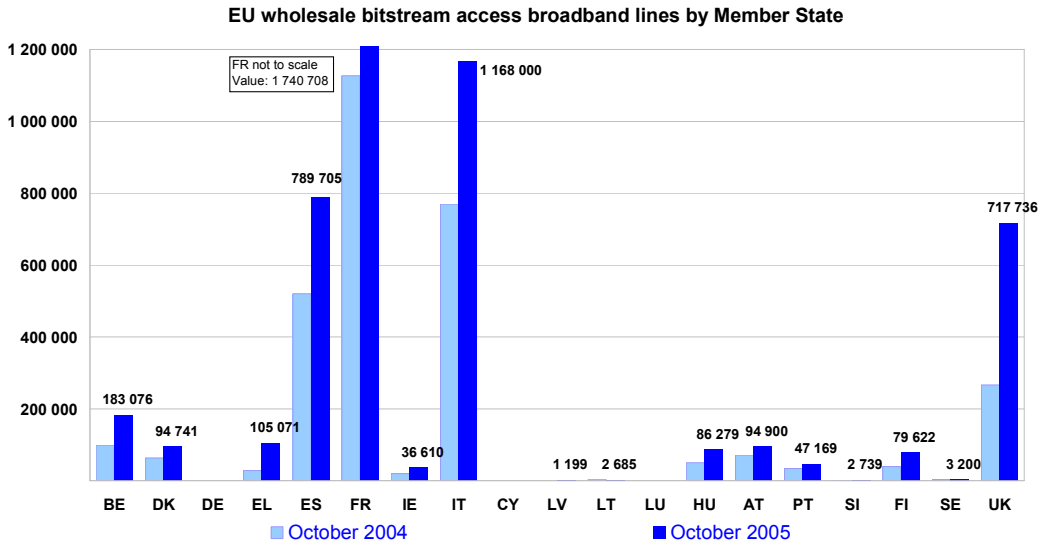


Figure 58



Data for 2004 may include lines sold to the incumbents' retail divisions and ISPs

6.3. RETAIL BROADBAND ACCESS

This section provides information on the deployment of broadband access lines by incumbents (and their subsidiaries or partners) and by new entrants (alternative telecom operators or Internet Service Providers) to end-users.

Internet broadband access can be provided by 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.)

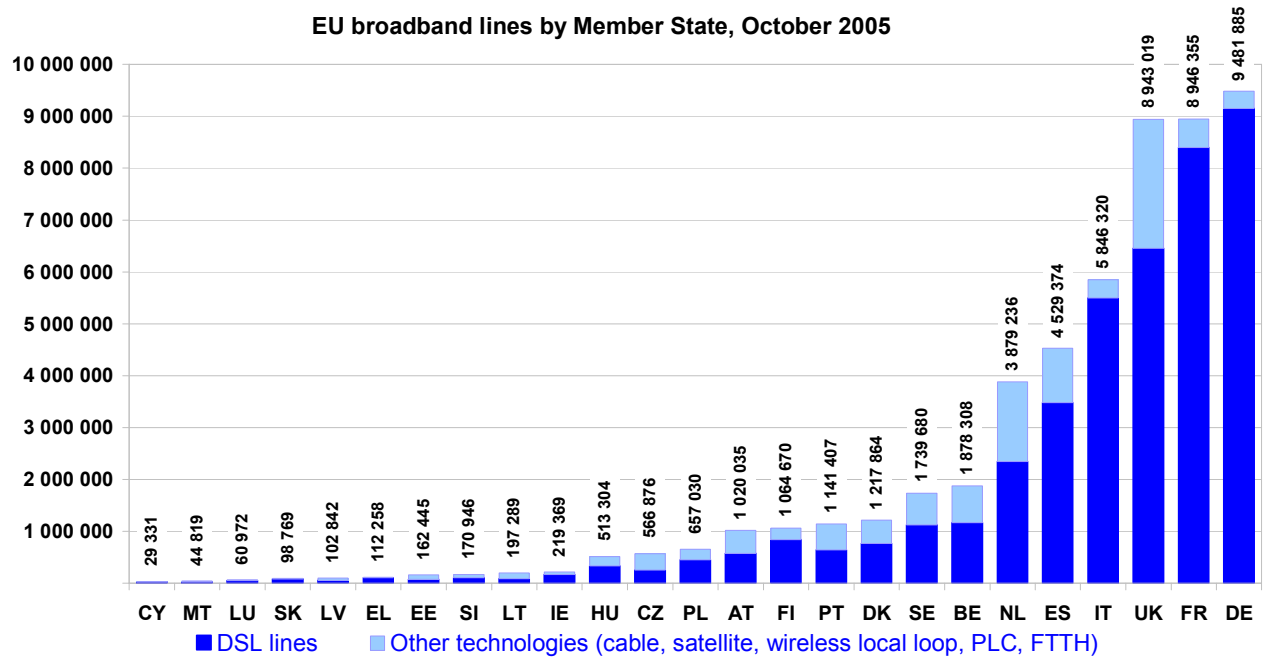
New entrants' DSL lines can be provided to end users by means of fully unbundled or shared access lines, bitstream access or resale.

In all the charts below on fixed broadband retail lines the data refer to 1 October 2005. In some cases only estimates are available.

The charts below only include fixed broadband lines.

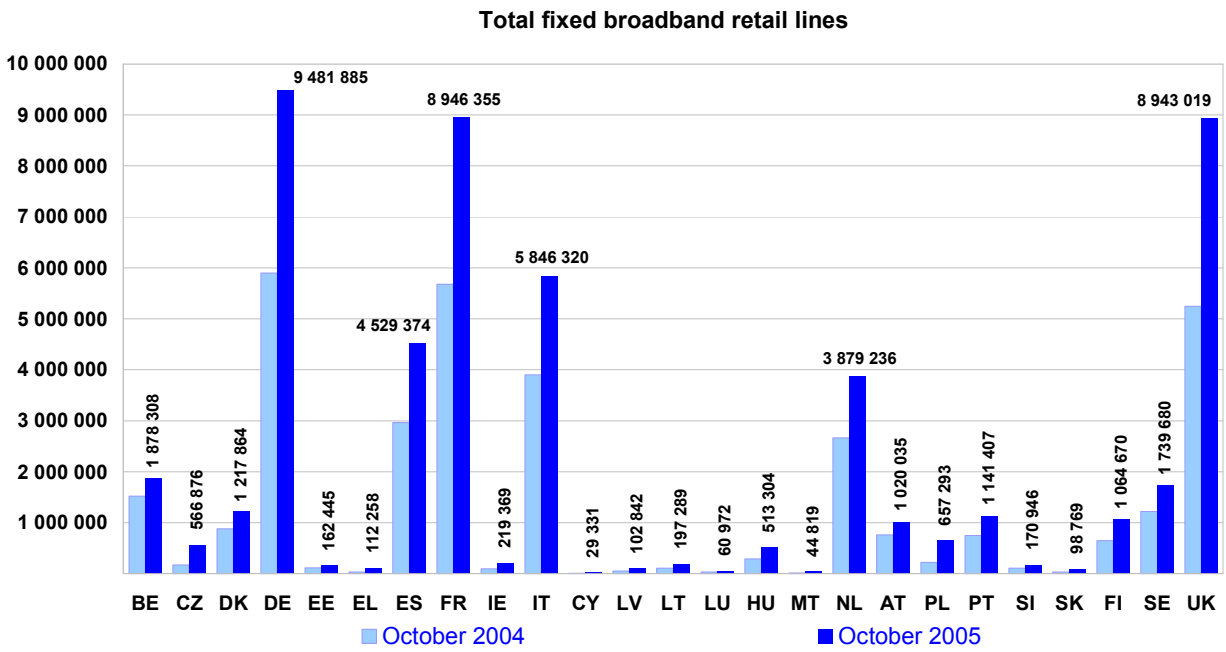
Figure 59 shows the total number of broadband access lines for each Member State, provided by both incumbents and new entrants, and including all types of fixed broadband connections.

Figure 59



The following chart presents the number of broadband lines per Member State in October 2004 and October 2005.

Figure 60



The following two charts show the breakdown of broadband lines according to the two main types of technologies. Figure 61 shows the number of DSL lines. Cable modem is the most common alternative technology, followed by fibre to the home. Other technologies are still marginal.

Figure 61

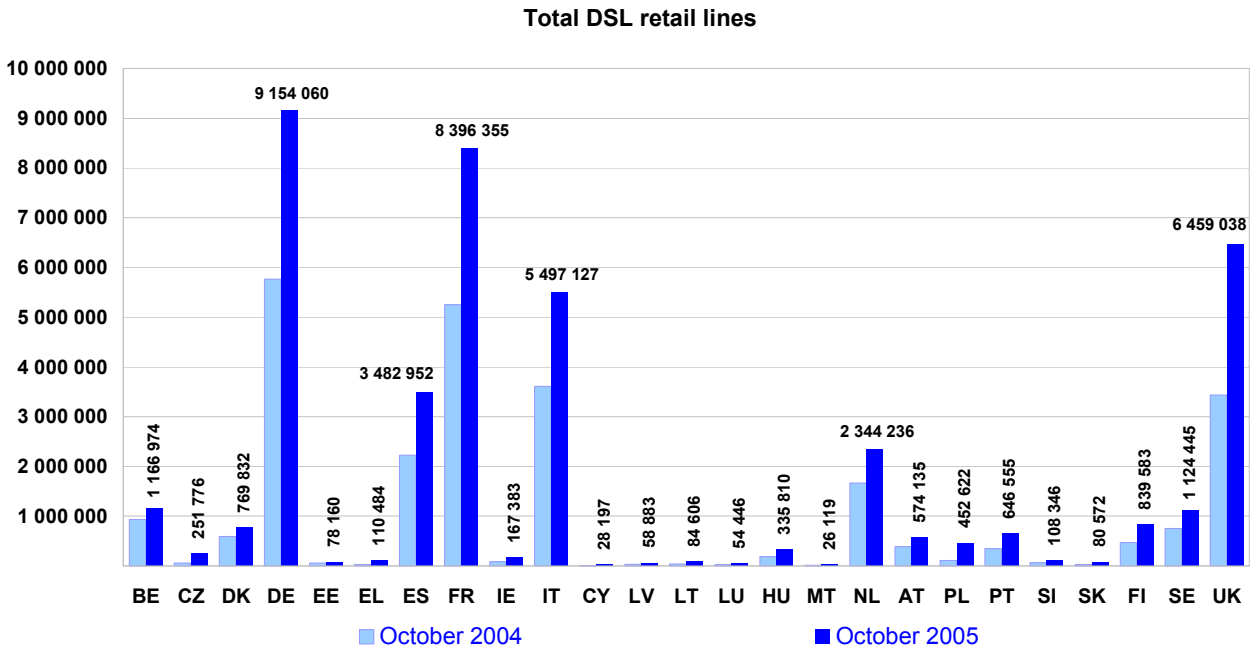
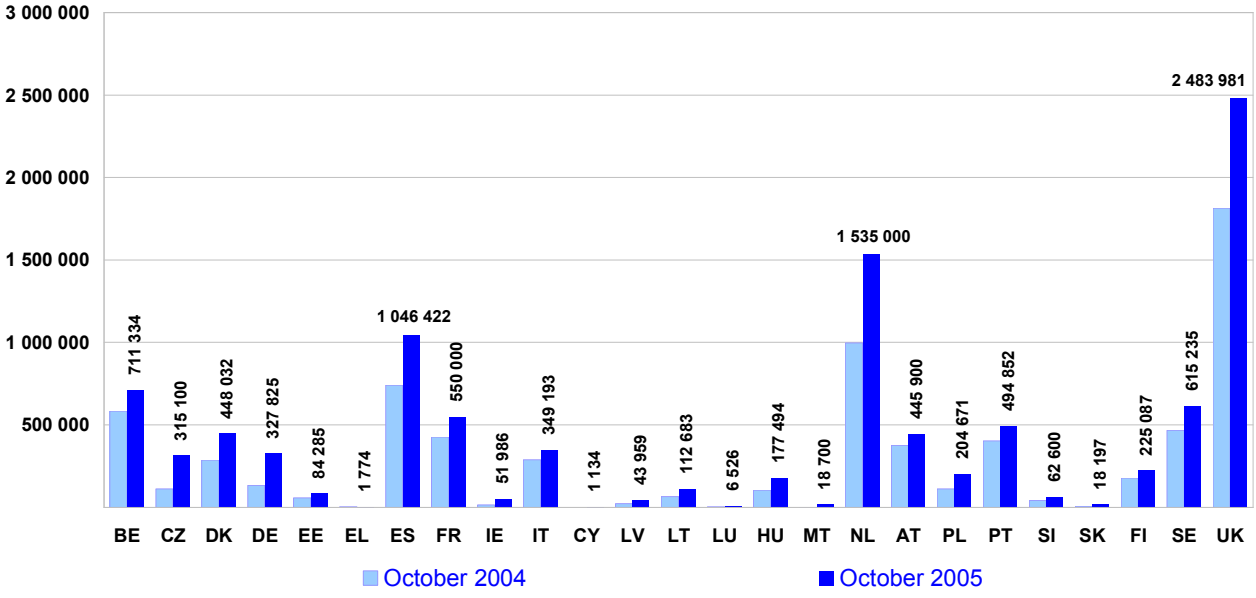
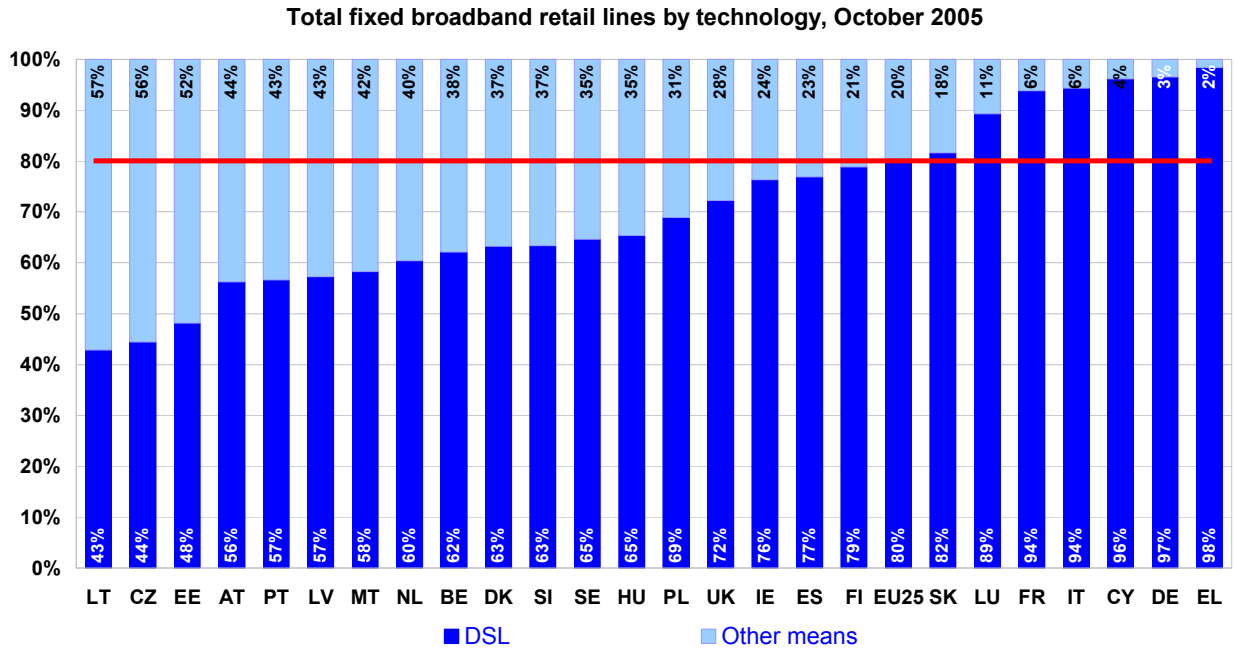


Figure 62



The following charts provide information on the national broadband markets according to the technology used and the type of operator. Figure 63 shows that DSL is the predominant technology in the EU. On average, 80% of the EU25 broadband lines use DSL technologies and only in three countries DSL lines represent less than 50% of the overall market.

Figure 63



With regard to the market share of fixed incumbent operators and new entrants, Figure 64 indicates that, on average, incumbent operators control 50% of broadband lines.

Figure 64

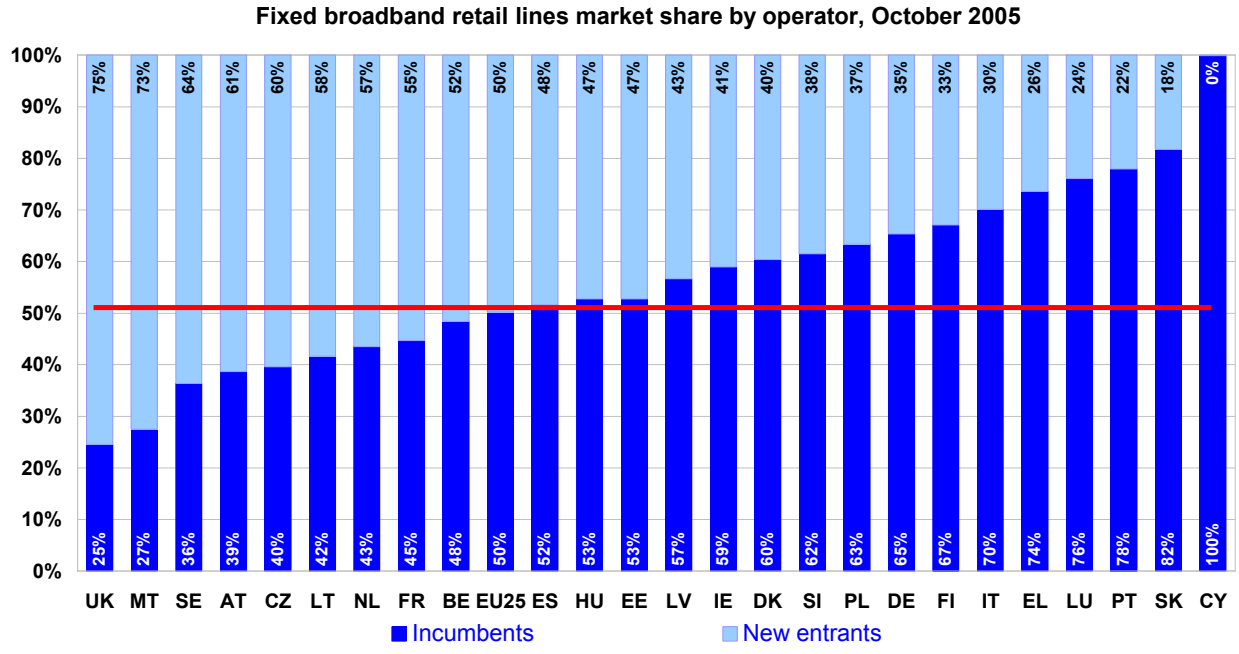
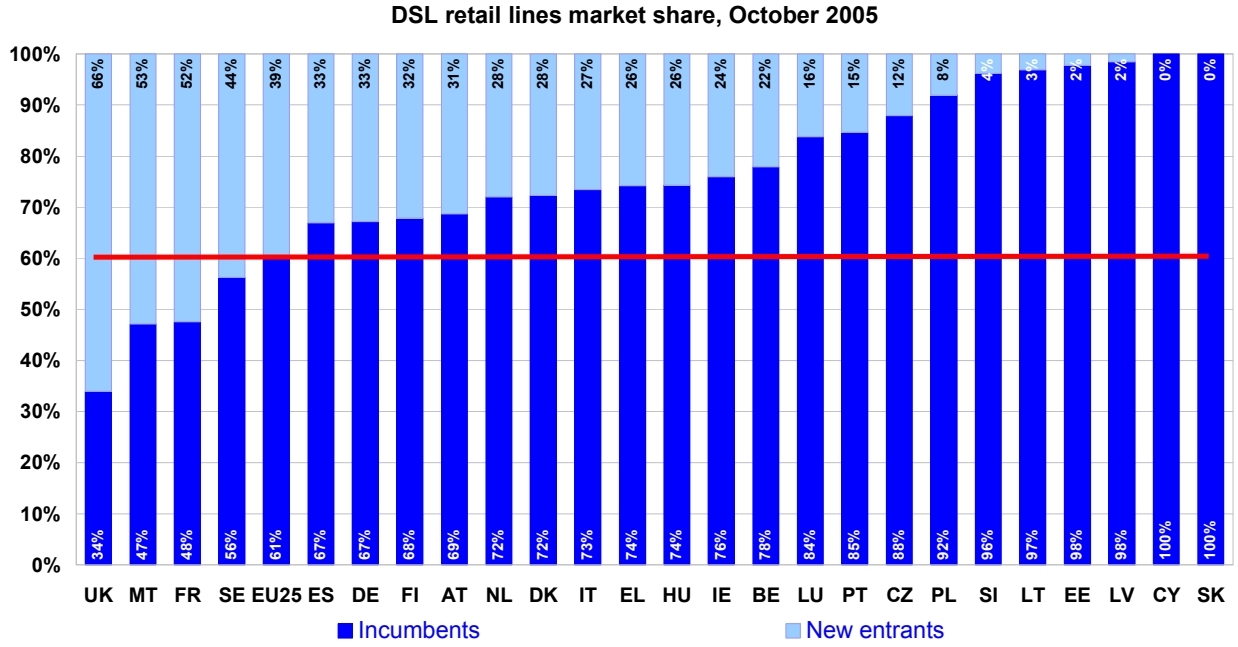


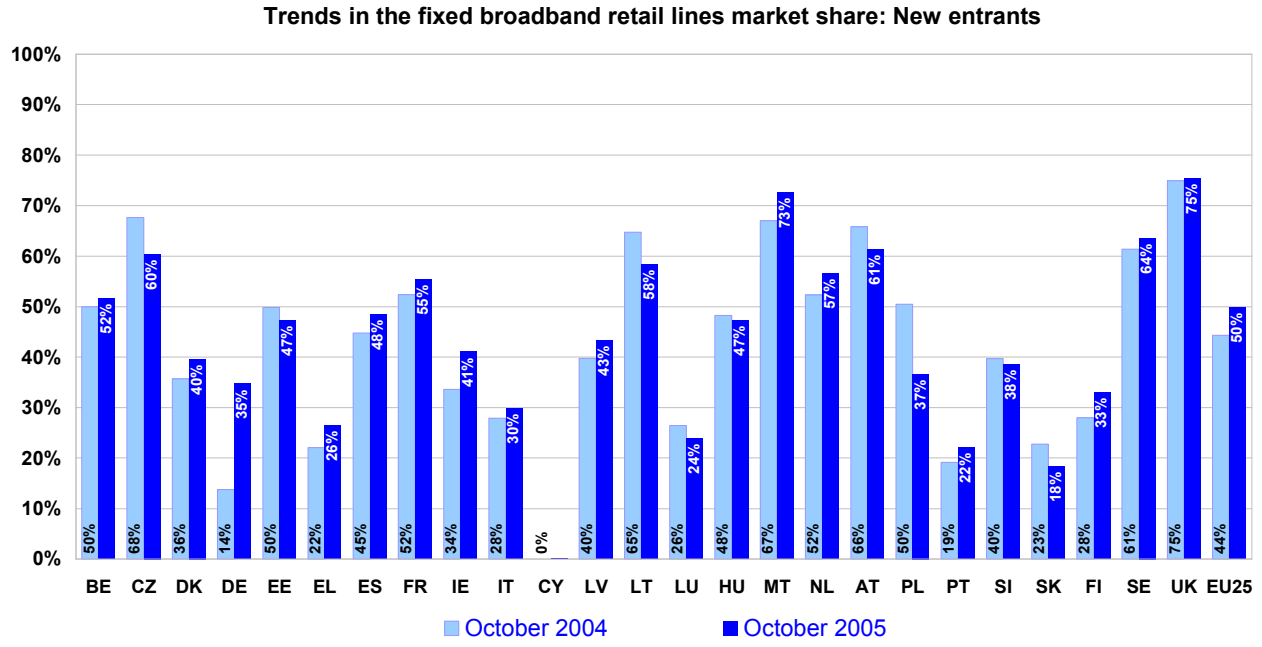
Figure 65 presents the market share by operator in the DSL retail market. At EU25 level the fixed incumbent operator provides 61% of DSL lines. In 10 Member States the incumbent operator sells more than 80% of all DSL retail lines.

Figure 65



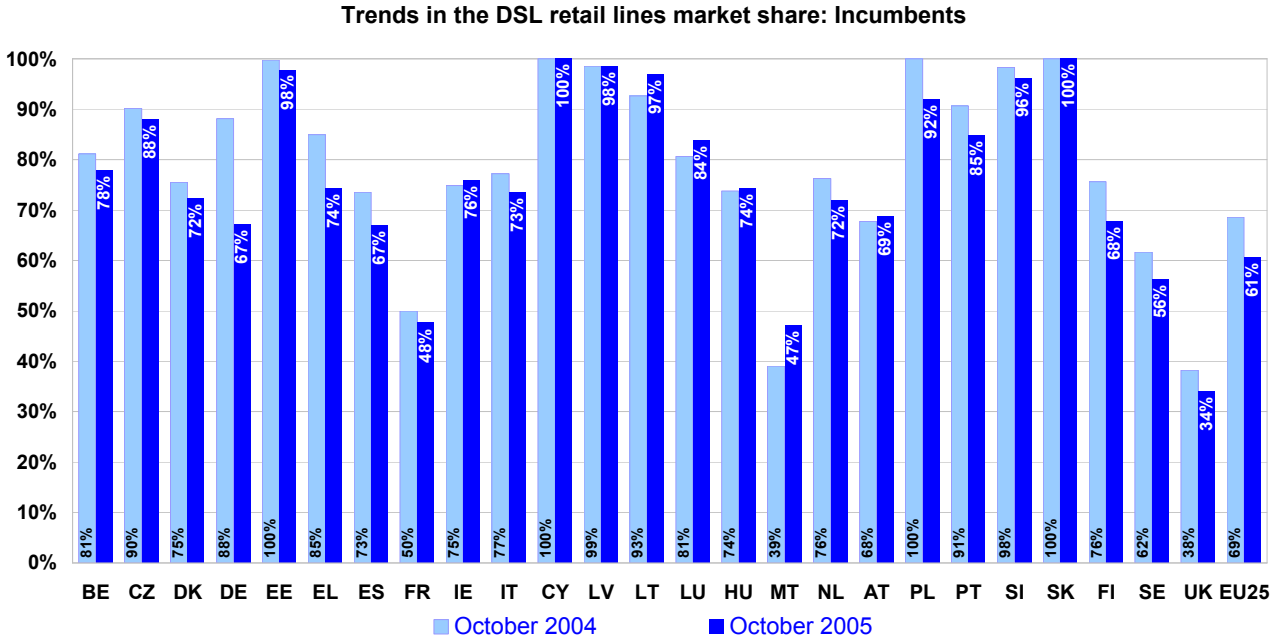
The next series of charts provide further information on the trends observed in the three segments analysed previously. As can be see in figure 66, new entrants are steadily increasing their presence in the overall broadband market, with an average 50% market share against 44% a year ago. This trend is however not uniform, and in 9 countries, Czech Republic, Estonia, Lithuania, Luxembourg, Hungary, Austria, Poland, Slovenia and Slovakia the fixed incumbent operator has increased its market share.

Figure 66



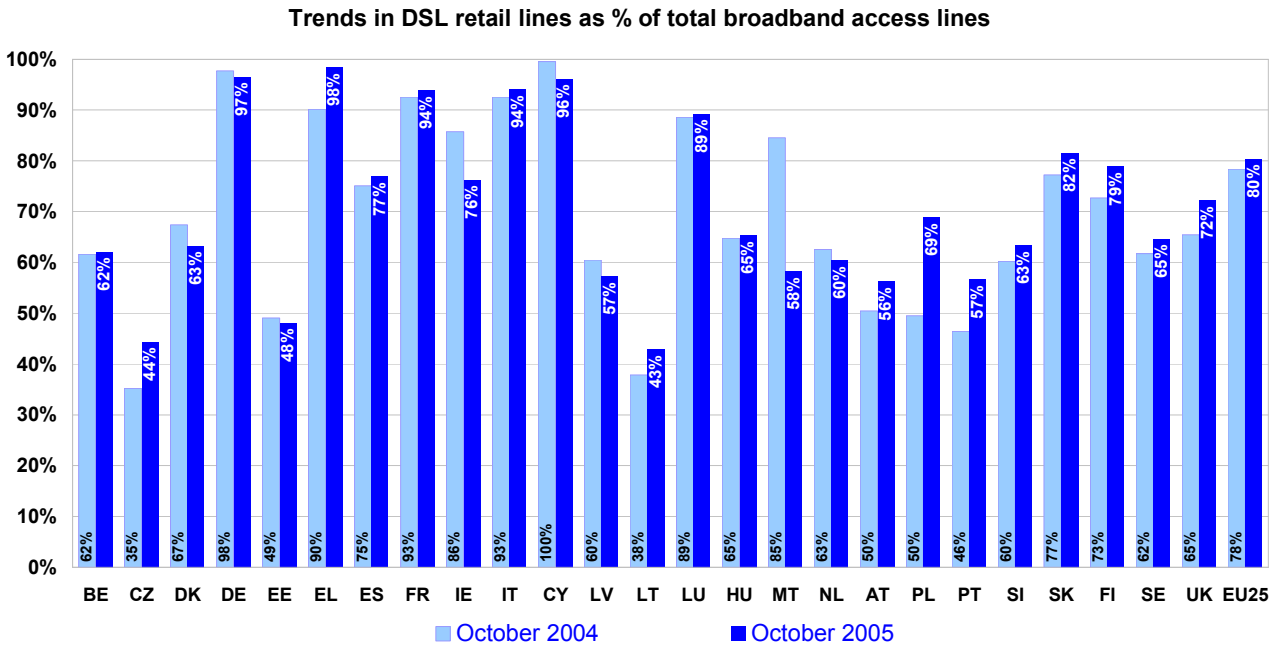
With regard to the trend in the number of DSL lines sold by incumbent operators in the same period, there has been a reduction of 8 percentage points on average, from 69% in October 2004 to 61% in October 2005.

Figure 67



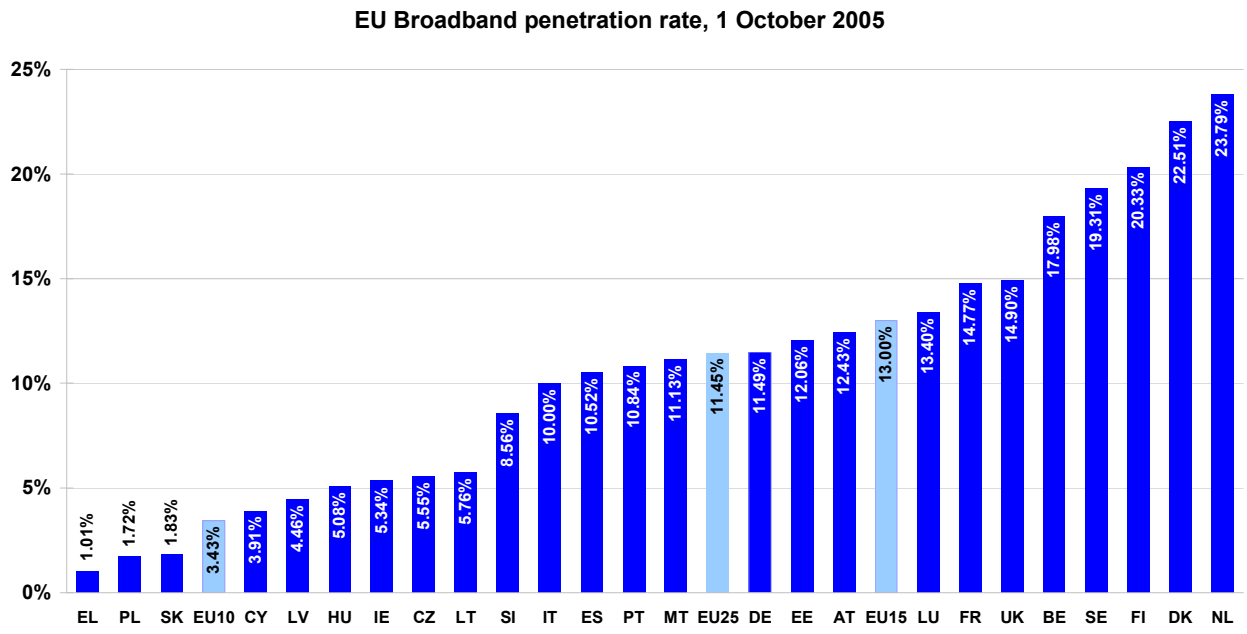
As can be seen from Figure 68 the number of DSL lines has increased in the overall broadband retail market, representing 80% of all broadband lines as against 78% in October 2004. However, in a number of countries other technologies have increased at a higher rate.

Figure 68



The following chart shows the penetration rate for broadband lines measured as the total number of broadband lines divided by the total population. The broadband penetration rate varies significantly across Member States ranging from 1% in Greece to 24% in Denmark.

Figure 69



Availability of wholesale access October 2005											
		Fully unbundled lines supplied by the incumbent to new entrants			Shared access lines supplied by the incumbent to new entrants			Wholesale DSL lines supplied			
								Bitstream access		Simple resale	
Country	Incumbent's PSTN activated main lines	Unbundled lines	Requested lines	N. of agreements	Shared lines	Requested lines	N. of agreements	No. of lines	No. of agreements	Resale No. of lines	No. of agreements
BE	4,317,833	6,760	175	8	1,909		8	183,076	11	74,251	27
CZ	3,249,000	1,035	n.a.	4	4,158	n.a.	4	n.a.	n.a.	50751	19
DK	3,310,209	62,567	n.a.	17	62,082	na	6	94,741	11	12041	10
DE	36,000,000	2,936,000		99	5,352		16		3	1,100,000	n.a.
EE	411,000	3,607	3,670	n.a.						n.a.	1
EL	5,500,000	3,883	396	12	1,530	48	1	105,071	10		
ES	15,642,543	132,416	10,404	13	228,870	26,287	12	789,705	30		
FR	33,399,373	360,788		21	2,153,072		21	1,740,708	5	146,056	20
IE	1,453,000	2,186	409	3	1,448	15	3	36,610	9		
IT	25,449,000	1,163,195	20,441	26	110,975	148,831	6	1,168,000	234		
CY	401,368										n.a.
LV	624,000			2			2	1199	11		
LT	768,843							2,685	16		
LU	241,000	2,964	60	3	98	8	4			6,748	5
HU	3,420,000	10		6			1	86,279	17		
MT	205,000									13,803	19
NL	7,067,000	68,880	n.a.	10	588,247	n.a.	10		1		
AT	2,859,700	97,044	4,704	26	75	n.a.	26	94,900	38		
PL	8,967,000										
PT	3,832,705	43,127	4,258	2	6		1	47,169	8		
SI	700,000					1,219	3	2,739	10	1375	3
SK	1,181,314										
FI	2,267,706	221,578	n.a.	n.a.	63,962	n.a.	n.a.	79,622	n.a.	n.a.	n.a.
SE	5,400,000	45,185	n.a.	122	287,060	n.a.	122	3,200	26	156,000	n.a.
UK	29,600,000	61,466		52	49,361		28	717,736	47	3,433,868	783
EU15	4,317,833	6,760	175	8	1,909		8	183,076	11	74,251	27
EU10	3,249,000	1,035	n.a.	4	4,158	n.a.	4	n.a.	n.a.	50751	19
EU25	3,310,209	62,567	n.a.	17	62,082	na	6	94,741	11	12041	10

BROADBAND RETAIL LINES, OCTOBER 2005																							
October 2005		**New entrants' DSL lines on PSTN October 2005**					**Incumbents' access lines by other means**									**New entrants' access lines by other means**								
	Incumbent's DSL lines	Full ULL	Shared access	Bitstream access	Resale	Total	WLL	Cable modem	Leased lines	3G	Fiber to the home	Satellite	PLC	Other	Total	WLL	Cable modem	Leased lines	3G	Fiber to the home	Satellite	PLC	Other	Total
BE	909 091	4 047	1 964	177 621	74 251	257 883									2	77	709 183	1 991					81	711 332
CZ	221 276	30 500	n.a.	n.a.	n.a.	30 500	1 100		n.a.	n.a.	2 000				3 100	180 000	120 000	n.a.		8 000	4 000	n.a.		312 000
DK	556 694	56 272	64 184	78 217	14 465	213 138	2 802	169 033	3 331					3 363	178 529	4 392	183 497	4 408		10 060	80	88	66 978	269 503
DE	6 148 708	1 900 000	5 352		1 100 000	3 005 352			42 804	n.a.	n.a.	3 421			46 225	n.a.	222 000	n.a.	n.a.	n.a.	50 000	9 600		281 600
EE	76 410	1 690			60	1 750	1 042				8 077			93	9 212	2 469	45 077	715		15 570			11 242	75 073
EL	82 002	3 883	1 530	23 069		28482			632						632	324		608					210	1142
ES	2 331 961	132 416	228 870	789 705		1 150 991	1 400		n.a.		n.a.	3 265			4 665	10 787	990 011	32 108		2 719	849	3 405	1 878	1 041 757
FR	3 995 731	360 788	2 153 072	1 740 708	146 056	4 400 624	n.a.		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		n.a.	550 000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	550 000
IE	127 139	2 186	1 448	36 610		40 244	n.a.	n.a.	2 186	n.a.	n.a.	n.a.	n.a.	n.a.	2 186	24 600	18 400	5 000			1 800		n.a.	49 800
IT	4 039 000	562 105	103 542	791 013	1 467	1 458 127			546		131	58 870		230	59 777	690	20	4 017		197 687	87 000			289 416
CY	28 197	n.a.	n.a.	n.a.	n.a.	0	n.a.	n.a.	165	n.a.	n.a.	n.a.	n.a.	951	1116	n.a.		18	n.a.	n.a.	n.a.	n.a.	n.a.	18
LV	57 981	414	1	278	209	902	310		n.a.		n.a.	n.a.		n.a.	310	3 018	14 343	6 595		920	6	10	18 757	43 649
LT	81 921			2 685		2 685			156		66				222	15 489	43 312	1 178		10 623	1		41 858	112 461
LU	45 601	1 999	98		6 748	8 845		608	168						776	49	5 670	10					21	5 750
HU	249 521	10		86 279		86 289	1 300	18 194	1 500		n.a.	n.a.		n.a.	20 994	8 000	144 000	3 500		1 000	n.a.		n.a.	156 500
MT	12 316				13 803	13 803											18 700							18 700
NL	1 687 109	68 880	588 247	n.a.		657 127			n.a.		n.a.	n.a.				n.y.a.	1 535 000	n.a.		n.a.	n.a.	n.a.	n.a.	1 535 000
AT	394 276	81 171	75	98 613		179 859			n.a.	n.a.	n.a.			n.a.		2 000	429 000	1 500	n.a.	1 000	n.a.	4 600	7 800	445 900
PL	416 233	36 389				36 389										3 234	175 562	24 908		58	0		646	204 408
PT	547 541	40 621	6	58 387	n.a.	99 014	n.a.	341 000	1 255	n.a.	n.a.	n.a.		n.a.	342 255	1 644	147 414	2 039	n.a.	n.a.	n.a.	1 500	n.a.	152 597
SI	104 232			2 739	1 375	4 114		647	n.a.		314				961	491	60 045			888	15		200	61 639
SK	80 572								174						174	1 200	16 823				n.a.			18 023
FI	569 626	126 373	63 962	79 622		269 957	748	76 211			60			67 480	144 499	2 782	63 088			204		934	13 580	80 588
SE	633 000	45 185	287 060	3 200	156 000	491 445	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		9 000	300 000	n.a.	n.a.	305 000	1 150	85	n.a.	615 235
UK	2 196 607	61 466	49 361	717 736	3 433 868	4262431									0	2 500	2 475 481				6 000			2483981
EU15	24 264 086	3447392	3548771	4594501	4932855	16 523 519	4950	586852	50924	0	191	65556	0	71073	779 546	58845	7628764	51681	0	516670	146879	20212	90550	8 513 601
EU10	1 328 659	69 003	1	91 981	15 447	176 432	3 752	18 841	1 995		10 457			1 044	36 089	213 901	637 862	36 914		37 059	4 022	10	72 703	1 002 471
EU25	25 592 745	3 516 395	3 548 772	4 686 482	4 948 302	16 699 951	8 702	605 693	52 919		10 648	65 556		72 117	815 635	272 746	8 266 626	88 595		553 729	150 901	20 222	163 253	9 516 072

6.4. PRICES FOR UNBUNDLED LOCAL LOOP

This section shows the charges for connection and the monthly rental per unbundled loop for both full unbundled access and shared access to the loop.

Estimates of the total average monthly cost are calculated on the basis of the price of the monthly rental + 1/36 of the connection fee. In previous years the connection fee was amortised over 12 months, therefore these data are not comparable to the data presented in previous reports.

Price excludes co-location costs.

It is assumed that the loop is active (exc. Estonia) and it will be used to provide both telephony and DSL services.

Charges in some Member States may be different in the case of subsequent access. Only the price for a single line is shown here.

6.4.1. Prices for full unbundled local loop

Belgium: Monthly rental for a Type 2 connection, i.e. Telephony usage and low frequency data + HF data: ADSL, SDSL, xDSL. Connection fee: Type 2 "active loop". For a non-active loop the connection fee is 59.56. A supplementary fee of 16.30 for disconnection is also charged.

Denmark**:** An additional DKK 514 is paid if there is no existing cable termination point.

Germany: Monthly rental price valid until 31.03.2007. Connection fee price valid until 30.06.2007. The connection fee does not include installation costs at end user premises.

Greece: The cost audit for 2005 is still in progress and may affect prices.

Estonia: Price for new loops only.

Spain: Additional wiring within premises is invoiced separately.

Ireland: This connection charge applies where there is an existing metallic path. The connection charge is reduced as the cumulative volume of orders increases. On the first day of the month following 20,000 provisioning orders being completed the charge will be €55, on the first day of the month following 50,000 provisioning orders being completed the charge will be €52 and on the first day of the month following 100,000 provisioning orders being completed the charge will be €49. The monthly rental charge will be adjusted by the change in CPI annually on 1 December until 2007..

Italy: The ULL connection fee was 42.00 € from 01/01/04 to 16/06/04. It includes POTS and ADSL.

Luxembourg: Price includes includes POTS and ADSL and a charge for a technical expertise.

Latvia: A single fee of LVL 27.08 is charged for a technical expertise (included in the figure).

Hungary: Matáv charges HUF 37644 (included in the figure) to check whether the line is suitable for unbundling.

Netherlands: Charges since 1 July 2004 until the implementation of the new regulatory framework, planned for early in 2006. The monthly rental price does not include the price of the DSLAM. Telco's provide their own DSLAMs.

Austria: Prices are currently being reviewed. Connection costs vary depending on the retention period (31.50 for 1 year retention/54.50 if no retention period).

Portugal: Prices do not include technical test, which are optional.

Slovakia: According to the R.U.O. of Slovak Telecom

Finland: Weighted average of 40 SMP operators providing ULL. Prices vary between 7.9 and 21 € for the monthly rental and between 80 and 212 € for the connection.

Figure 70

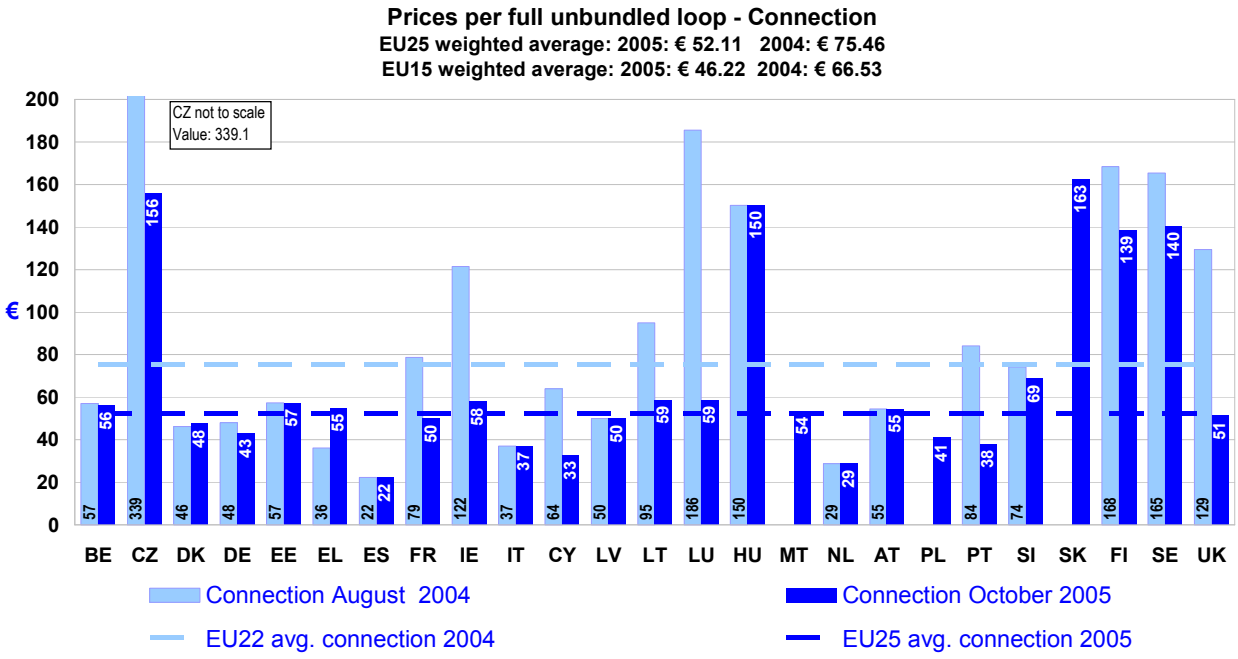


Figure 71

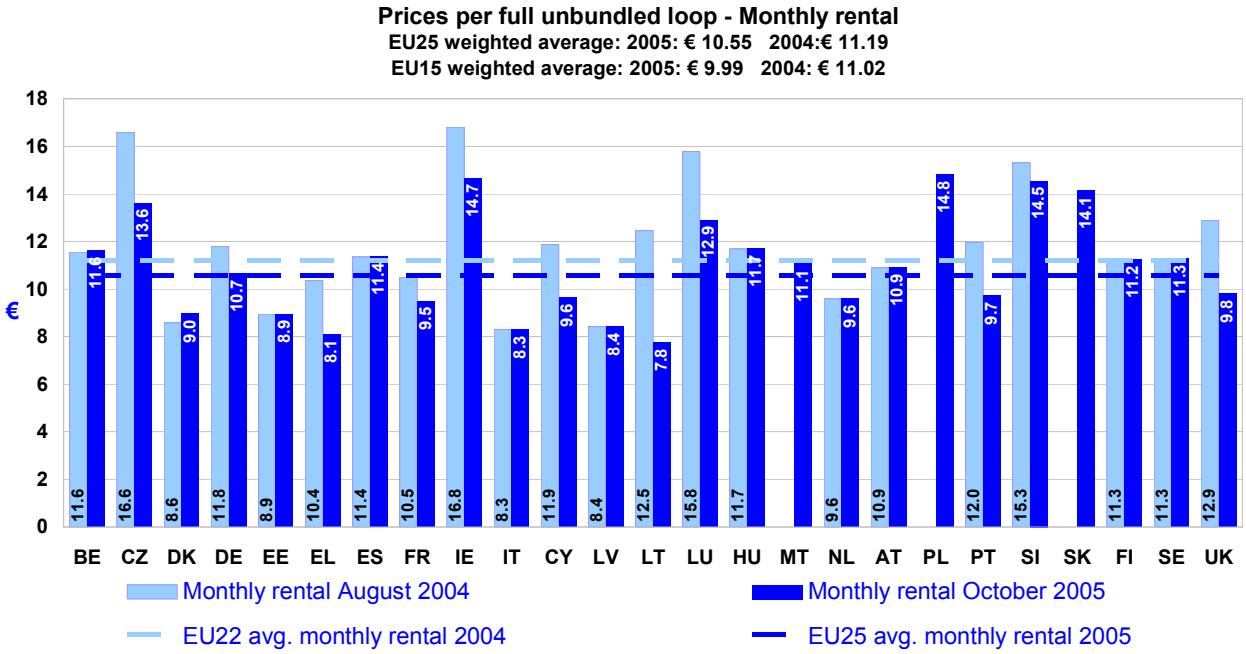
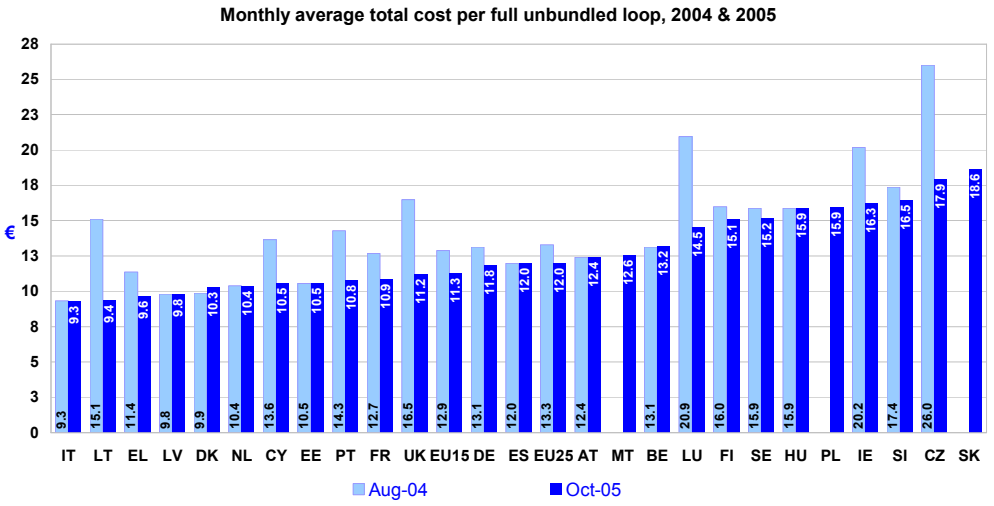


Figure 72



Estimates are based on the total cost for the loop for 3 years.

6.4.2. Prices for shared access local loop

Belgium: The price is quoted exclusive of the splitter (€ 131/year for 48 splitters). A supplementary fee of €28.33 for disconnection is also charged.

Denmark: An additional DKK 514 is paid if there is no existing cable termination point. The price does not include the splitter.

Germany: Price valid until 30.06.2007.

Estonia: Price for new loops only.

Spain: Additional wiring within premises is invoiced separately. Price is exclusive of splitter.

France: Figures include the filter.

Greece: The cost audit for 2005 is still in progress and may affect prices.

Ireland: This connection charge applies where there is an existing metallic path. Price exclusive of splitter. The national regulatory authority is currently in consultation on this charge. The connection charge will be reduced as the cumulative volume of orders increases. On the first day of the month following 20,000 provisioning orders being completed the charge will be €55, on the first day of the month following 50,000 provisioning orders being completed the charge will be €52 and on the first day of the month following 100,000 provisioning orders being completed the charge will be €49.Italy: The connection fee was 58,40 € from 01/01/04 to 16/06/04. Connection costs vary depending on the splitter being provided by Telecom Italia (39euro) or by other operators (44.5 euro).

Cyprus: The incumbent operator has published its RUO and OCECPR has modified it. There are 2 signed agreements.

Latvia: A single fee of Latvia L 27.08 is charged for a technical expertise (included in the figure).

Luxembourg: Price of the splitter not included. Price includes a charge for a technical expertise.

Hungary: Matáv charges HUF 37644 (included in the figure) to check whether the line is suitable for unbundling.

Netherlands: Charges since 1 July 2004 until the implementation of the new regulatory framework, planned for early in 2006. Monthly rental price does not include the prices of the DSLAM and the splitter. Telco's provide their own DSLAMs and splitters

Austria: Prices are currently being reviewed [monthly rental: Half of full ULL (5.45); connection: Twice of full ULL (109) if no retention period]

Portugal: Prices do not include technical test, which are optional.

Slovakia: According to the R.U.O. of Slovak Telecom.

Slovenia: Price includes cost of splitter

Finland: Weighted average of 40 SMP operators providing ULL. Generally the monthly rental is 50% of the monthly rental of full ULL. Prices for the connection fee vary between 47 and 202 €.

Figure 73

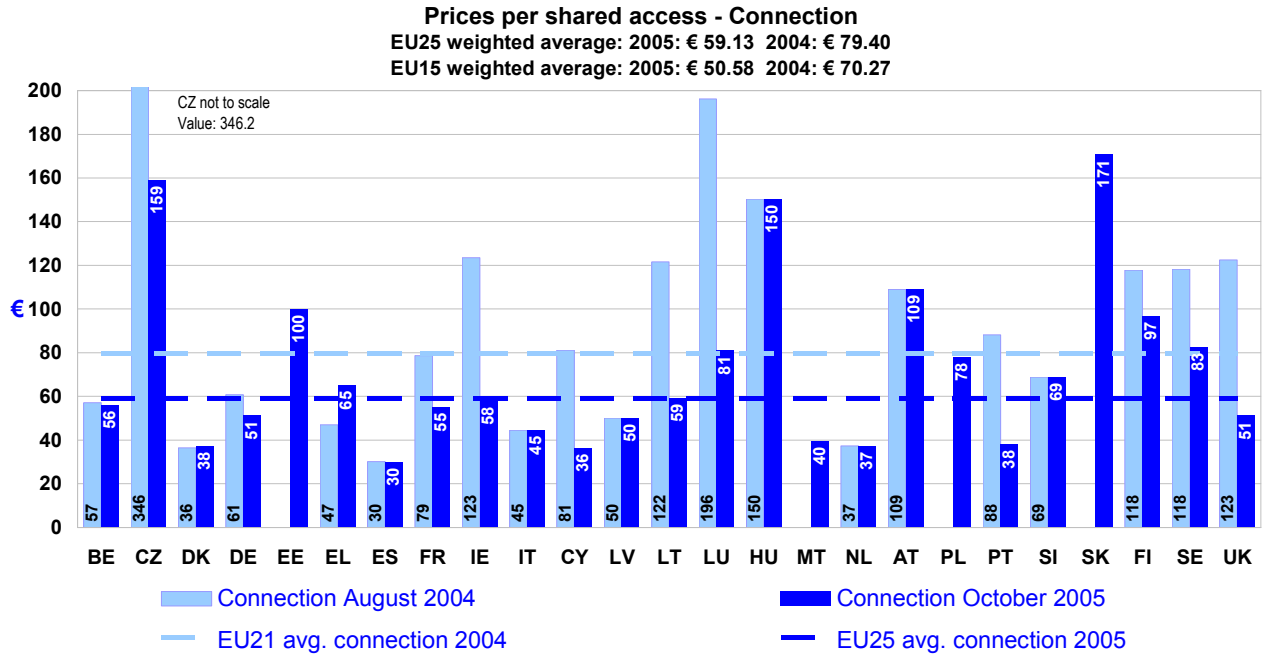


Figure 74

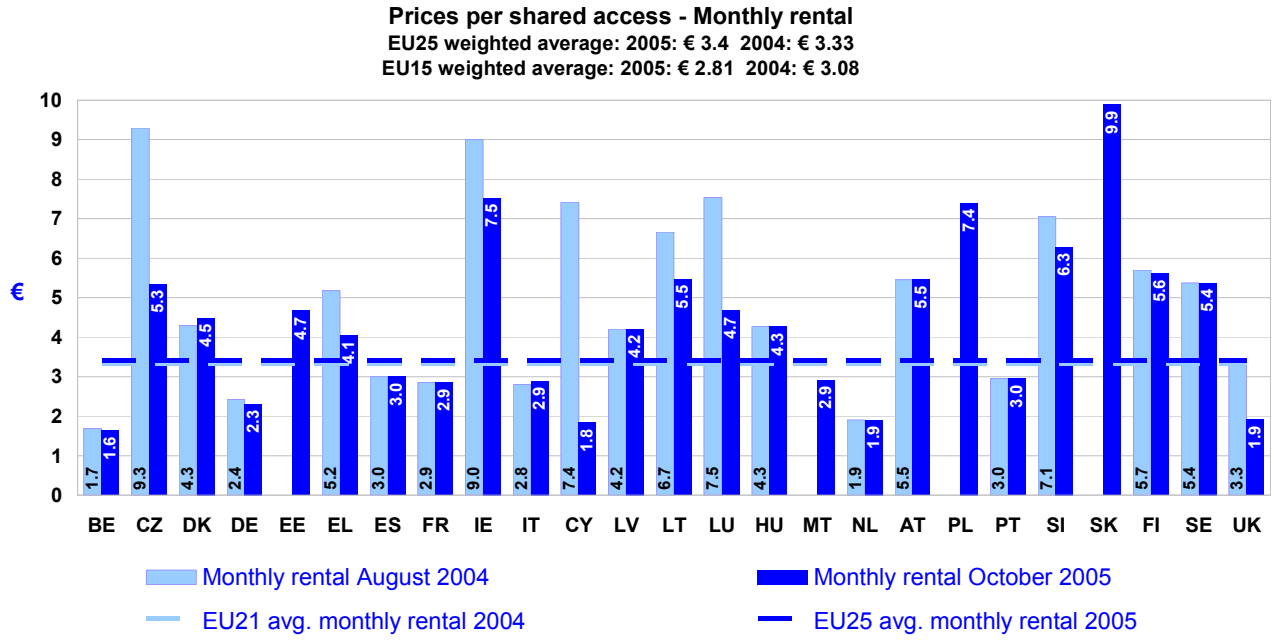
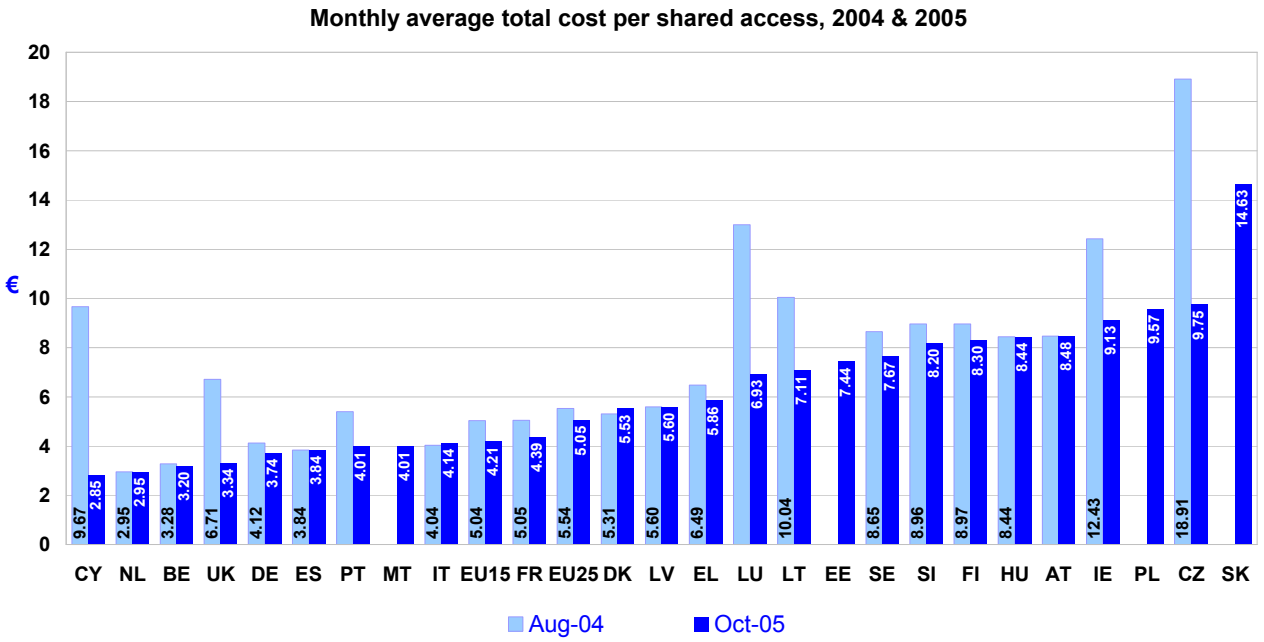
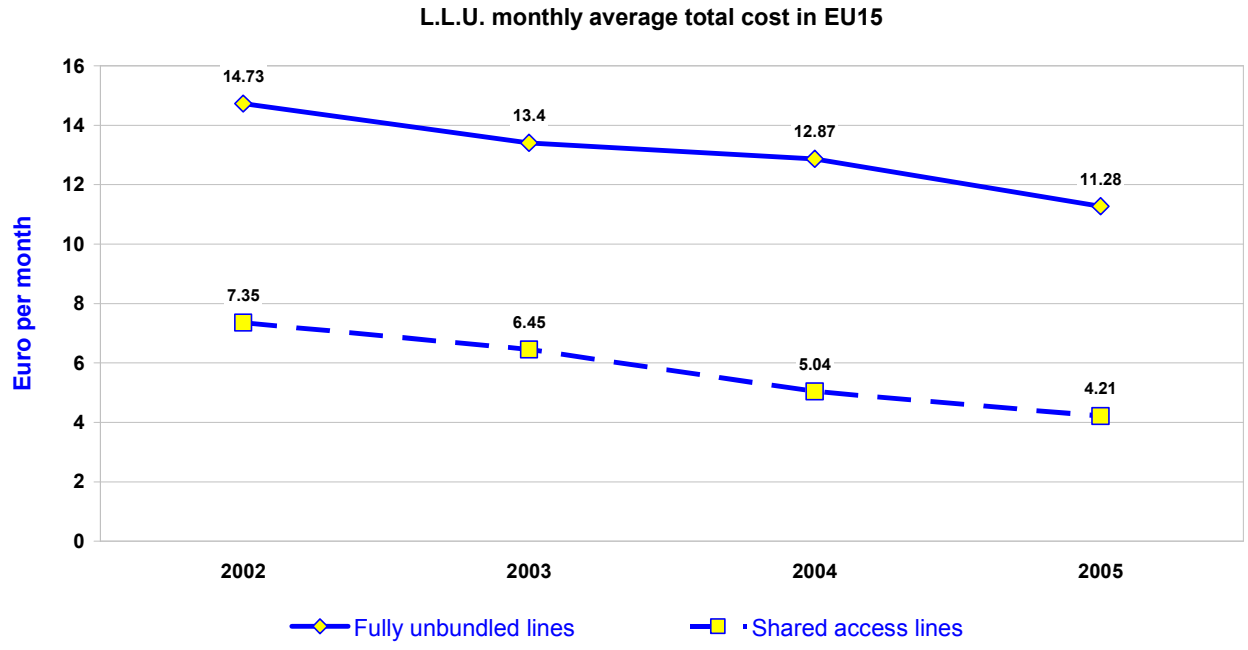


Figure 75



Estimates are based on the total cost for the loop for 3 years.

Figure 76



7. PUBLIC VOICE TELEPHONY TARIFFS

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 in September 2005. The price trend over the past seven years is also analysed.

The incumbent operators are: Belgacom for Belgium, Cesky Telecom for Czech Republic, TDC for Denmark, Deutsche Telekom for Germany, Elion for Estonia, OTE for Greece, Telefonica for Spain, France Telecom for France, Eircom for Ireland, Telecom Italia for Italy, CYTA for Cyprus, Lattelekom for Latvia, Lietuvos Telekomas for Lithuania, P&T Luxembourg for Luxembourg, Matav for Hungary, Maltacom for Malta, KPN for the Netherlands, Telekom Austria for Austria, Polish Telecom for Poland, Portugal Telecom for Portugal, Telekom Slovenije for Slovenia, Slovak Telecom for Slovakia, TeliaSonera for Finland (formerly Sonera), TeliaSonera for Sweden (formerly Telia), and British Telecom for the United Kingdom.

The incumbent operators still retain a large market share, but new entrants are increasingly gaining market share 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 also shown.

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

NRAs were given the possibility to check these data before finalising this report. All NRAs, with the exception of Cyprus and Slovakia, provided comments and approved these data.

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 rental 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 is 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. 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 Verizon (in New York city) and the prices for international calls are those charged by 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).

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. Per second or per unit charges apply from the beginning of the call.

- 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.

- The unit charge in effect works 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 charging is normally used with per second billing, to ensure the operator obtains a 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.

In the calculation of the minimum charge for calls using per second billing the first second of the calls (after it is answered) is not included, even though this can also be perceived as part of the minimum cost.

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:

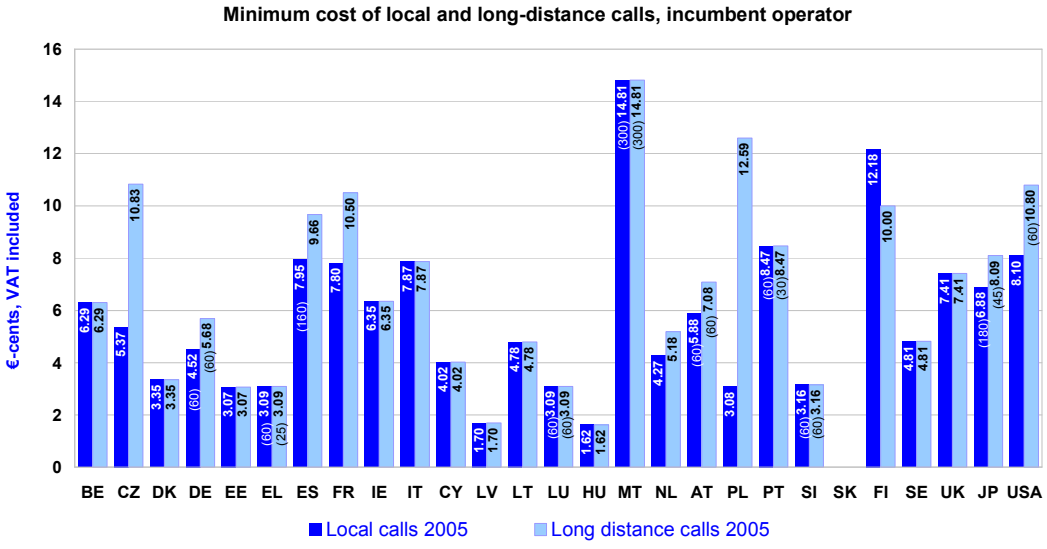
1. Real time charging (also known as "per second billing") allows the cost of the call to be calculated to the exact duration of the call (normally nearest second). A call set-up charge, initial charge or minimum charge may be applied to this structure, in addition to the duration charge.
2. Unit based 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. A call set-up charge may be applied to this structure, but is relatively rare.
3. 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.

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.

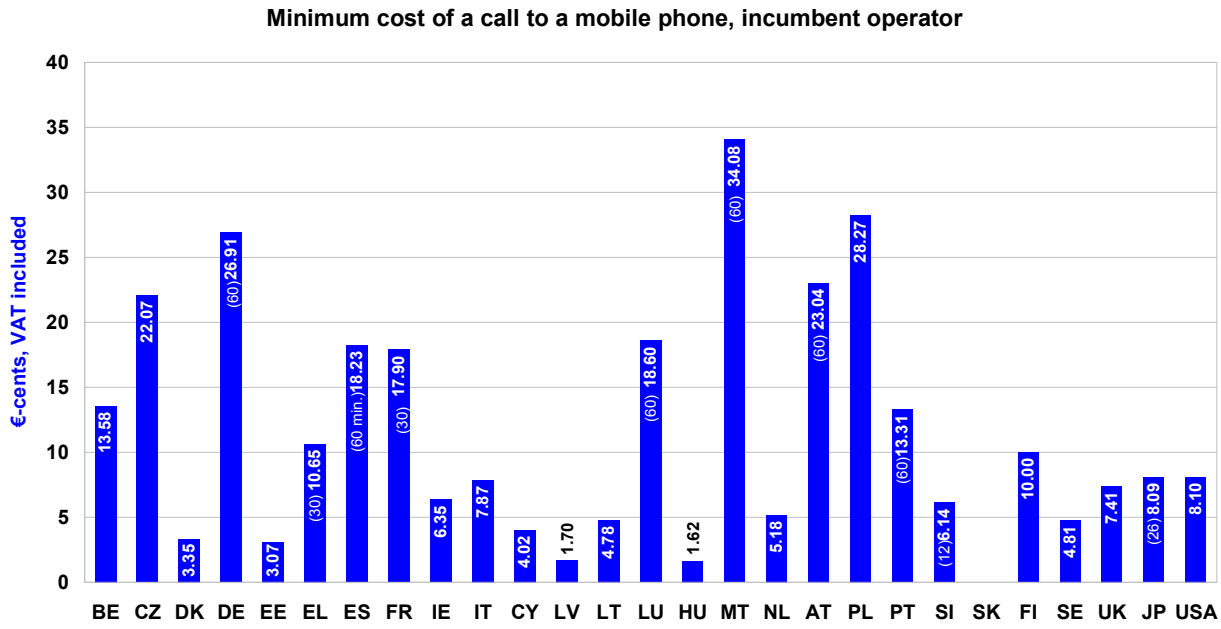
The following charts show the minimum cost, due to initial charges, for local, long-distance and international calls and calls to mobile charged by the incumbent operators. The free call time (i.e. the number of seconds of call time before normal time-based charging starts) is shown in brackets. Values are expressed in €-cents, 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.

Figure 77



In Slovakia no minimum price or call setup charges are reported by the operator

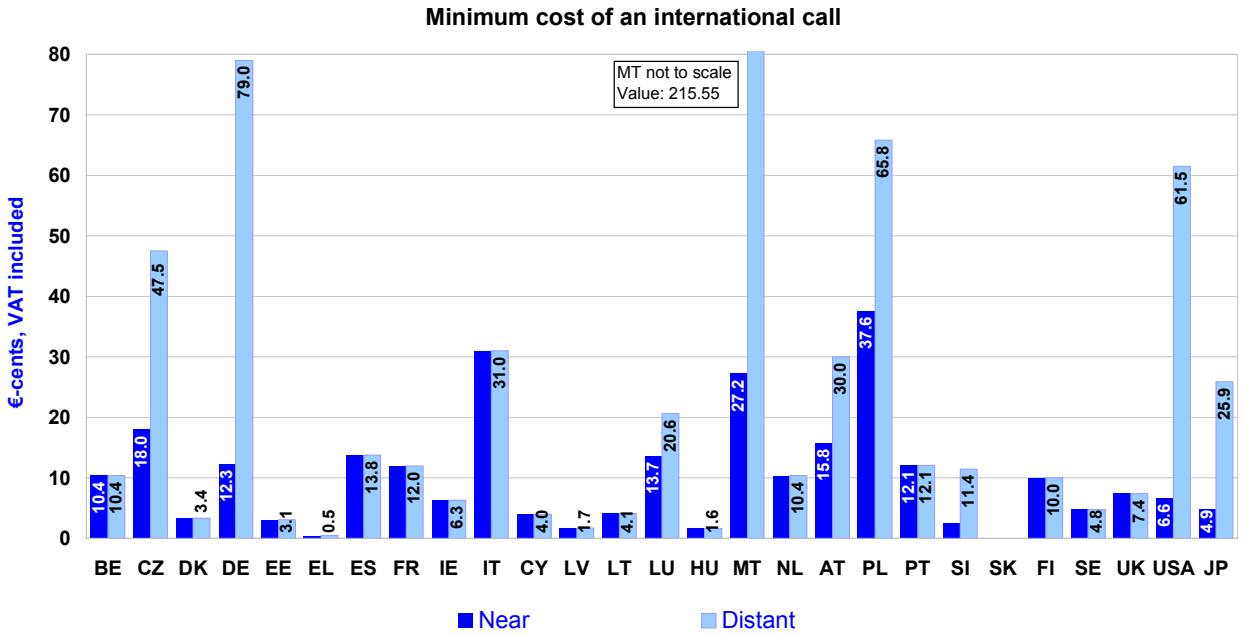
Figure 78



In Slovakia no minimum price or call setup charges are reported by the operator

Initial charges for international calls will normally follow similar rules as for national calls. Where unit based charging is used the initial period duration covered by the first unit may change with the destination. In most countries prices are the same for business and residential customers. Differences may occur in Austria, France, the UK and USA.

Figure 79



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 September 2005 and August 2004. 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.

In Italy, Sweden, the United Kingdom, USA and Japan the rental charges are different for business and residential customers. In Austria two different packages have been chosen as appropriate for business (TikTak Office) and residential users (TikTak Privat), hence different packages. In the United Kingdom the residential package changed in 2004, after BT abandoned the Residential Standard Tariff. The "BT Together Option 1" tariff is used. In Finland and Japan the monthly rental will depend on where in the country the line is connected. The charges shown are for the capital/most densely populated area.

Figure 80

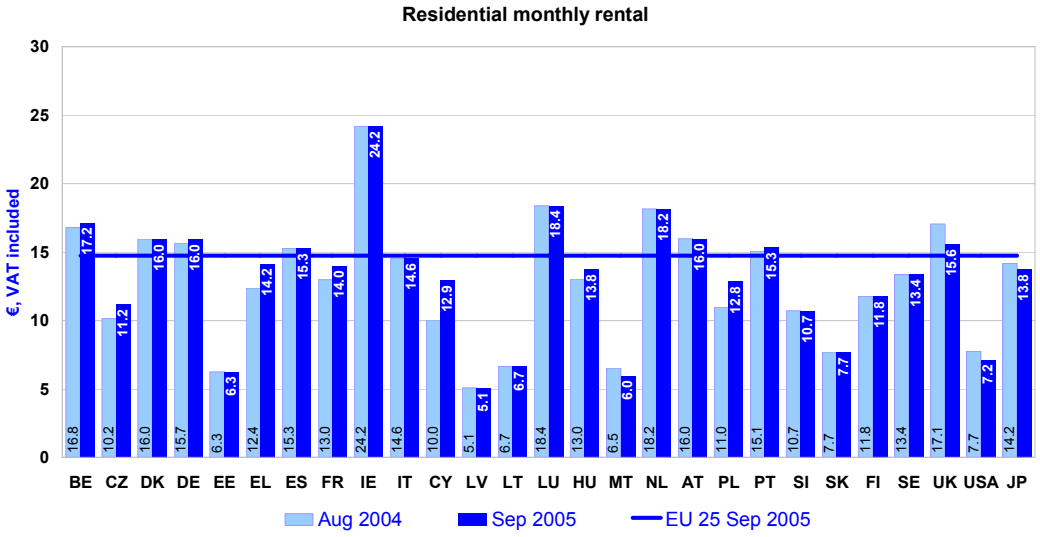
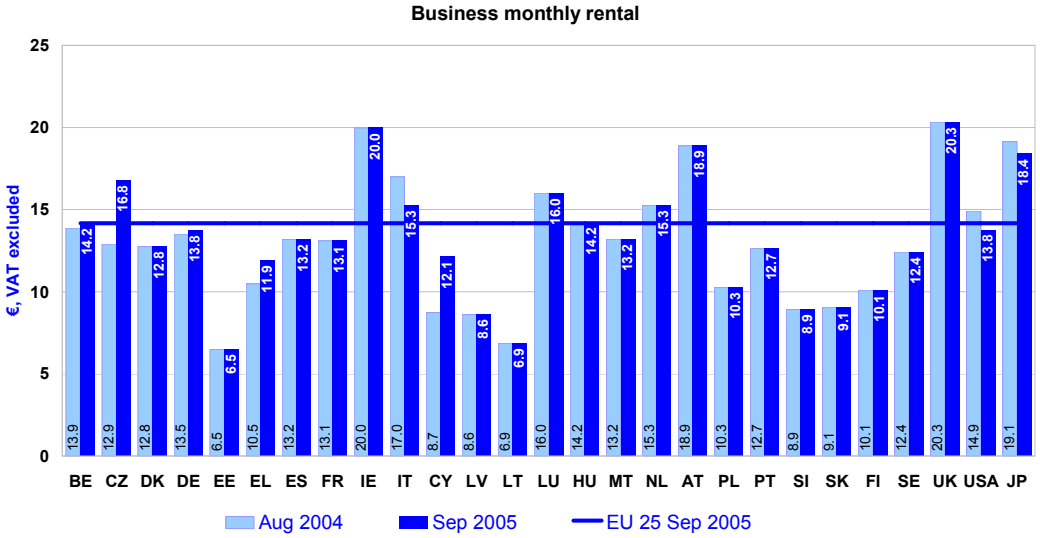


Figure 81



The following charts show the EU weighted average variation in nominal terms of the residential and business monthly line rental charge. Averages for EU25 and EU15 are presented.

Figure 82

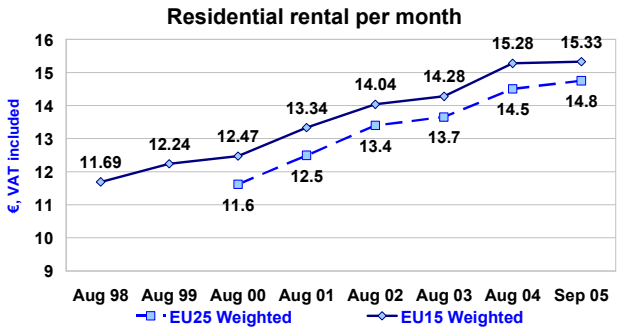
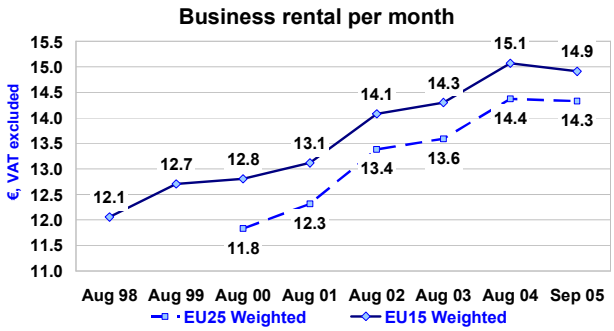


Figure 83



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.

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 September 2005, 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" which includes not only fixed national calls (as did the old basket), but also fixed international calls and calls to mobile networks. The revised OECD baskets were adopted in May 2000.

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 (Representing 10% of the number of calls to fixed lines), plus 72 international calls (Representing 6% of the number of calls to fixed lines). The usage charges for national calls to fixed lines are calculated with a weighted distribution 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 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, plus 216 international calls. The usage charges for national calls to fixed lines are calculated with a weighted distribution 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.

A full description of the methodology can be found at the end of this report.

Figure 84

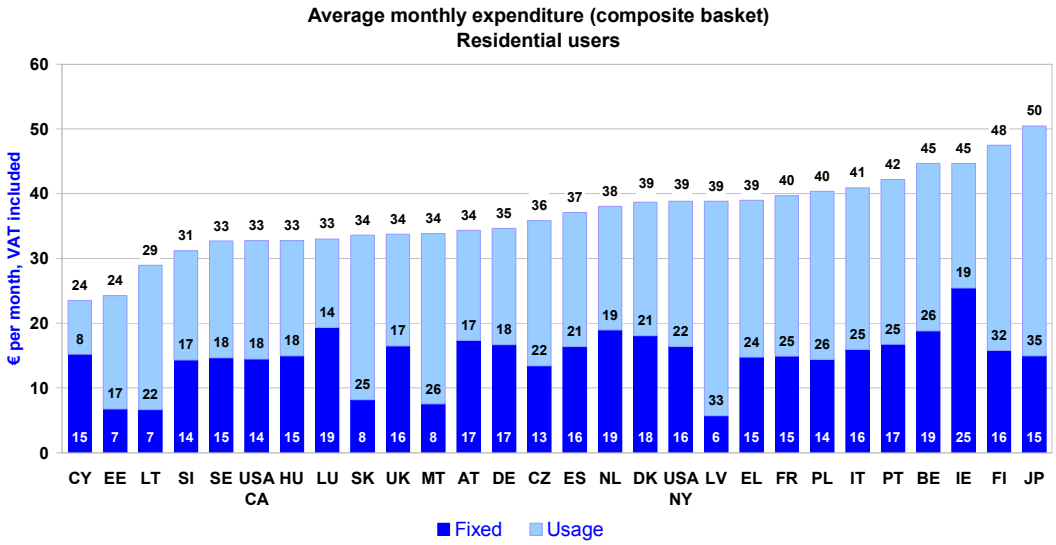
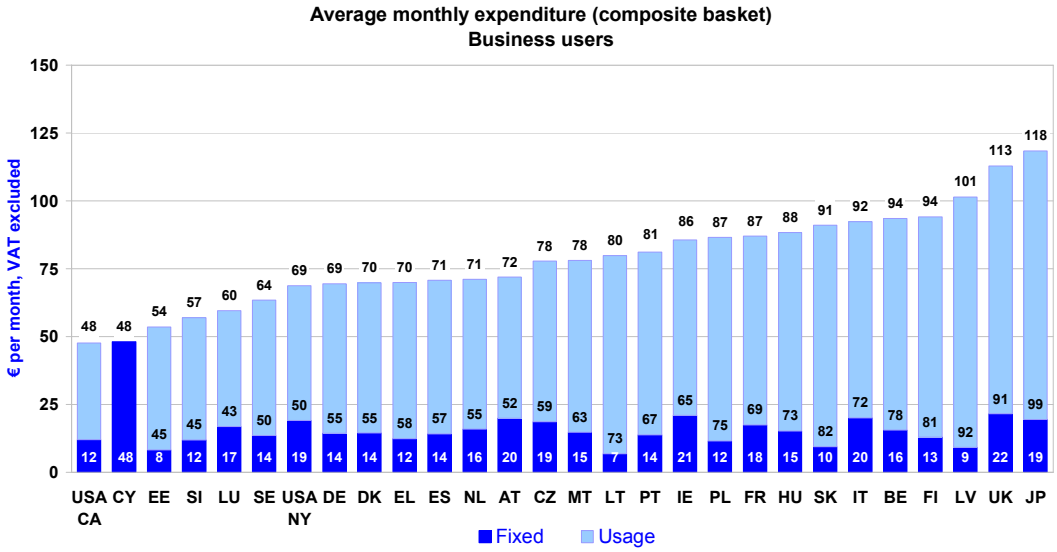


Figure 85



7.4. PRICE OF FIXED NATIONAL CALLS BY THE INCUMBENT OPERATOR

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 September 2005.

Prices are indicated for three-minute and ten-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 ten-minute call.

Where different tariff packages exist, the basic, residential package is selected. Otherwise the standard tariff is used. The "TikTak Privat" Package is used in Austria, "BelBasic" in the Netherlands and "BT Together Option 1" in the UK. No discount packages are taken into account.

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

Figure 86

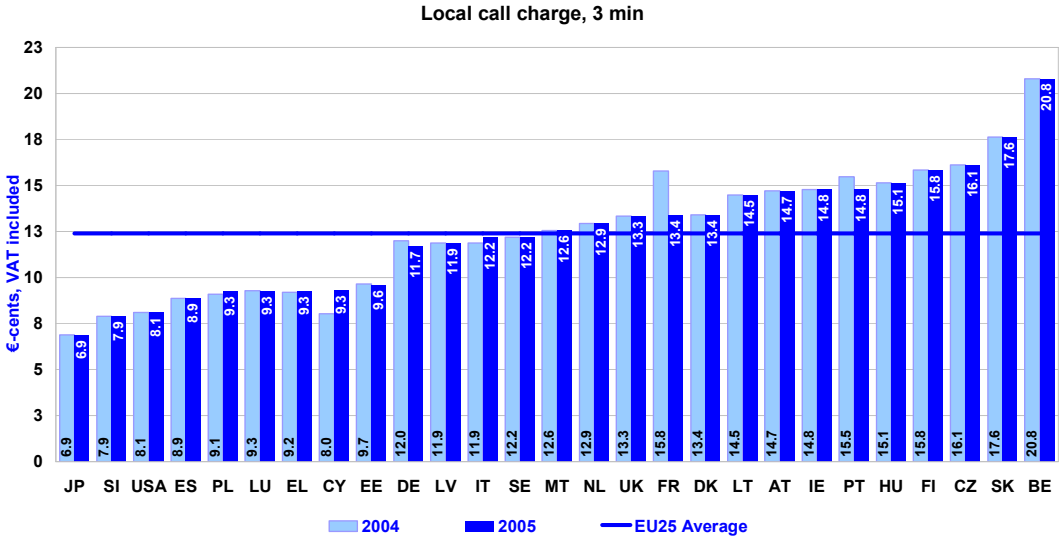


Figure 87

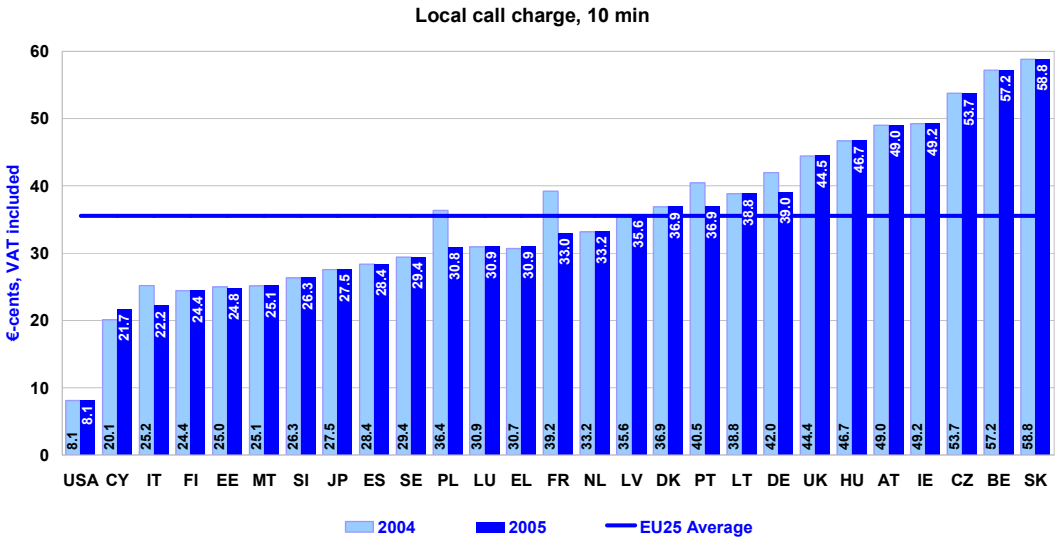


Figure 88

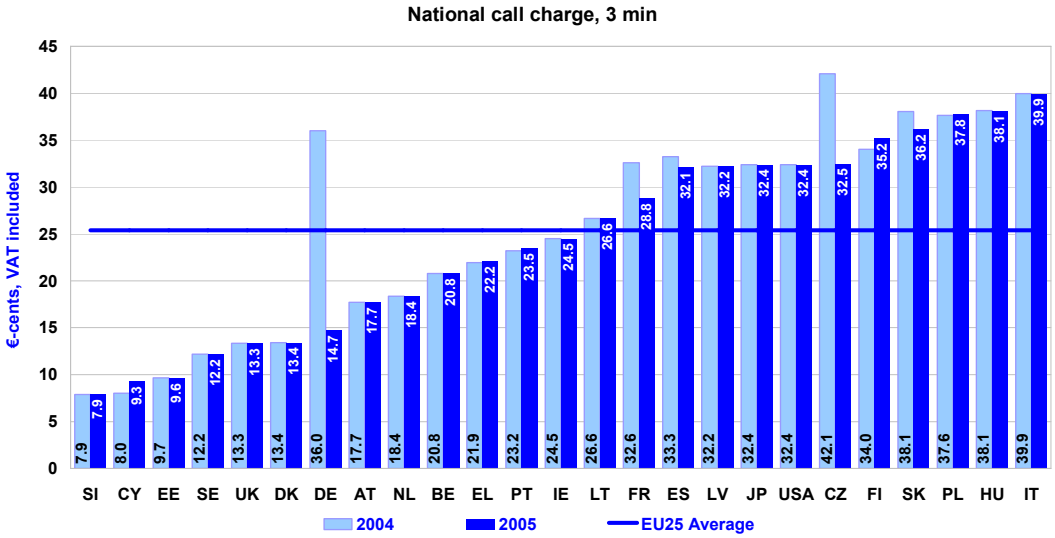


Figure 89

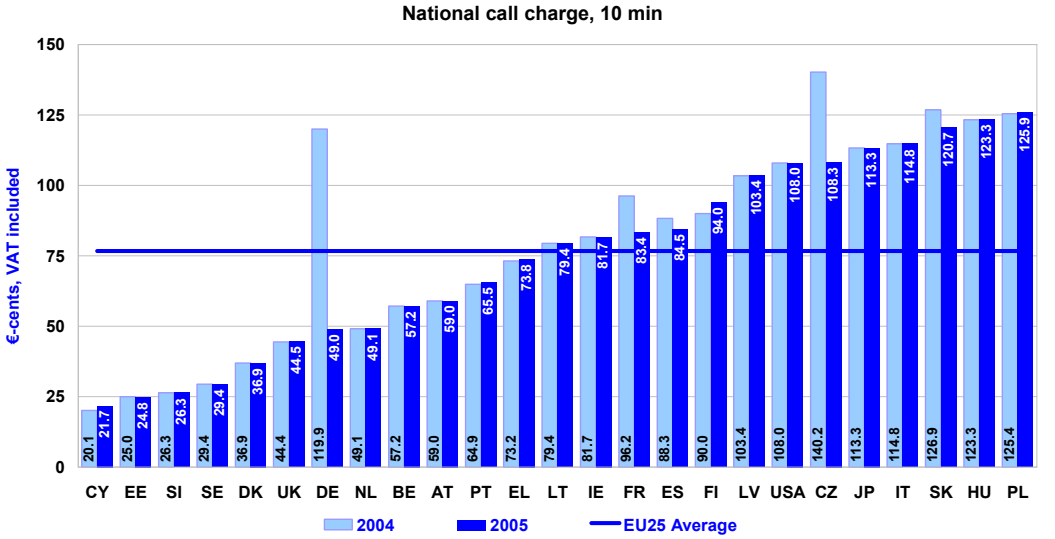


Figure 90

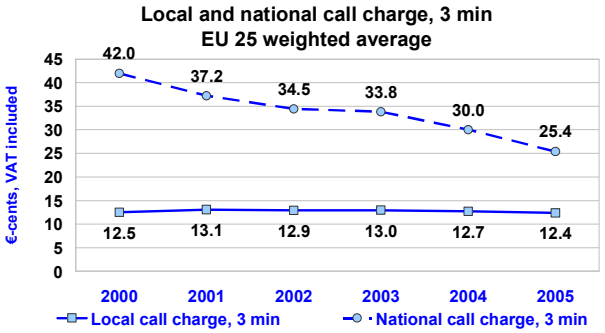
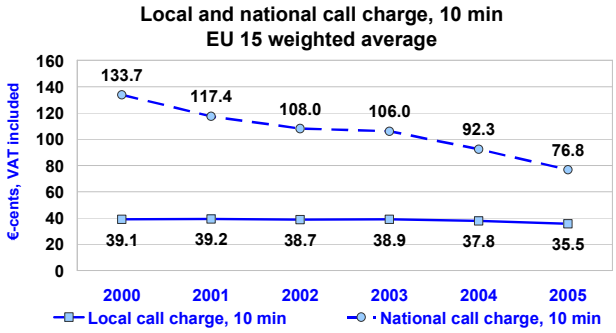


Figure 91



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

Figure 92

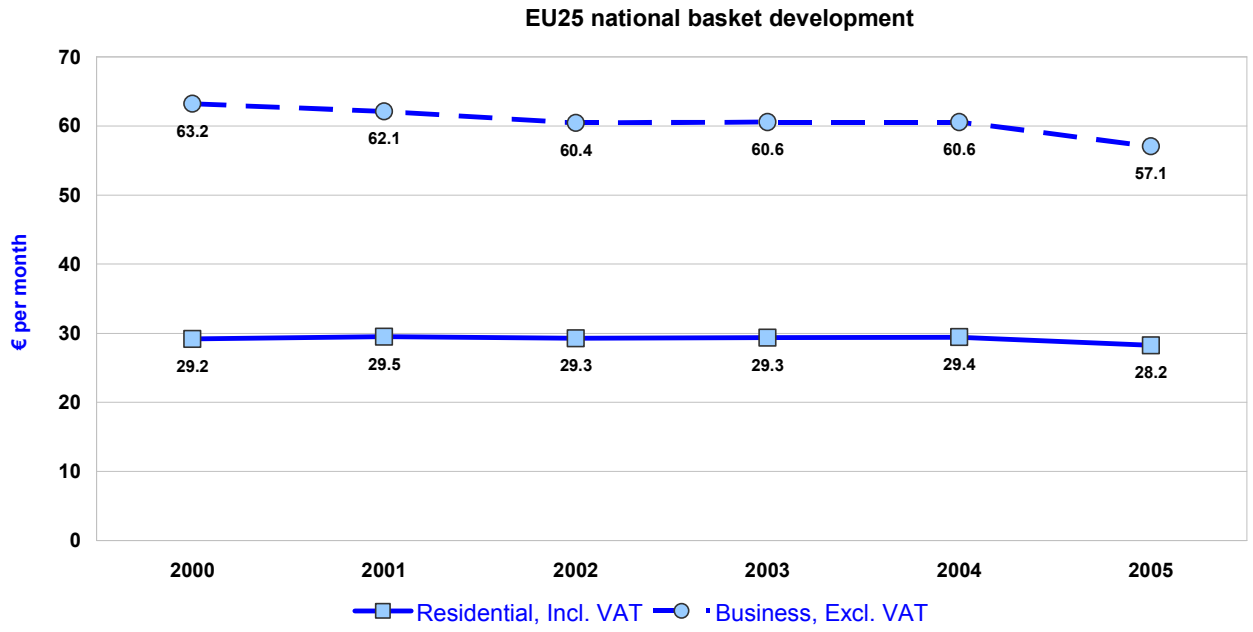
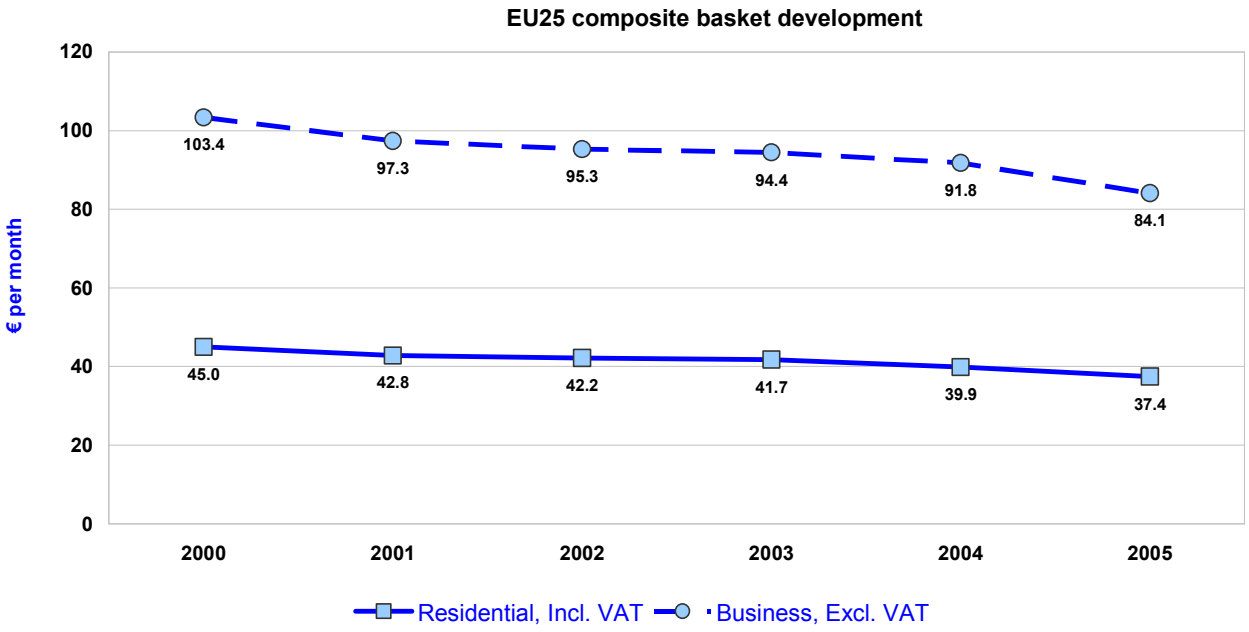


Figure 93



Since 2000 all EU25 MS are included except Malta, which is included since 2003.

7.6. PRICE OF FIXED NATIONAL CALLS BY ALTERNATIVE 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 largest competitor in each Member State. The tariff packages selected will impact on this comparison, although care has been taken to ensure reasonable comparability.

Figure 94

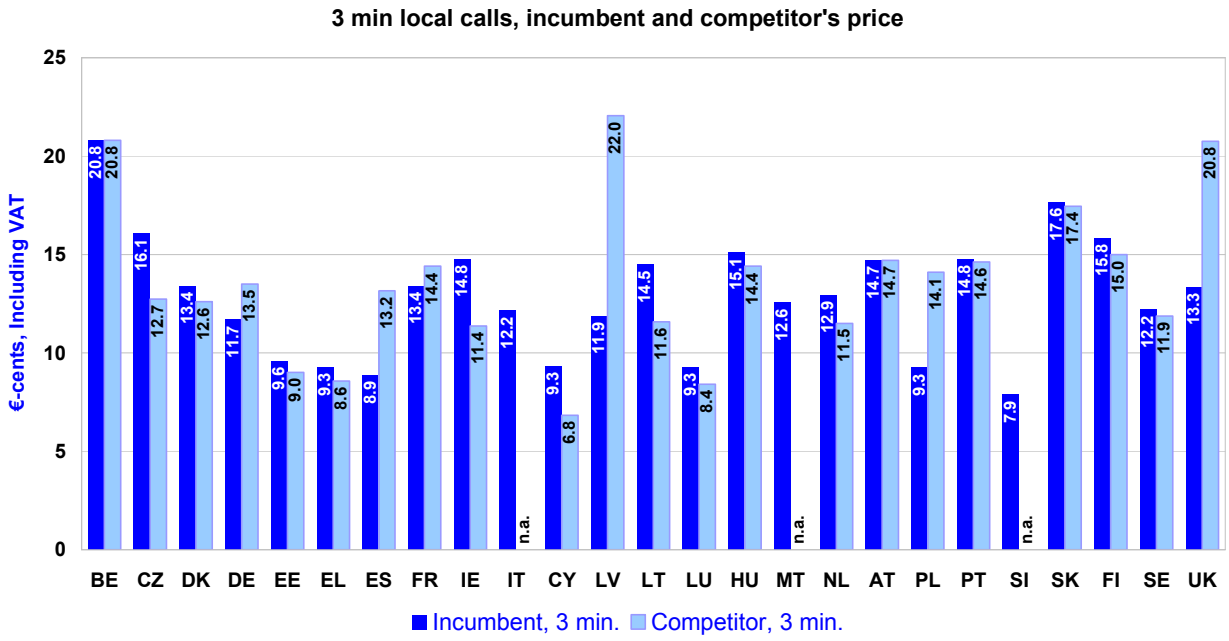


Figure 95

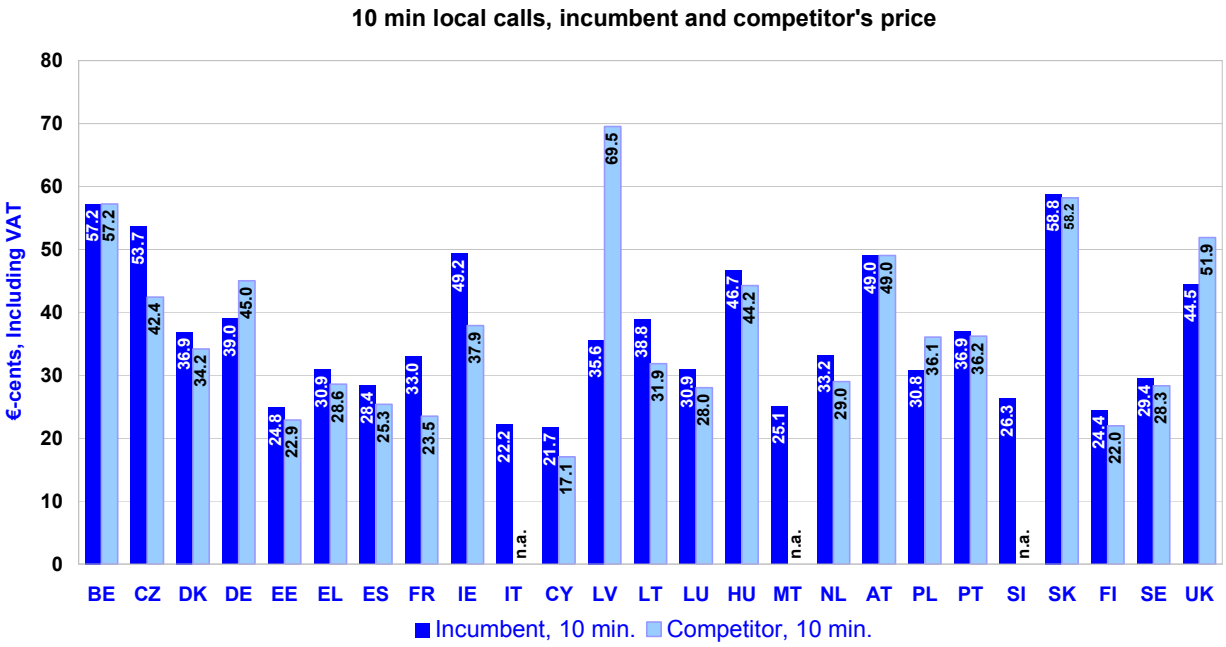


Figure 96

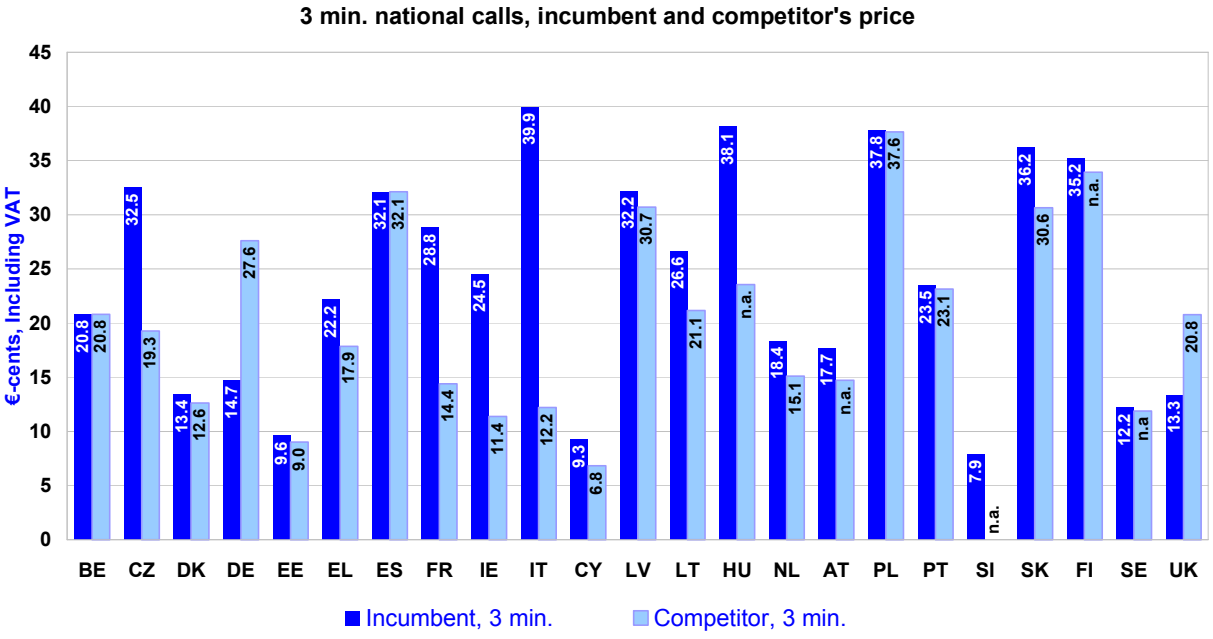
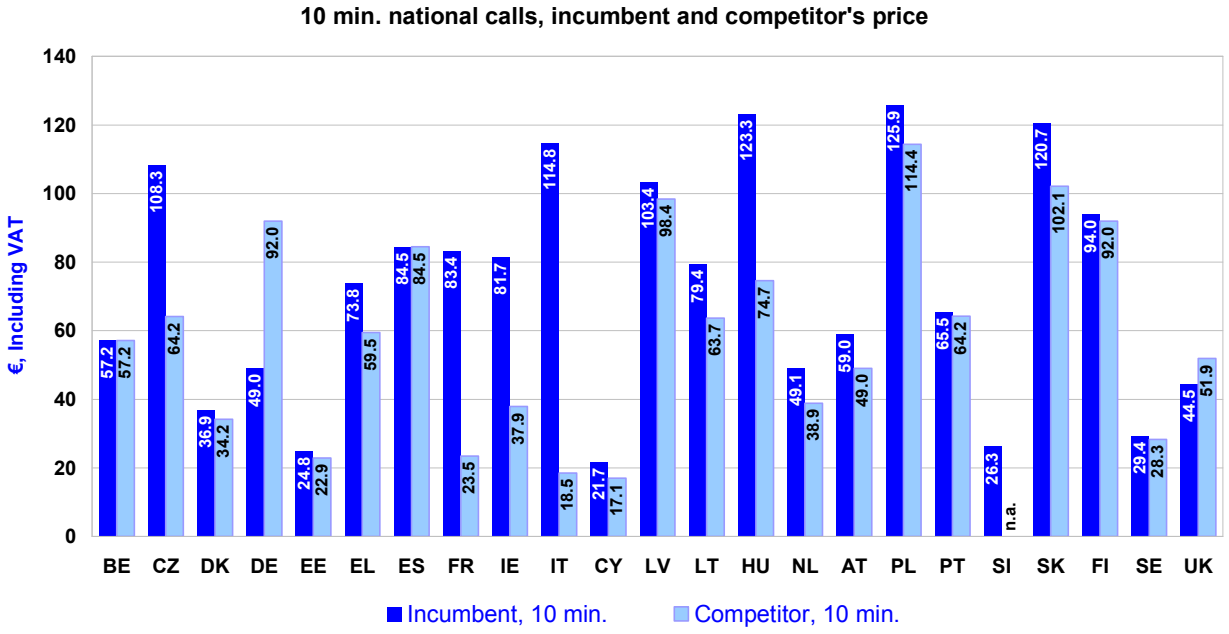


Figure 97



7.7. INCUMBENT OPERATOR PRICE FOR 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 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).

All tariffs are standard prices from ex-incumbents operators, and both these operators and new entrants may offer lower prices.

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

A full description of the methodology can be found at the end of this report.

Figure 98

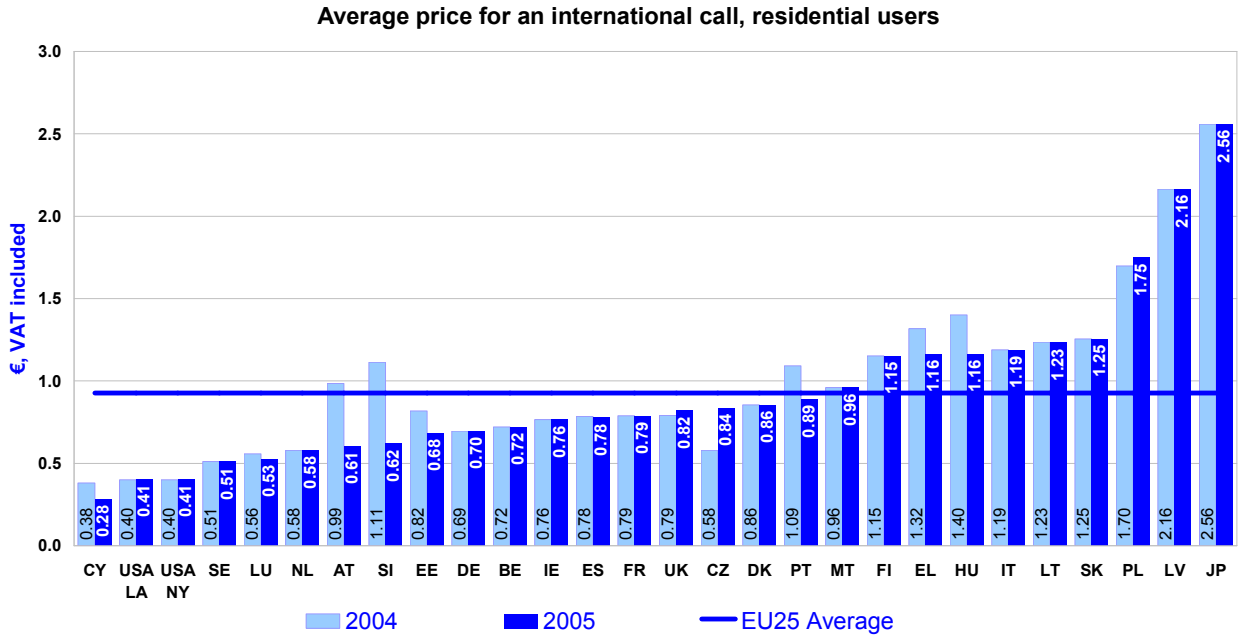


Figure 99

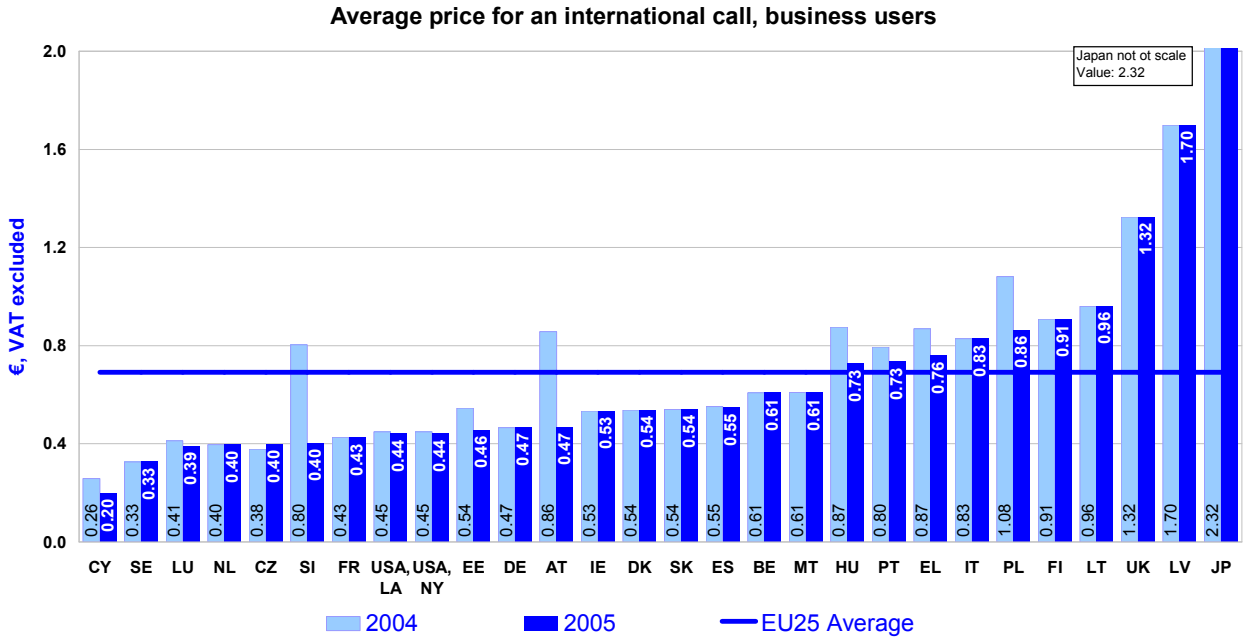
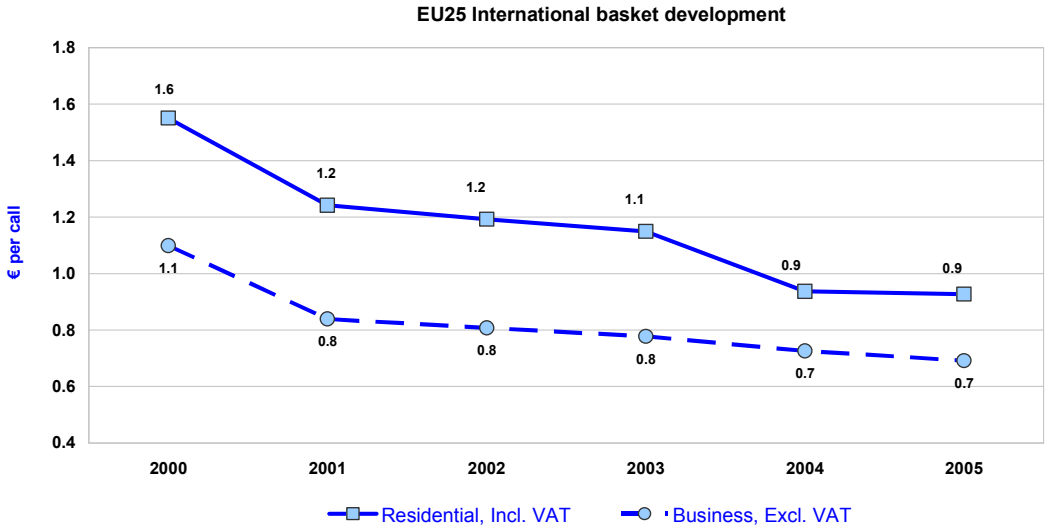


Figure 100



7.8. INCUMBENT OPERATOR 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 11.00AM) to four different destinations: Near EU country, Distant EU country, USA and Japan. Figures are expressed in €, including VAT, and they refer to the European incumbent operators and the EU weighted average. The table below summarises the definition of near and distant EU destination countries.

From:	Near EU	Far EU
BE	FR	EL
CZ	DE	FI
DK	SE	EL
DE	FR	EL
EE	FI	EL
EL	IT	DK
ES	PT	DK
FR	BE	EL
IE	UK	EL
IT	EL	DK
CY	EL	DK
LV	SE	EL
LT	SE	EL
LU	DE	EL
HU	AT	FI
MT	IT	FI
NL	DE	EL
AT	DE	EL
PL	DE	EL
PT	ES	DK
SK	CZ	FI
SI	AT	FI
FI	SE	EL
SE	DK	EL
UK	FR	EL

Figure 101

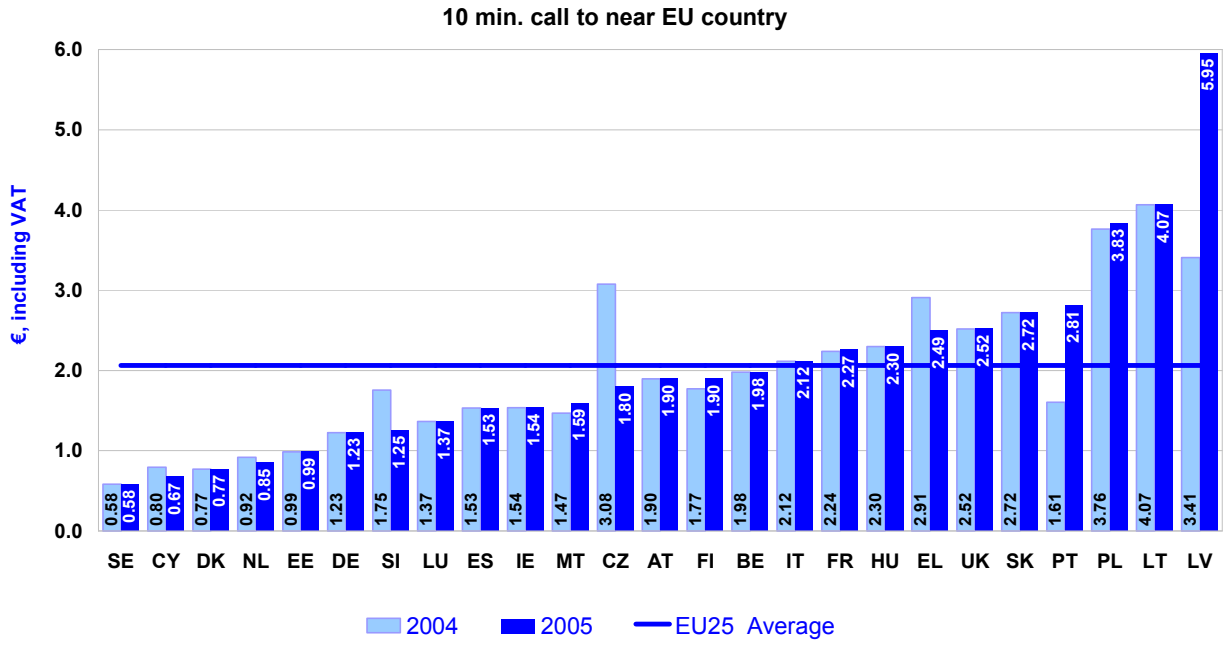


Figure 102

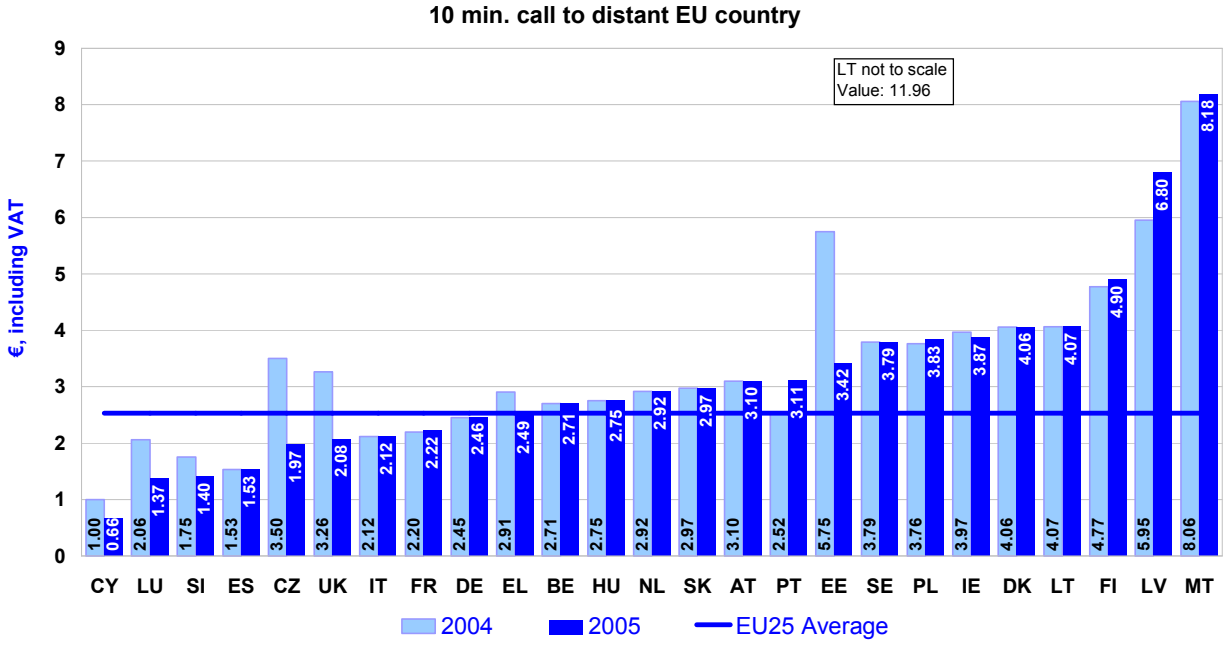


Figure 103

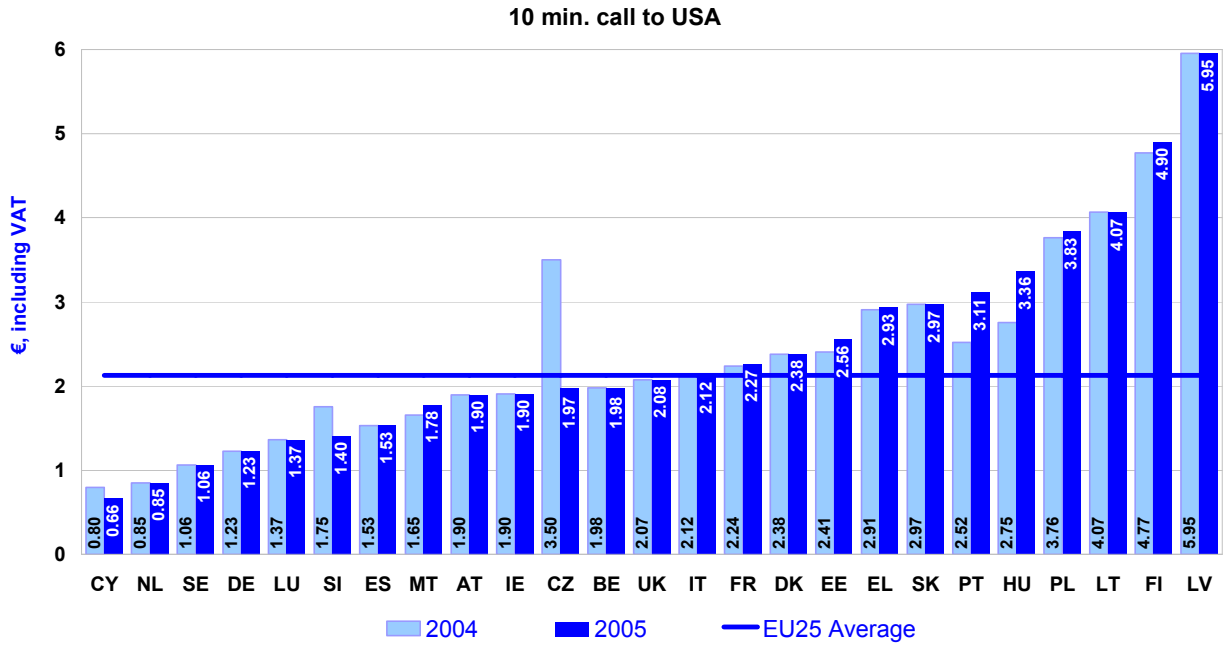
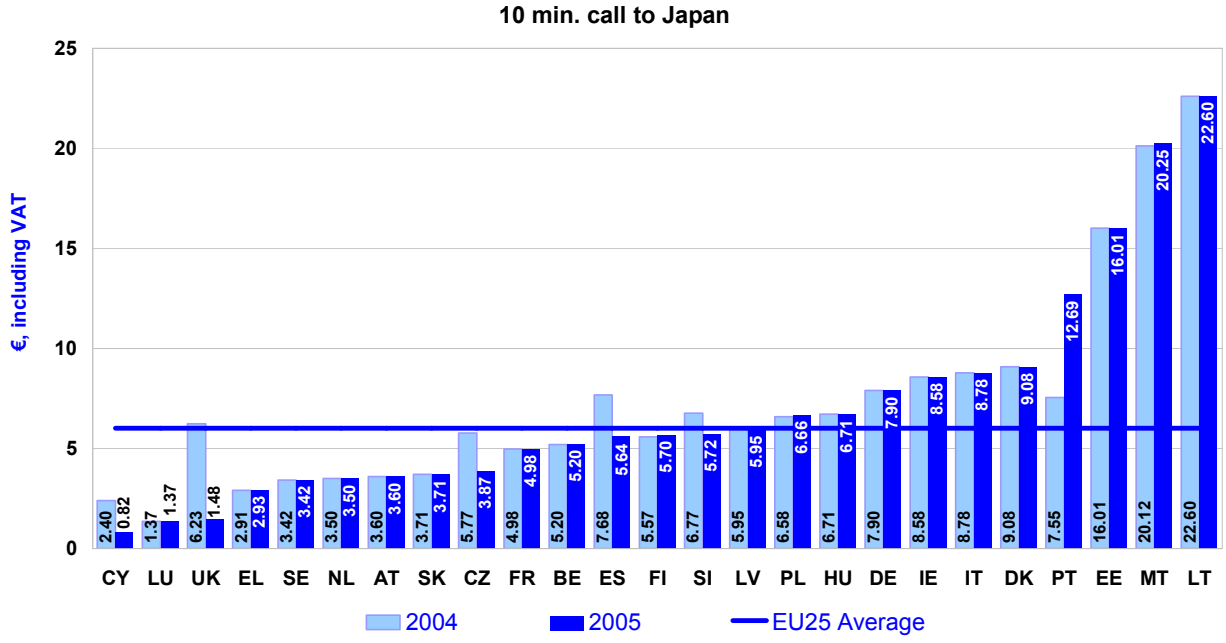


Figure 104



7.9. ALTERNATIVE OPERATORS' PRICE FOR FIXED INTERNATIONAL CALLS

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 September 2005.

Figure 105

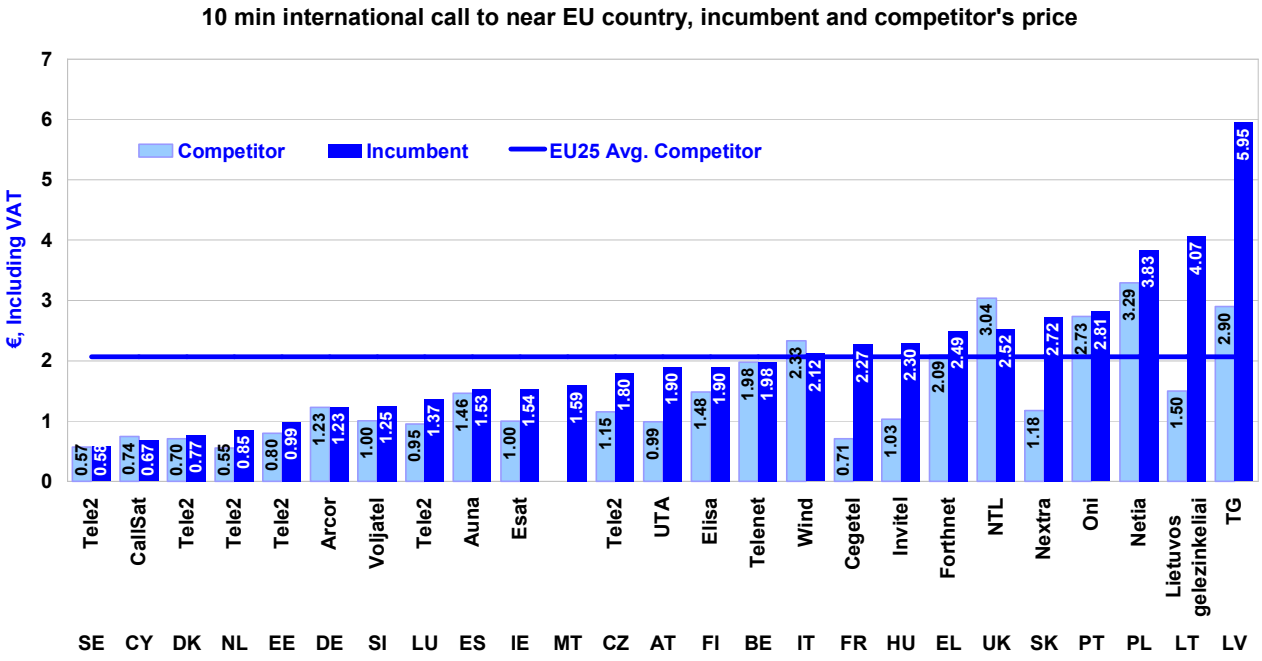


Figure 106

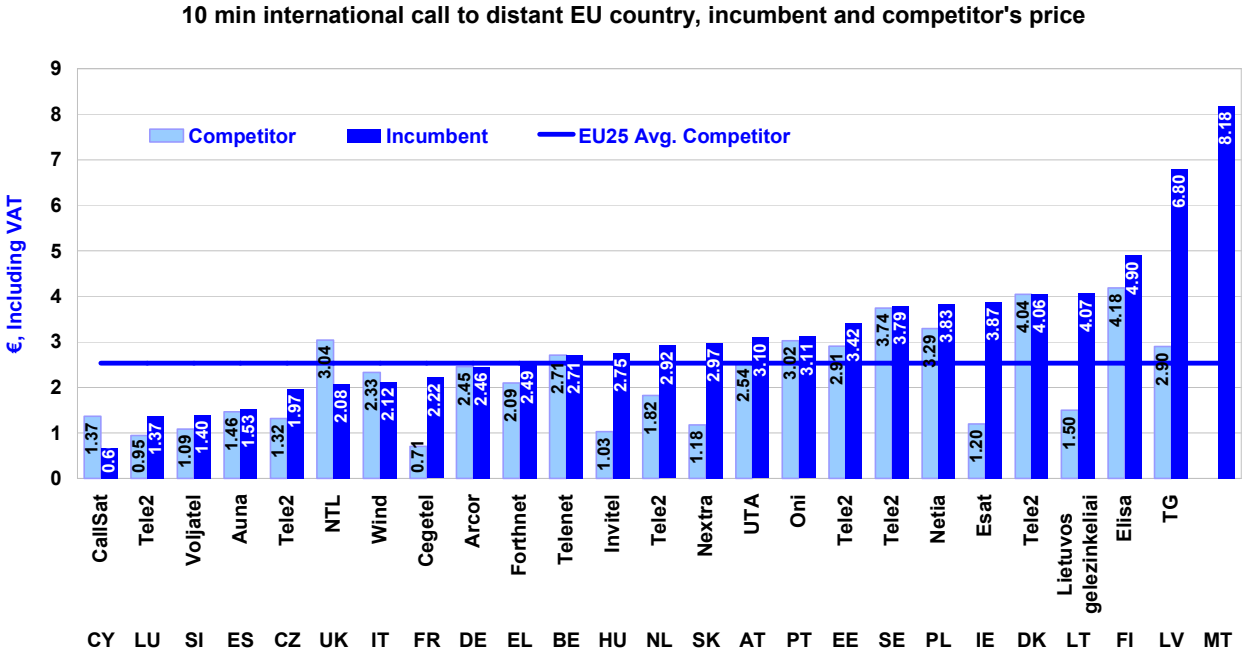


Figure 107

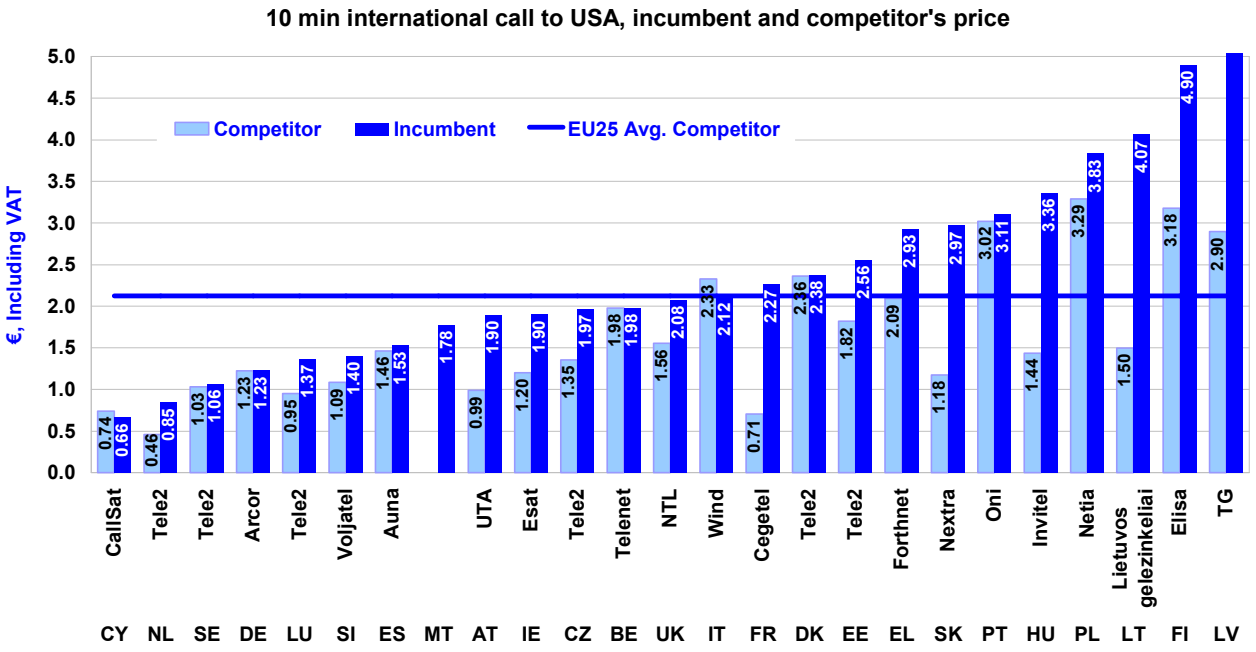
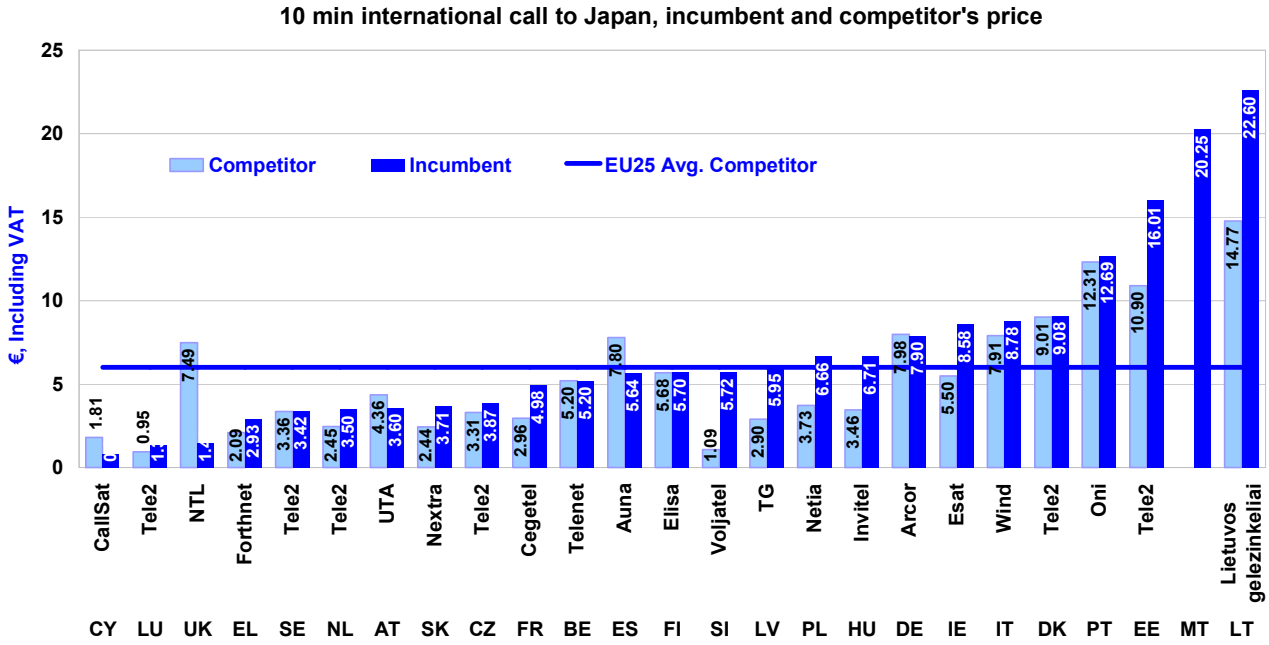


Figure 108



8. LEASED LINES RETAIL TARIFFS

This section contains an overview of prices charged by incumbent operators to end users in each Member State for national and international leased line services as at 1 September 2005. Figures do not cover wholesale prices. Price developments are also analysed over the period August 2000 - September 2005.

The figures and the information are taken from a study carried out by Teligen-HI Europe 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 for 2004 and 2005. Two 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 (see details below). The countries where the price may vary with location or other non-distance related definitions are: Belgium, France, Austria, Finland, Sweden and the United Kingdom.

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 25 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 year, excluding VAT.

National leased lines prices as at 1 September 2005.

The validity dates of the tariffs used in this section are:

	Valid date		Valid date
Belgium	01/06/04	Hungary	01/01/02
Czech Republic	01/05/03	Malta	01/12/04
Denmark	01/04/05	Netherlands	01/11/04
Germany	17/04/02	Austria	01/09/01
Estonia	01/06/04	Poland	01/01/00
Greece	01/01/05	Portugal	01/03/03
Spain	01/08/04	Slovenia	01/12/02
France	01/07/03	Slovakia	01/06/01
Ireland	18/06/03	Finland	
Italy	01/11/03	Sweden	
Cyprus	01/10/04	United Kingdom	01/01/04
Latvia	01/06/99	Japan	01/01/05
Lithuania	27/06/03	USA, Verizon	21/05/05
Luxembourg	01/02/05	USA, Pacbell	12/03/03

Belgium: Belgacom has divided its network into 4 levels based on "economic concentration". The tariffs shown are for circuits within or between level 1 areas, "Very high economic concentration". Prices for 155 Mb/s shown here are adjusted from prices for 140 Mb/s circuits. Local circuits within an exchange area are priced as a regular circuit of the given distance.

Czech Republic: Cesky Telecom defines prices for all bit rates based on the price of a 64 kb/s circuit. Coefficients are given for each bit rate available (up to 2 Mb/s), and the price is the product of the 64 kb/s price and the coefficient. Local circuits are defined as a 0 km circuit. 10 distance zones are defined for circuits with more than 0 km between serving exchanges. There are no incremental charges (i.e. per km).

Denmark: TDC divides the leased lines into two categories: Local circuits based on distance bands and whether the two ends are connected to the same exchange or neighbouring exchanges. Long distance circuits connected to different exchanges, divided into 4 distance bands. There are no incremental charges (e.g. per km). Prices for 155 Mb/s shown here are adjusted from prices for 140 Mb/s circuits.

Germany: Deutsche Telekom offers different types of circuits. In this analysis the "Standard Festverbindungen" is used. Tariffs are divided into: a) Local 1 (same exchange); b) Local 2, up to or above 15 km; c) Long Distance, < 15km, 15 – 50 km, 50 – 150 km, > 150 km. Local 2 and Long distance use incremental (per km) charges. At 34Mb/s and 155 Mb/s access circuit charges apply, with a distance (per km) element.

Estonia: Elion divides the leased lines into distance bands of 0 – 6 km, 6 – 10 km, 10 – 20 km, >20 km. Trunk circuits above 20 km use incremental (per km) charges. Local circuits are priced as a regular circuit of the given length.

Greece: OTE divides the leased lines into: a) Local circuits, b) Trunk circuits (< 35 km, 35 – 70 km, 70 – 150 km, > 150 km). Trunk circuits use incremental (per km) charges. 64 kb/s charges are for Hellascom service from 2003. Prices for 2004 are those OTE should apply according to the EETT decision of December 2003. Prices have since changed again.

Spain: Telefonica strictly divides leased lines according to distance: a) Distance bands: 0 – 4 km, 4 – 20 km, 20 – 70 km, 70 – 300 km, 300 – 500 km, > 500 km. All bands use incremental (per km) charges. Telefonica does not publish prices for 155 Mb/s circuits. Local circuits within an exchange area are priced as a regular circuit of the given distance.

France: France Telecom offers leased lines in the products Transfix and Transfix 2.0. Transfix is the basic service, and the one used in this analysis. The tariff is divided into distance bands: 0 – 10 km, 10 – 50 km, 50 – 300 km, > 300 km. 34 and 155 Mb/s divide at 30 km and 100 km instead of 50 km. Prices for 2 Mb/s relate to 2,048 kb/s bit rate. 1,920 and 1,984 have different prices. Prices for 34 and 155 Mb/s circuits relate to circuits with one end in a major city (zone A), as defined by France Telecom. Local circuits within an exchange area are priced as a circuit of the given distance. Additional definitions apply for higher speed circuits.

Ireland: EirCom define the tariff for leased lines with a local end charge, and main link charges for circuits 0 – 30 km and > 30 km. Local circuits may be made up by 2 local ends, and no main link. Circuits equal to or above 1 Mb/s have a distance incremental charge for local ends over 1.5 km.

Italy: All circuits have an access charge per end, and a main link distance related charge per km. Distance bands are 0 – 60 km, 60 – 300 km, and > 300 km. Circuits from 2 Mb/s and above are available with various levels of reduced charges depending on contract period and overall spend. The most basic level is used in this analysis. Local circuits within an exchange area are priced as two access circuits only.

Cyprus: CYTA divides the leased lines into: a) Subscriber segment, for access. b) Network segment, between exchanges, at distance bands of 0 – 20 km, 20 – 80 km, > 80 km. Local circuits within an exchange area are priced as two subscriber segments.

Latvia: Lattelekom circuits have the same price regardless of distance. Prices are only provided for circuits up to 2 Mb/s.

Lithuania: Lietuvos Telekomas distinguish between circuits inside the local exchange area, and those beyond the local exchange area.

Luxembourg: P&T Luxembourg divide the leased lines tariff into 4 types of circuits: Same local network, contiguous local network of same nodal sector, same nodal sector or contiguous local networks of different nodal sectors, and non-contiguous local networks of different nodal sectors. This definition relates to the network hierarchy, and not to distance. Distances at 200 km are not possible. Local circuits within an exchange area are priced as a circuit in the same local network.

Hungary: Matav applies an access circuit charge for each end of the circuit, and a fixed basic charge and a per km charge for the trunk part. Matav does not publish prices for national circuits, so data have not been updated.

Malta: Maltacom has a flat charge regardless of distance, only dependent of bitrate.

Netherlands: KPN Telecom offer leased lines as Digital Standard and DigiStream services. Digital Standard is the basic service, and the one used in this analysis. Tariffs are divided into a charge per connecting point and a main link charge. The main link charge is divided into two zones: Up to 50 km with a fixed basic charge and an incremental per km charge, and over 50 km with a fixed basic charge. Prices are in effect capped above 50 km. Prices for 34 and 155 Mb/s circuits are not published. Local circuits within an exchange area are priced as two access connections plus a short main link of the given distance.

Austria: Telecom Austria divides the "Digitaler Stromweg" circuits into 2 categories: City-tarif when both ends of the circuit are in category A cities (a defined list of 68 towns and cities), and Normal-tarif when the above does not apply. This analysis used the City-Tarif. The Normal-tarif would in most cases come out more expensive. For the years up to 2000 a different tariff scheme applied, with a different list of towns, and 3 instead of 2 categories. The tariff is based on a charge per local end, and a distance related charge per km. The distance bands vary with bit rate. Local circuits within an exchange area are priced as two access circuits only.

Poland: Polish Telecom has no recurring charges related to the access. A basic charge plus a per km charge is applied for the full length of the circuit. Distance bands are divided into 0 – 3 km, 3 – 20 km, 20 – 30 km, 30 – 50 km, 50 – 100 km, 100 – 200 km, over 200 km.

Portugal: Portugal Telecom divides the leased line tariff into local access circuit charge, and a main link with a fixed and an incremental charge per km. Distance bands are 0 – 10 km, 10 – 30 km, 30 – 50 km, 50 – 100 km, over 100 km. Local circuits connected to the same exchange will not incur main link charges. Local circuits within an exchange area are priced as two access circuits only.

Slovenia: Telekom Sloveije divides the leased line tariffs into 3 distance bands: 0 – 5 km, 5 – 50 km and over 50 km. Each of these bands have a basic price and a per km price. Distance is calculated between serving exchanges.

Slovakia: Slovak Telecom defines the leased line tariff in two parts: Local Access and Intercity. The Intercity part is divided into 3 distance bands: 0 – 50 km, 50 – 100 km and over 100 km. Prices are given for the 64 kb/s bitrate. Other bitrates between 9.6 kb/s and 2048 kb/s are calculated based on the 64 kb/s price using a multiplication factor. This factor is different for Local Access and Intercity circuit parts. For example 2048 kb/s has a factor of 4.4 for the Local Access and 5.6 for the Intercity part

Finland: Sonera stopped publishing full 64 kb/s circuit prices in 1998, and has also stopped publishing 2 Mb/s circuit prices. Local circuit charges were divided into 3 categories: Urban area, Rural areas I and II. Definitions of these areas relate to individual locations in the Sonera coverage area. Long distance (main link) charges were also divided into 3 categories: Green, Red and Blue. Green covers the main 5 cities, red a further 28 towns, and Blue the rest of the countries. Distance bands are 0 – 50 km, 50 – 100 km, and > 100 km. Incremental charges per km applied.

Sweden: Telia no longer publishes prices for national leased line. Prices below relate to the last published price list. Telia divides their network into 5 categories: Metropolitan green and green for the major cities and towns, red and blue for short distance network in smaller places, and white for rural areas. Circuits are priced according to the portion of the circuit falling into any of these categories on its route. Here the green tariff is assumed, for a circuit between reasonably large towns. The tariff is divided into local circuits and long distance. Long distance circuits will have a separate access link charge per end, and a main link charge. Local circuits are priced in 2 distance bands: 0 – 0.5 km and 0.5 - 3 km. Long distance circuits are priced in the bands 0 – 20 km, 20 – 40 km, and > 40 km. The latter has an incremental per km charge. Circuits at 34 Mb/s and 140/155 Mb/s are no longer offered by Telia. Instead other services are offered, as complete network solutions.

United Kingdom: BT divides their Kilostream (64 kb/s) and Megastream (2, 34 and 155 Mb/s) tariffs into circuits wholly within City London Zone (0207-area), and circuits with one or both ends outside London. For local circuits within CLZ the main link does not apply since both ends are connected to the same exchange (according to the definition used). The price is calculated as the sum of two local access circuits. Distance bands outside London are < 15 km and > 15 km. Incremental charges per km applies.

8.1.1. 64 Kbit/s

Figure 109

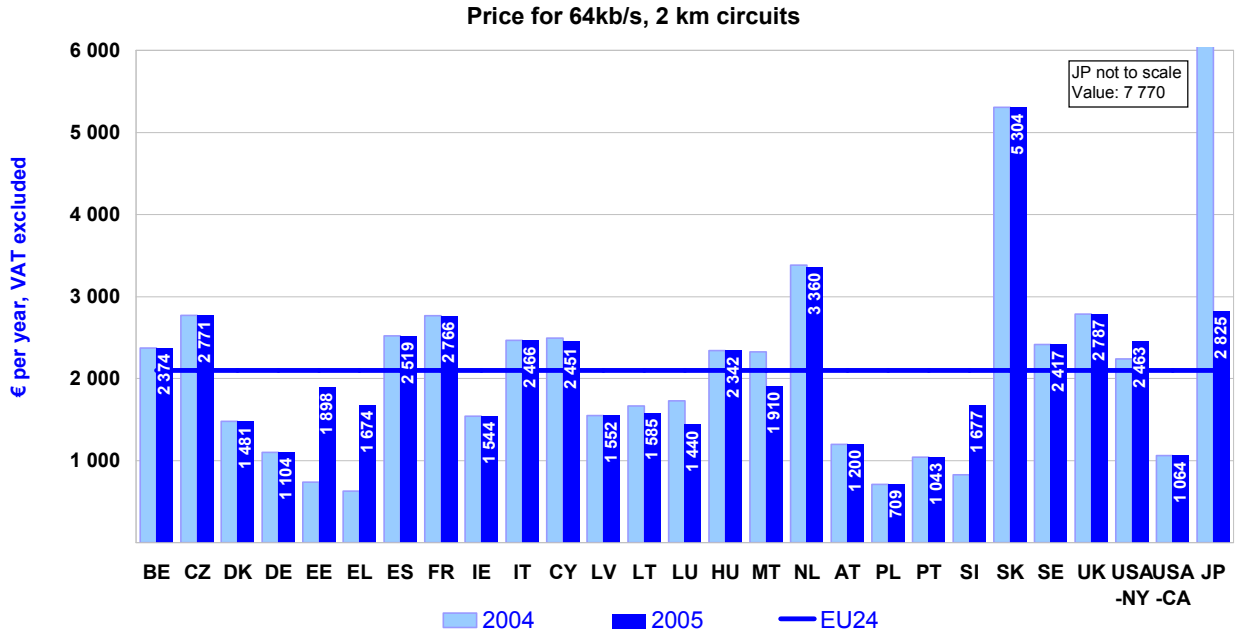
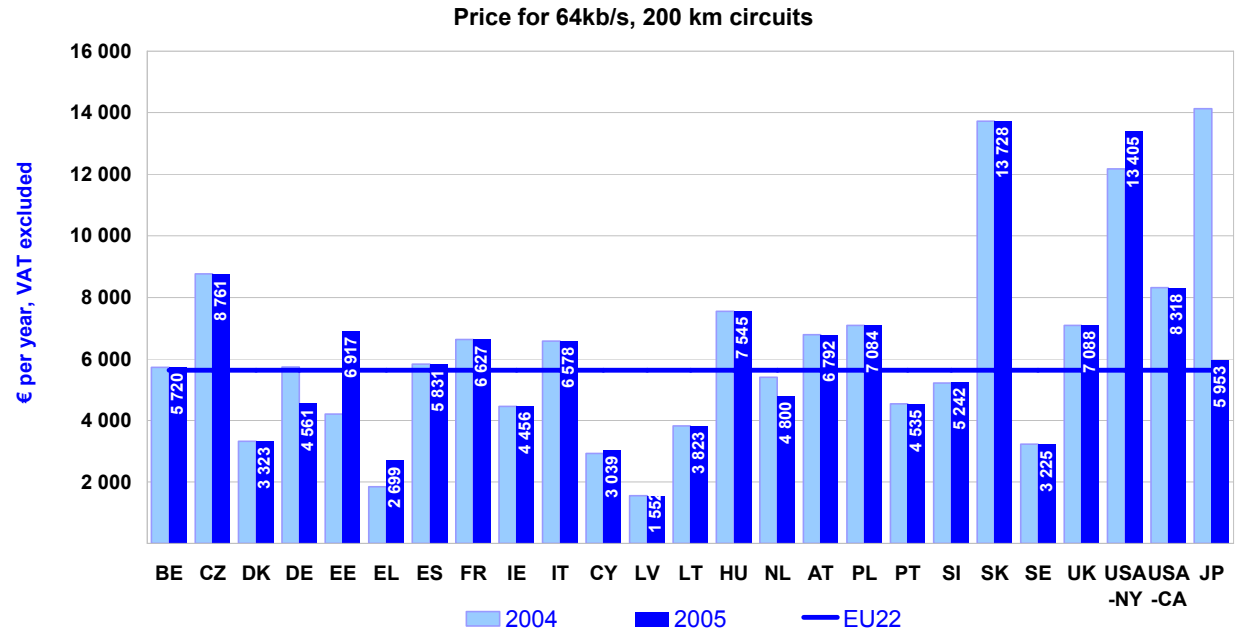


Figure 110



8.1.2. 2 Mbit/s

Figure 111

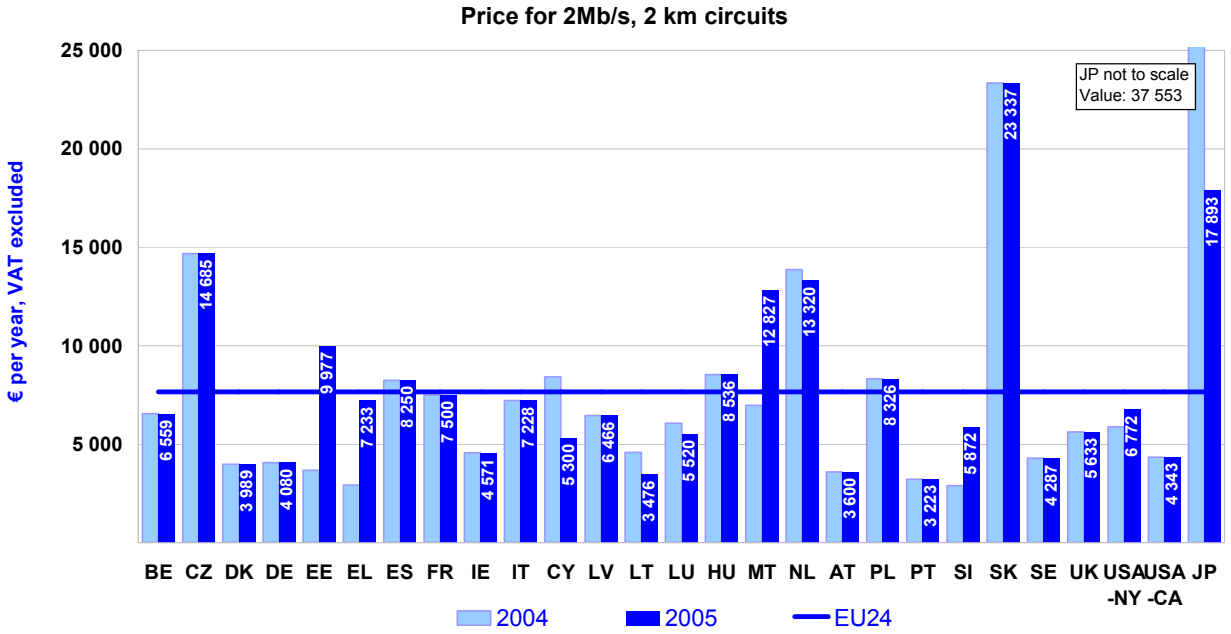
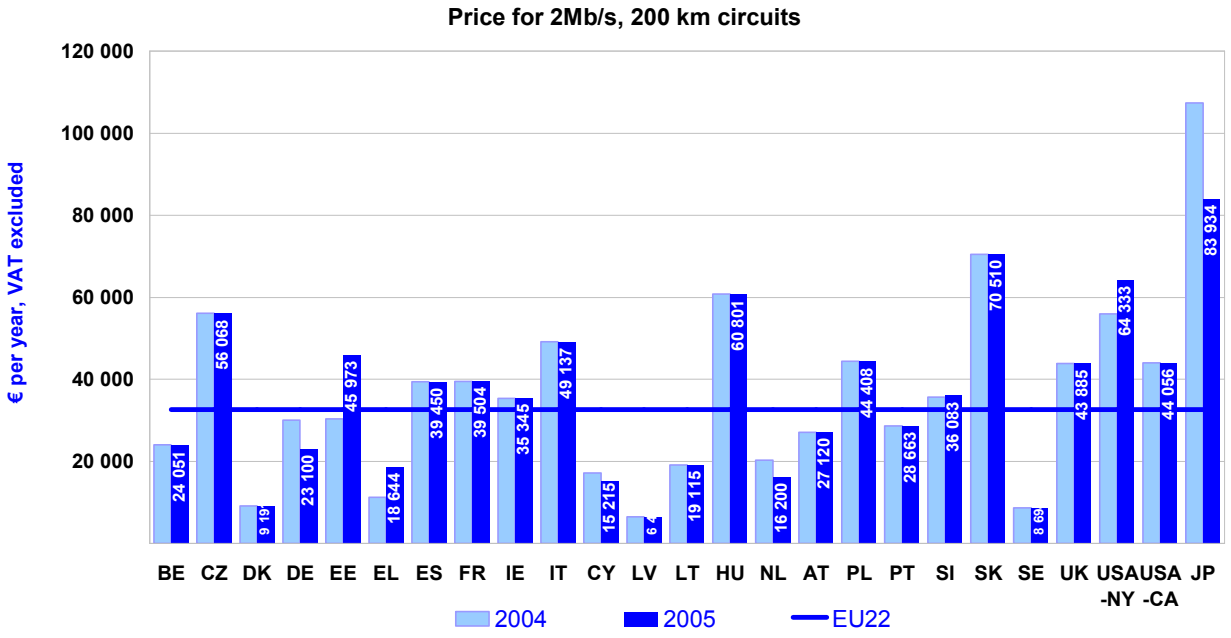


Figure 112



8.1.3. 34 Mbit/s

Figure 113

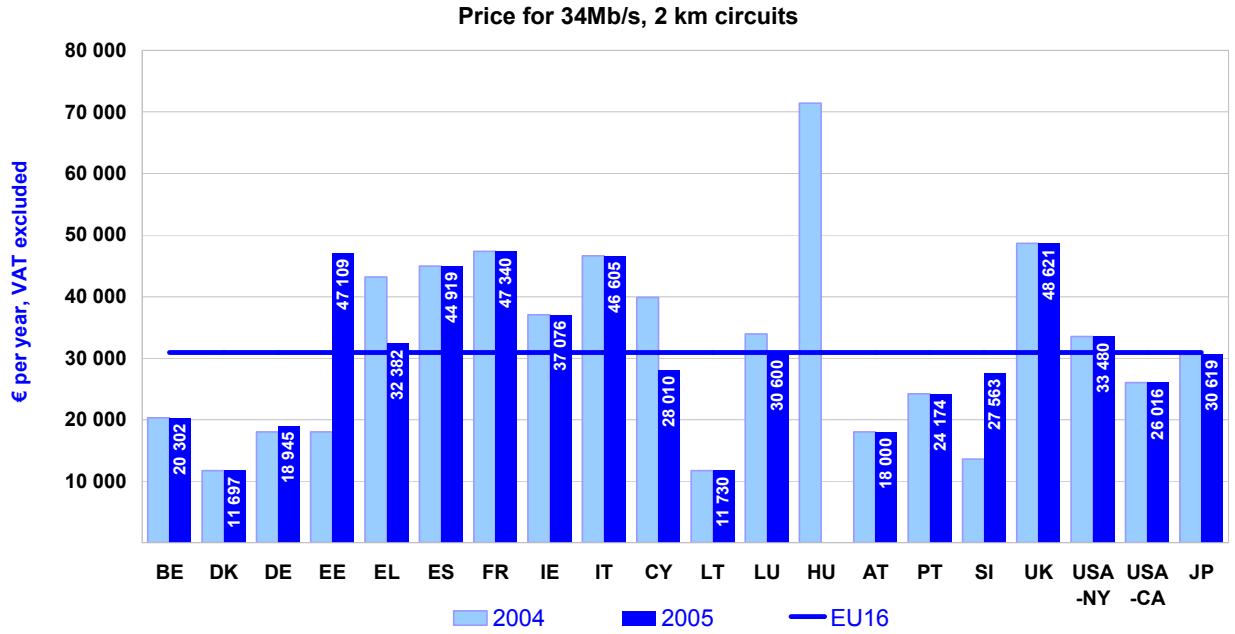
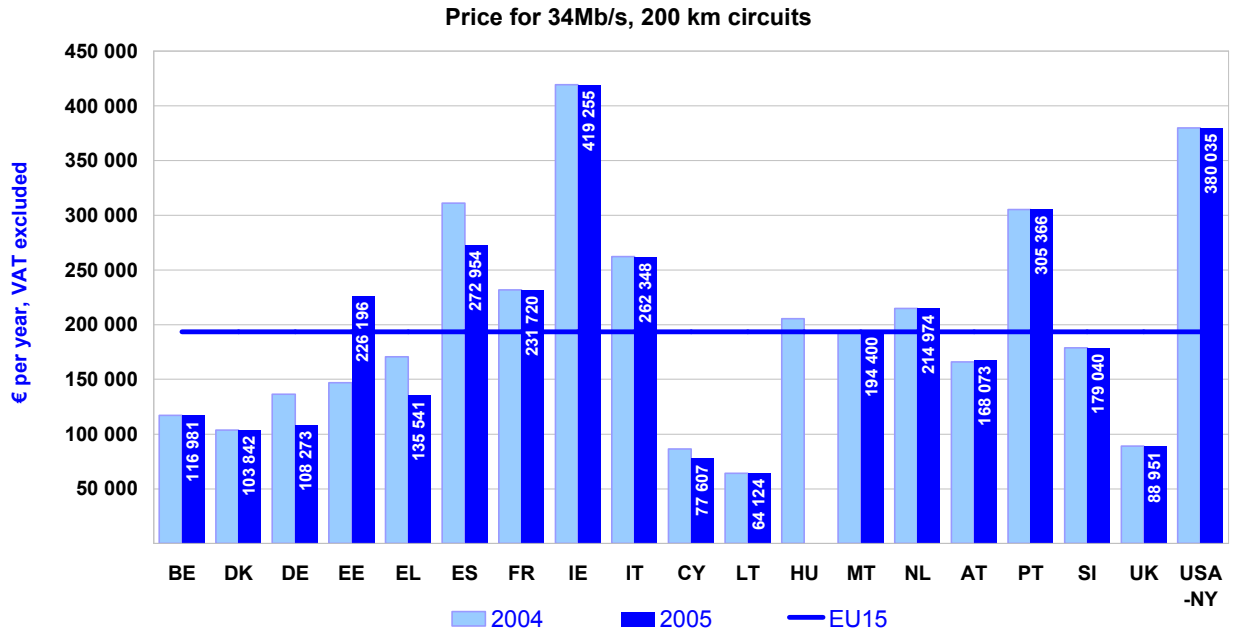


Figure 114



8.1.4. 155 Mbit/s

Figure 115

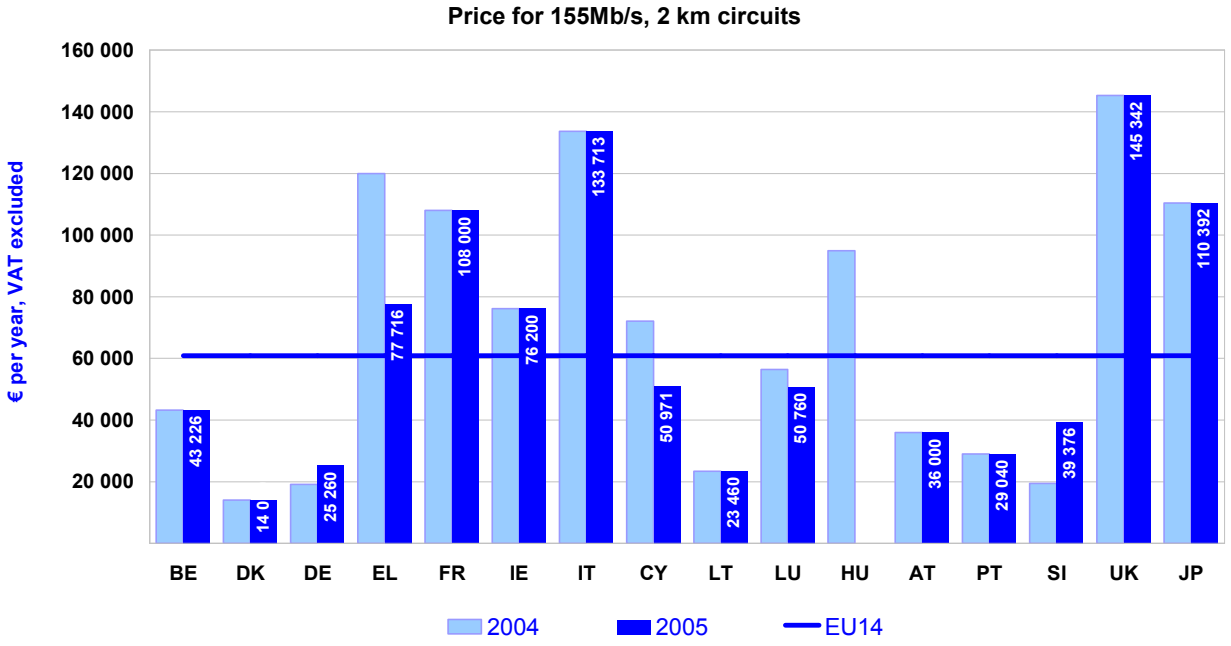
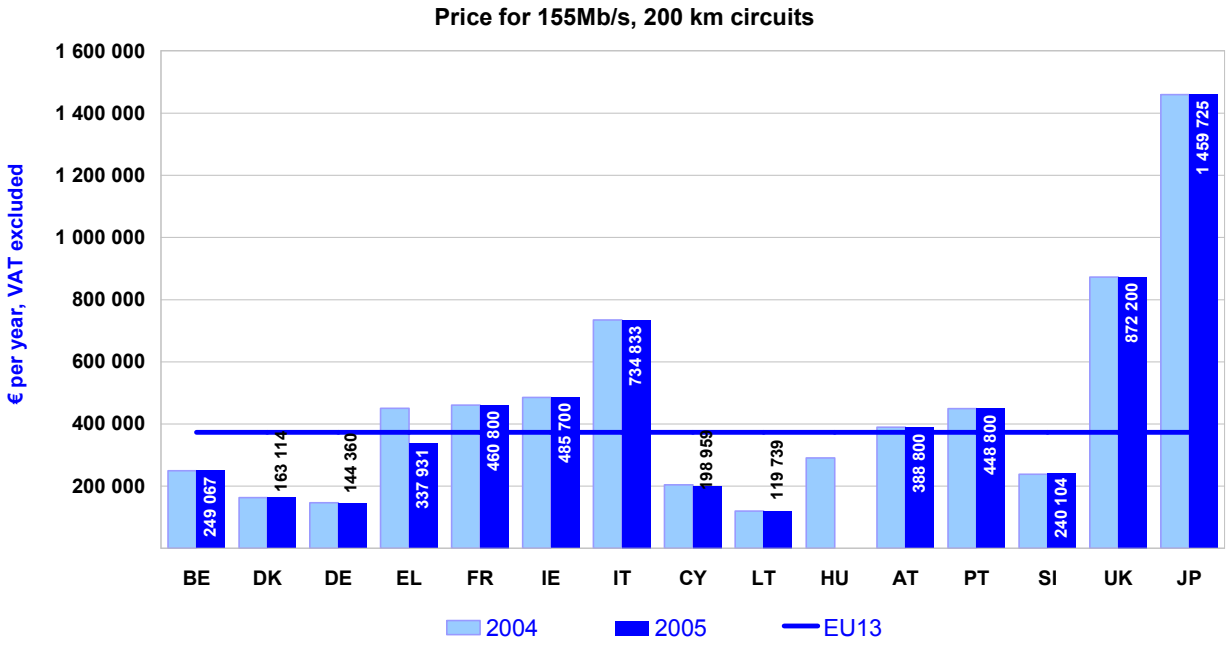


Figure 116



8.2. NATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 SEPTEMBER 2005)

Figure 117

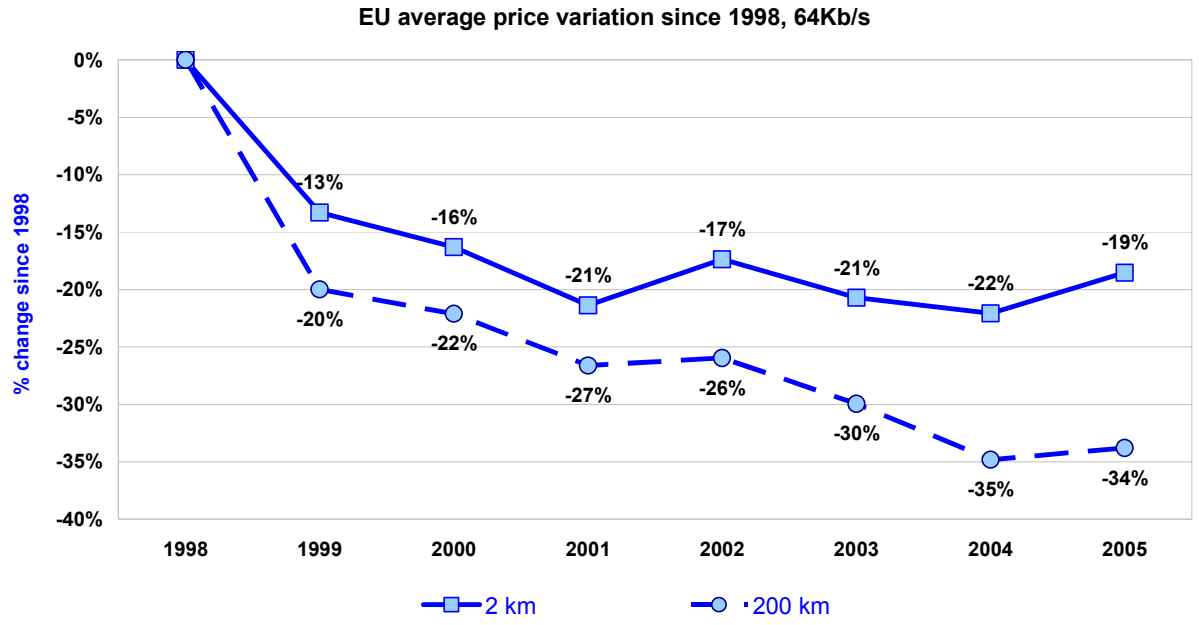


Figure 118

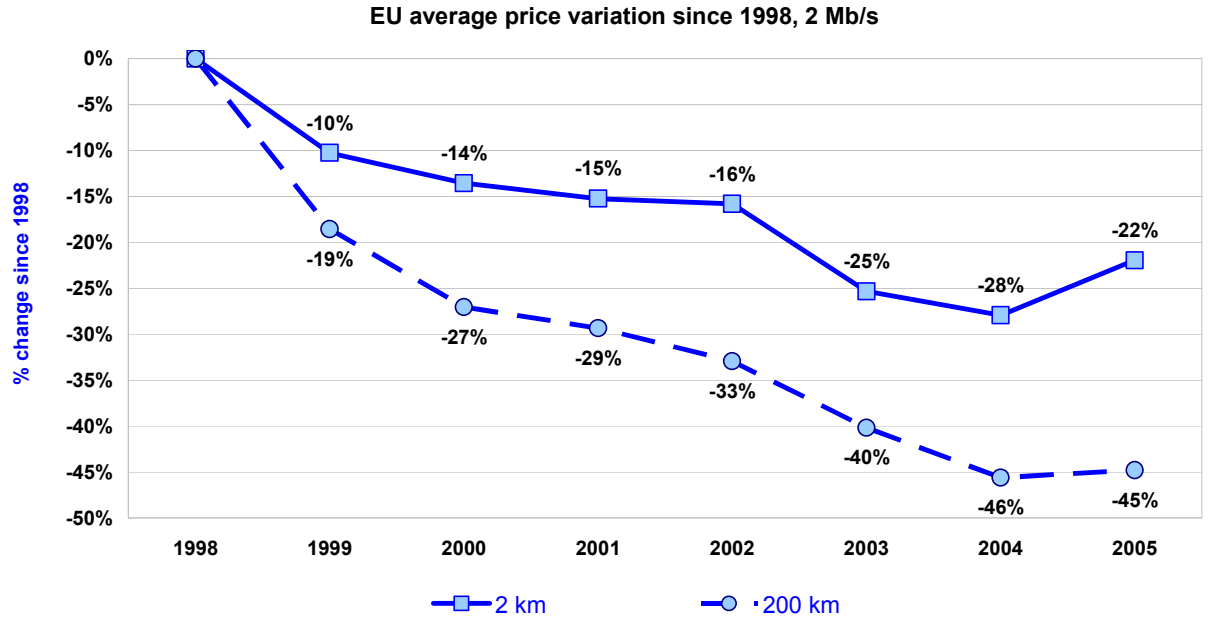
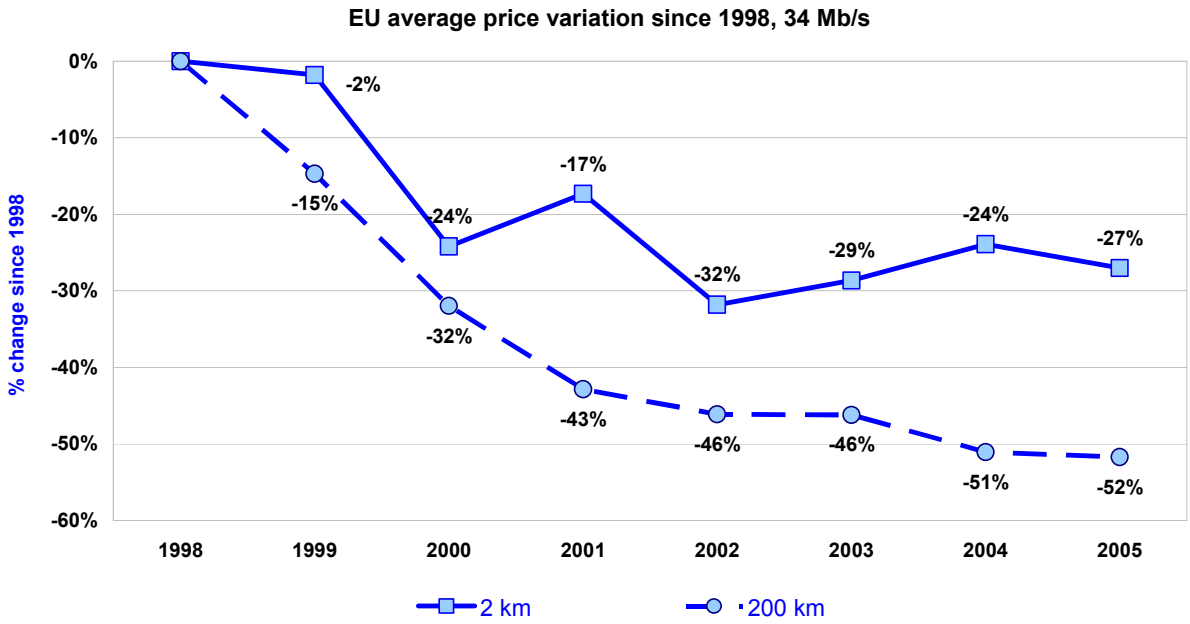


Figure 119



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 September 2005 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
- The years from 2000 are covered
- Variable / 1 year contract (shortest term available).
- AT&T prices are used for USA

8.3.1. 64 Kbit/s

Figure 120

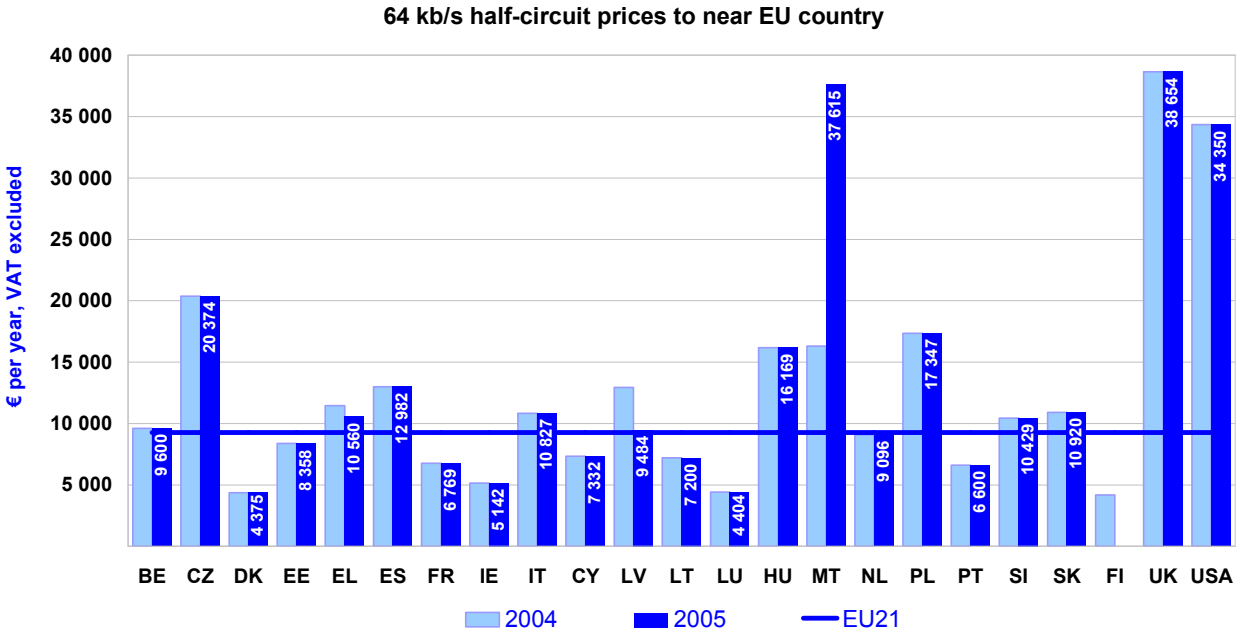


Figure 121

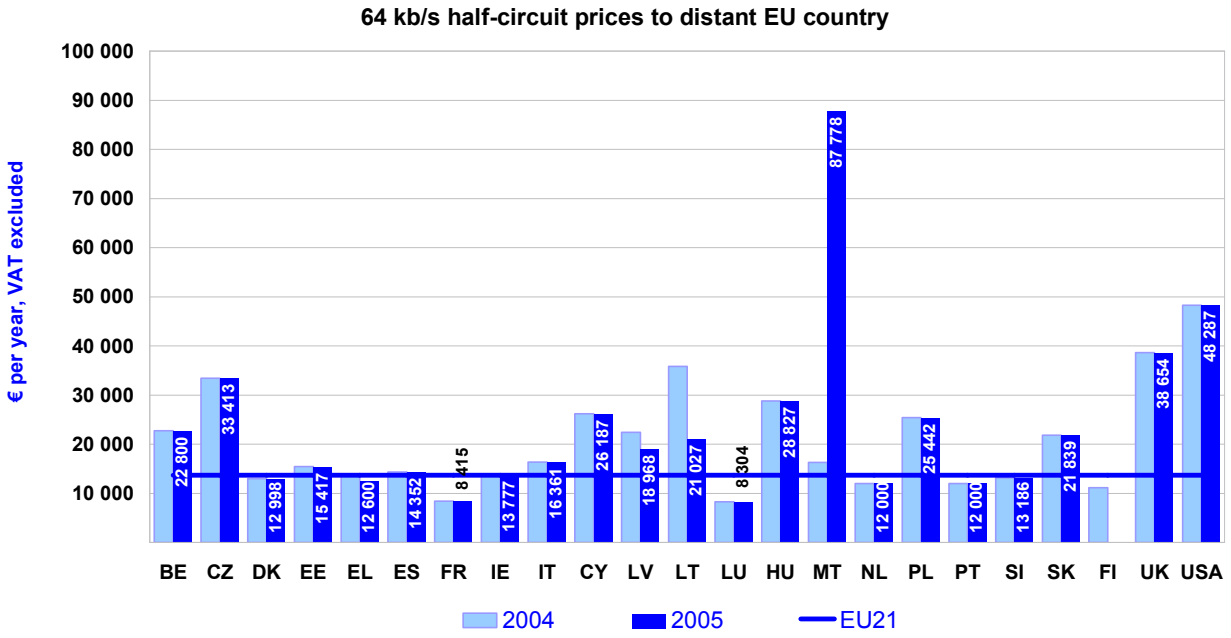
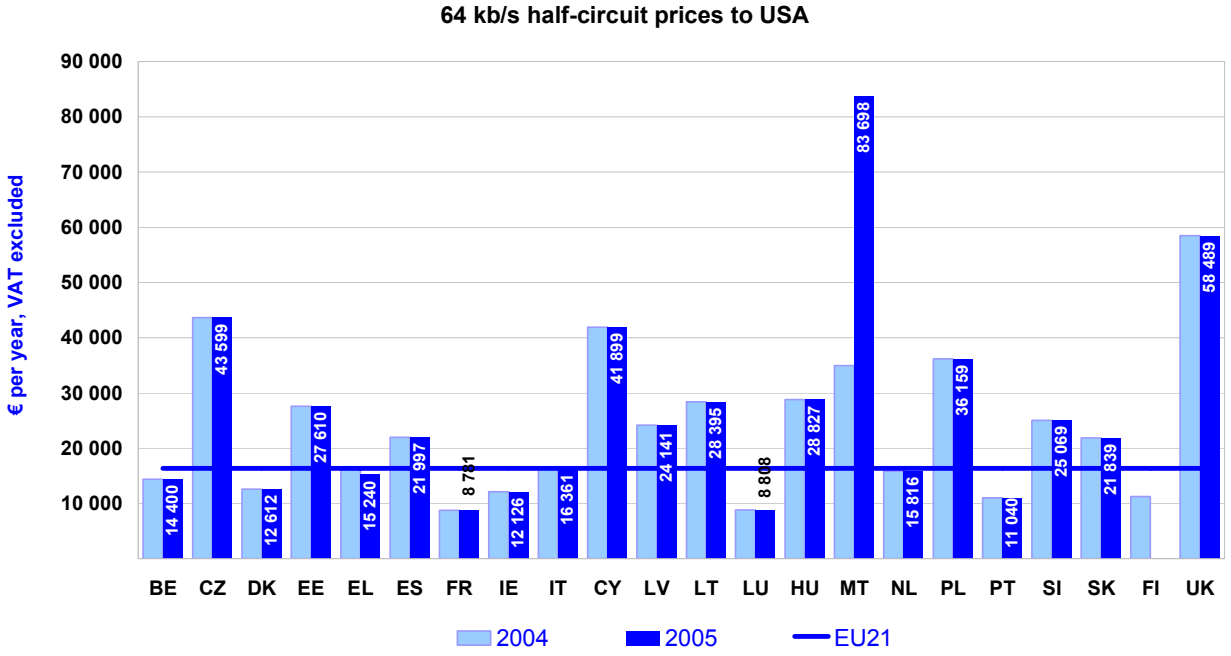


Figure 122



8.3.2. 2 Mbit/s

Figure 123

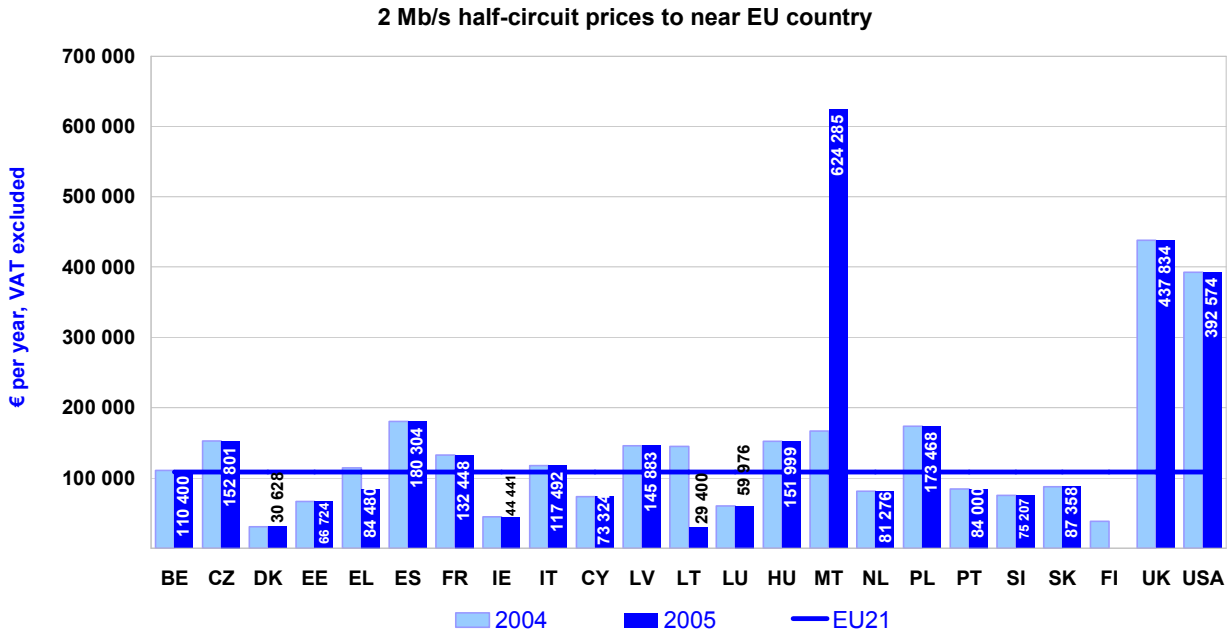


Figure 124

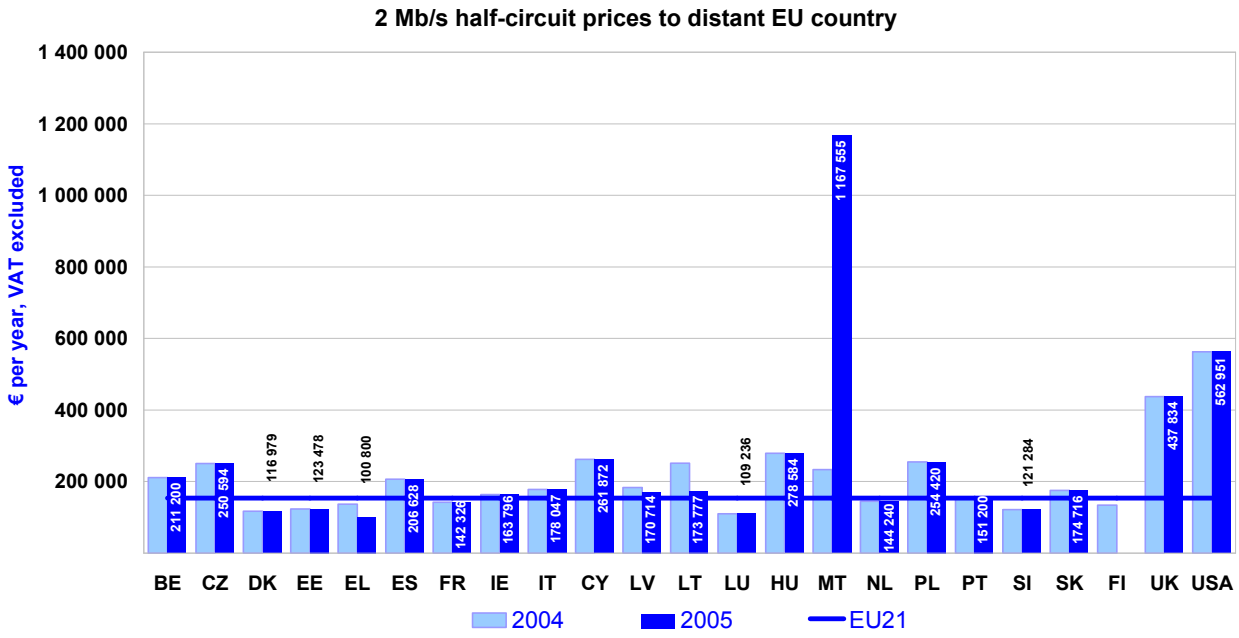
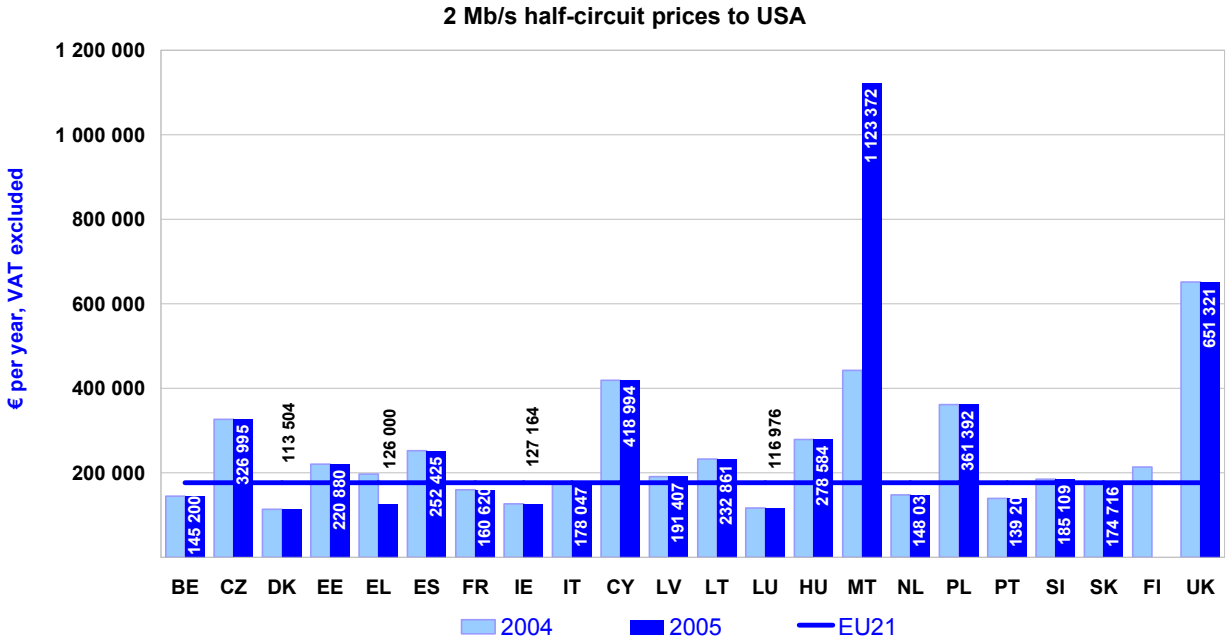


Figure 125



8.3.3. 34 Mbit/s

Figure 126

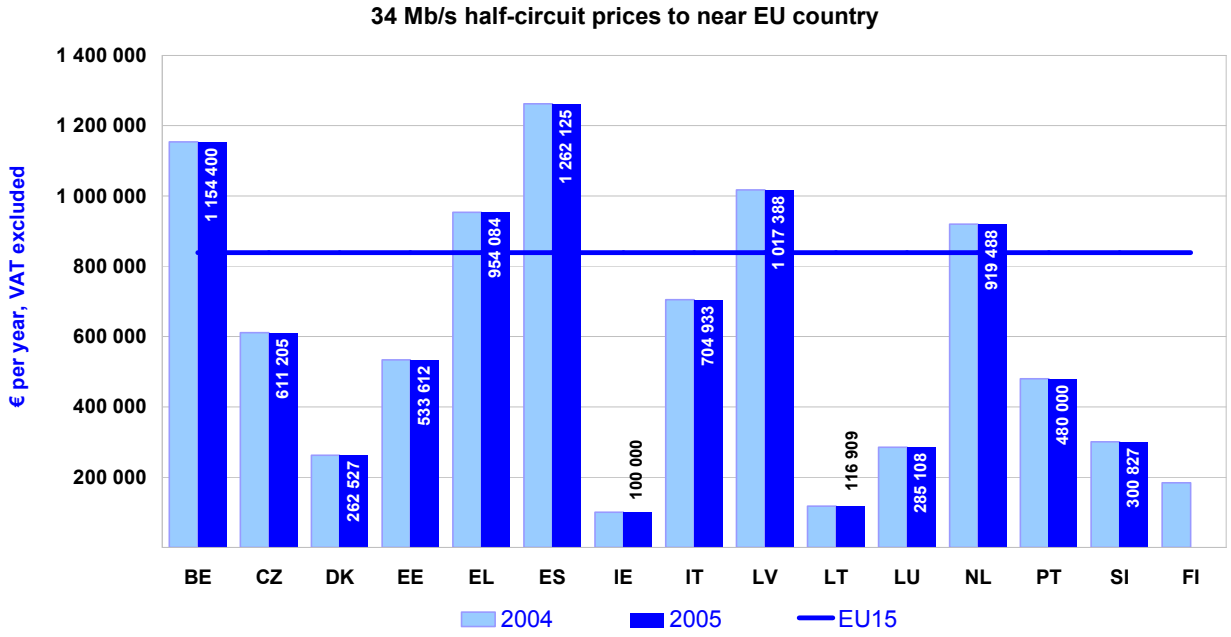


Figure 127

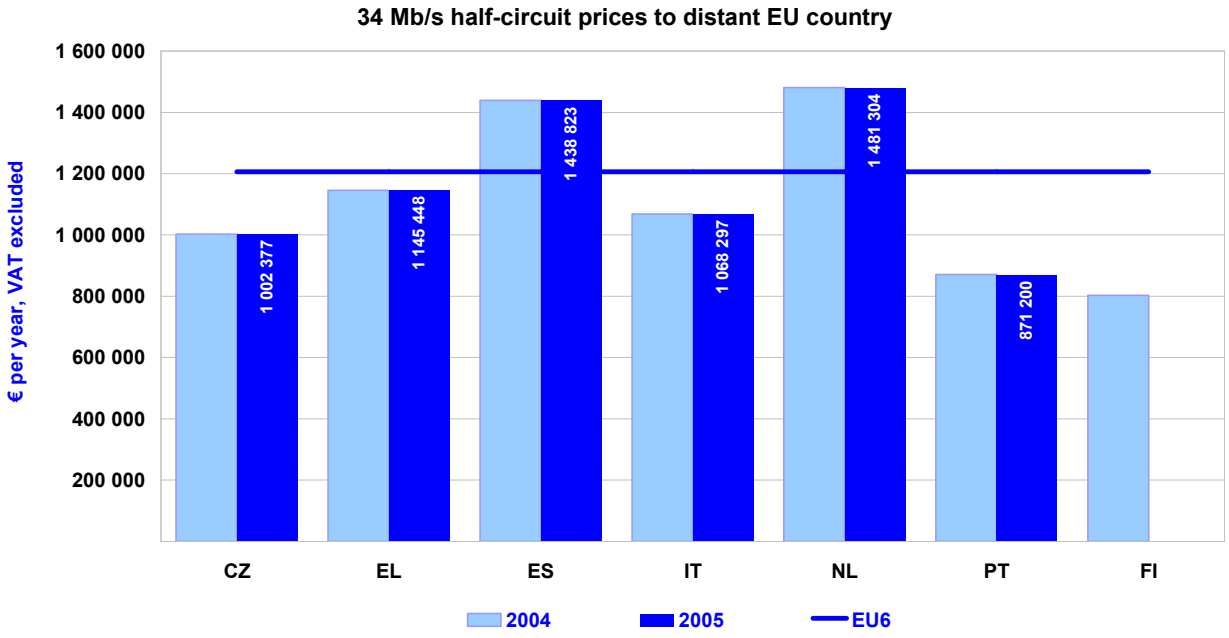
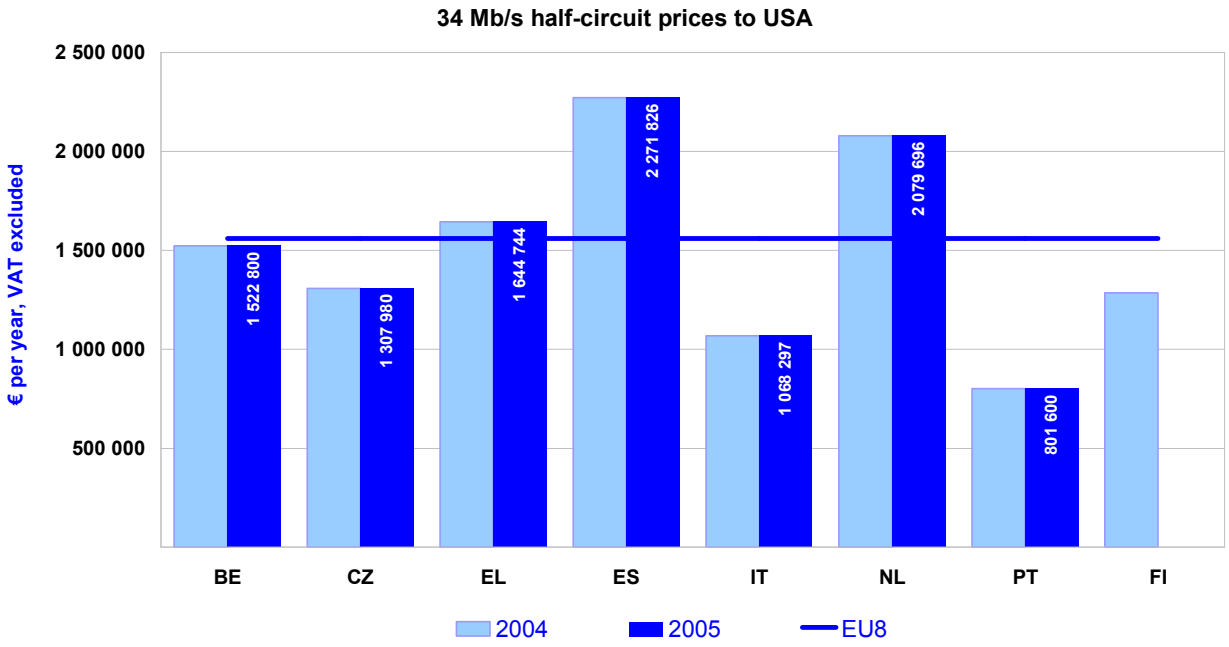


Figure 128


34 Mb/s half-circuit prices to USA
€ per year, VAT excluded
2 500 000
2 000 000
1 500 000
1 000 000
500 000
1 522 800
1 307 980
1 644 744
2 271 826
1 068 297
2 079 696
801 600
BE
CZ
EL
ES
IT
NL
PT
FI
2004
2005
EU8

8.4. INTERNATIONAL LEASED LINES PRICE TRENDS (1 AUGUST 1998 - 1 SEPTEMBER 2005)

Figure 129

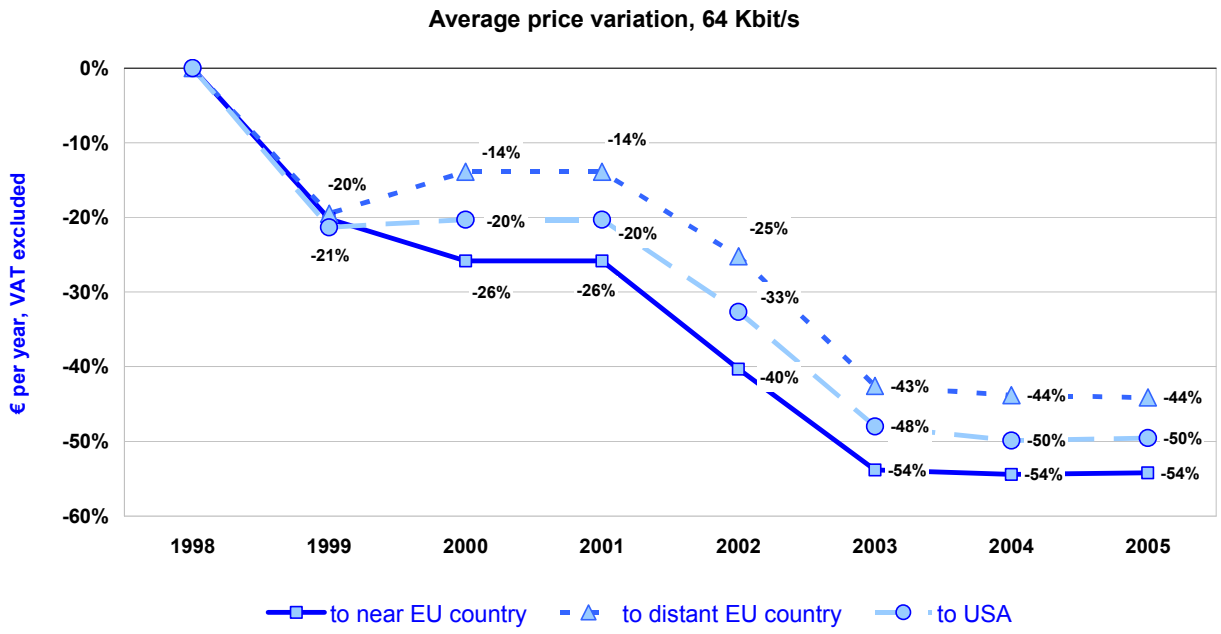
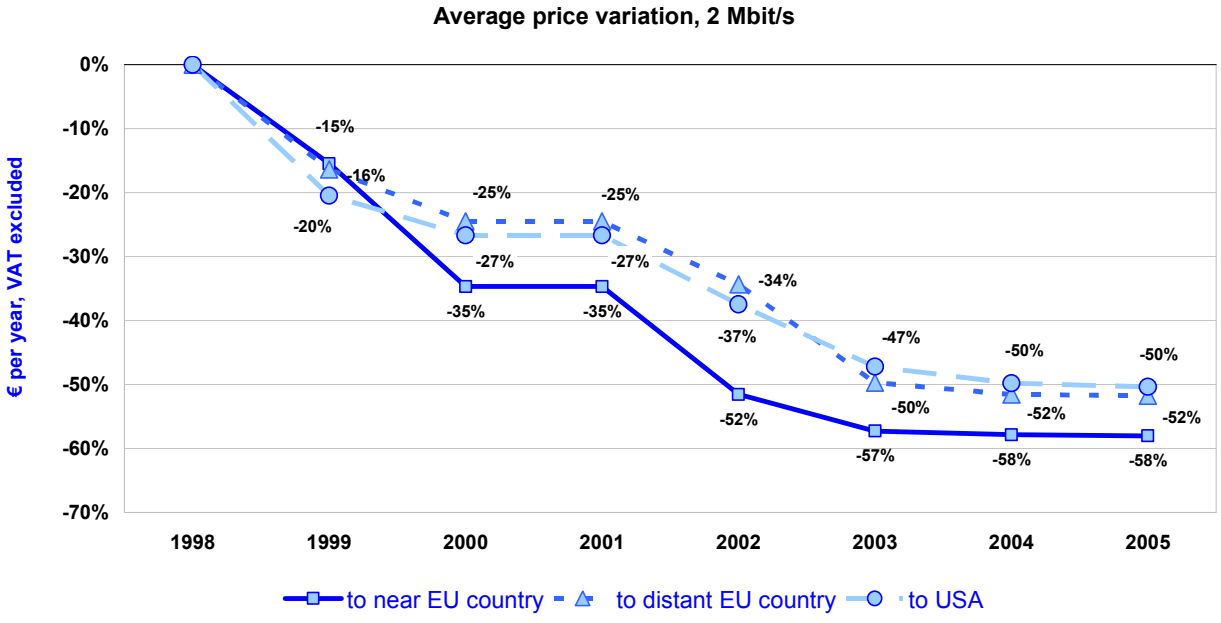


Figure 130



9. EXCHANGE RATES

9.1. EXCHANGE RATE USED IN SECTION 5 ON THE MOBILE BASKET, SECTION 8 ON PUBLIC VOICE TELEPHONY TARIFFS AND SECTION 9 ON LEASED LINE TARIFFS.

	EURO
Belgium	1
Czech Republic	0.03396
Denmark	0.13405
Germany	1
Estonia	0.06391
Greece	1
Spain	1
France	1
Ireland	1
Italy	1
Cyprus	1.74581
Latvia	1.43699
Lithuania	0.28963
Luxembourg	1
Hungary	0.00406
Malta	2.32883
Netherlands	1
Austria	1
Poland	0.25699
Portugal	1
Slovenia	0.00418
Slovakia	0.02600
Finland	1
Sweden	0.10696
UK	1.48236
Japan	0.00736
USA	0.81786

9.2. EXCHANGE RATE USED IN ALL THE OTHER SECTIONS

Belgium	1
Czech Republic	0.03378721
Denmark	0.13399796
Germany	1
Estonia	0.06391165
Greece	1
Spain	1
France	1
Ireland	1
Italy	1
Cyprus	1.74489618
Latvia	1.4365752
Lithuania	0.28962002
Luxembourg	1
Hungary	0.00398963
Malta	2.3293734
Netherlands	1
Austria	1
Poland	0.25523226
Portugal	1
Slovenia	0.00417502
Slovakia	0.0257387
Finland	1
Sweden	0.10742754
UK	1.47058824
SOURCE: OJ C244/1 OF 4.10.2005	

10. OECD TELECOMMUNICATIONS BASKET DEFINITIONS

10.1. NATIONAL PSTN BASKET

Business basket results exclude VAT. Residential basket results include VAT.

The non-recurring charge is calculated as an average between the charge for a new line installation, and the charge for "same day takeover", i.e. when there is a direct transfer from the previous to the new customer. Valid for both Business and Residential baskets.

Non-recurring charge calculation	Weight
New line connection charge	50%
Same day takeover connection charge	50%

The non-recurring charge is depreciated over 5 years. An exception is made for countries where the connection charge has a lifetime value (e.g. Japan, where the connection is a tradable asset). Valid for both Business and Residential baskets.

Non-recurring charge depreciation	Weight
With normal one-off charge	5
Where connection is a tradable asset	20

Annual rental for the service is included in the basket. Any additional recurring charges (per year) shall also be included (e.g. charges related to the use of specific calling plans).

Where the service (or tariff plan) includes a number of "free" calls or minutes, or any other call-related allowance, the value of this allowance is deducted from the usage. The value of the deducted allowance cannot be higher than the usage. Where the tariff clearly specifies that the allowance is related to specific types of calls (e.g. local, international), the usage in question shall only cover the defined type(s) of calls.

The number of calls to fixed line phones (i.e. excluding calls to mobile phones) is defined as:

Number of national fixed line calls	Calls per year
Business basket	3600
Residential basket	1200

The national usage will have a weighted distribution over 14 distances. Call charges relevant at each of these distances shall be used.

Km	**3**	**7**	**12**	**17**	**22**	**27**	**40**	**75**	**110**	**135**	**175**	**250**	**350**	**490**
Bus	53	11	7	4	2.5	3	3.5	3.5	2.5	2	1.5	1.5	1	4
Res	60	14	5	3	1.5	2.5	2.5	2.5	1.5	1.25	1	1	0.75	3.5

Bus = Business basket, Res = Residential basket. All weights in percent of total number of fixed line calls.

The national usage will have a weighted distribution over six time and day points. Call charges relevant at each of these time and day points shall be used.

Day/Time	We 11:00	We 15:00	We 20:00
Bus	45.4	40.6	7
Res	14.3	22.1	31.6

Bus = Business basket, Res = Residential basket. All weights in percent of total number of fixed line calls.

We = Weekdays, Sa = Saturdays, Su = Sundays.

National call duration will vary with distance and time of day. The charge for each call shall reflect the actual charge for the duration in question, as defined by the tariff. Call setup and minimum charges shall be included.

Day/Time	Weekday daytime			Weekday evenings, nights and weekends		
Distance	3-12 Km	17-40 Km	75-490 km	3-12 km	17-40 Km	75-490 Km
Bus	3.5	3.5	3.5	3.5	3.5	3.5
Res	2.5	3.5	3.5	3.5	3.5	3.5

Bus = Business basket, Res = Residential basket. Duration in minutes per call.

Calls to mobile phones may be added to the basket. This is optional, and the presentation of the results must clearly state whether such calls are included or not. The number of calls shall be 10% of the number of national fixed line calls, in addition to the fixed line calls.

Calls to mobile phones	Calls per year	Call duration
Business basket	360	2
Residential basket	120	2

Call duration in minutes per call.

10.2. INTERNATIONAL PSTN BASKET

The international PSTN basket, when used separately, shall reflect the cost of a single call, calculated according to the weighting method described below. No fixed charges are included.

Business basket results exclude VAT. Residential basket results include VAT.

Call charges for calls to all other OECD Member States shall be used. Peak and off-peak time call charges are used, defined as the highest (most expensive) charge and the lowest (least expensive) charge.

Call cost is based on average per minute charge. Call setup charges and/or different charges for first and additional minutes are included.

The charges to different destinations are weighted according to the ITU call volume statistics. An average over the latest 5 years of available traffic statistics is used. As there may be gaps in the ITU statistics for certain destinations from some countries, calls on such routes are excluded from the calculation.

Call charges are weighted between peak and off-peak:

	Peak time weight	Off-peak time weight
Business basket	75.0 %	25.0 %
Residential Basket	25.0 %	75.0 %

Call duration differ between peak and off-peak time:

	Peak time	Off-peak t
Business basket	3 minutes	5 minute
Residential Basket	5 minutes	5 minute

10.3. COMPOSITE NATIONAL – INTERNATIONAL BASKET

This basket is based on a combination of the national and international baskets, as described above. The national basket remains unchanged, and the international basket is scaled using a fixed number of international calls.

Business basket results exclude VAT. Residential basket results include VAT.

The international portion of the basket shall have a number of calls equal to 6% of the national fixed line calls, in addition to the calls defined in the national portion of the basket.

	Interna
Business basket	216
Residential basket	72

10.4. NEW OECD MOBILE BASKETS

All baskets will include:

Registration or installation charges, with 1/3 of the charges, *i.e.* distributed over 3 years.

Monthly rental charges, and any option charges that may apply to the package, or package combination.

The three new baskets are:

Low user basket. The usage level of this basket is low, with a call volume less than half of that in the Medium user basket.

Medium user basket. This basket will have 75 outgoing calls per month.

High user basket. The usage level is about twice the Medium user basket.

The usage profiles will also include a number of SMS messages per month.

Call and message volumes for each basket are:

	Outgoing calls /month	SMS per month
r	25	30
user	75	35
er	150	42

The information received showed that there is little difference between the average pre-paid usage and the low user post-paid usage. The low user basket can therefore be used for both pre- and post-paid tariffs, allowing a simple comparison also between the two types.

Only national calls are included in the profiles, with 4 different destinations:

Local area fixed line calls. This is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of calls is included in the National.

National fixed line calls. This covers all fixed line calls outside the local area, except in cases as noted above.

Same network mobile calls (On-net). This includes all calls made to mobiles in the same mobile network as the caller.

Other network mobile calls (Off-net). This includes calls to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to 3 other networks will be considered in each country.

Distributions per destination for each basket are:

% of total number of calls	Fixed Local area	Fixed National area	On-net mobile	Off-net mobil
Low user	28.0%	14.0%	40.0%	18.0%
Medium user	24.0%	12.0%	43.0%	21.0%
High user	26.0%	14.0%	42.0%	18.0%

As the information received produced little evidence on the split between local and national fixed line calls, the assumption has been used that the ratio would be 2:1 for local:national, i.e. 67% local and 33% national. This assumption is taken from the averages in fixed baskets, and the scarce information received.

Instead of splitting time and day into distinct times and days the following approach will be used:

Peak time calls at weekdays, most expensive time during daytime.

Off-peak time calls at weekdays, cheapest time before midnight.

Weekend time calls, at daytime Sundays.

Distributions over time and day for each basket are:

total number ofToD	ToD Peak	ToD Off-peak	ToD Weekend
er	38.0%	35.0%	27.0%
n user	47.0%	30.0%	23.0%
ser	63.0%	22.0%	15.0%

There will be 3 separate call durations:

Local and national fixed line calls

Same network mobile calls (On-net)

Other network mobile calls (Off-net)

Call durations for each basket are:

s per call	Dur Fixed National	Dur On-net	MobileDur Off-net	Mobile
er	1.6	1.4	1.4	
n user	2.1	1.9	1.9	
ser	2.2	2.0	2.1	

Any call allowance value included in the monthly rental will be deducted from the usage value once the basket is calculated. The deduction cannot be larger than the actual usage value, i.e. negative usage is not allowed. No transfer of unused value to next month is taken into account.

Any inclusive minutes will be deducted from the basket usage before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern that is described in the basket, i.e. the same peak/off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.

Any inclusive SMS-messages will be deducted from the basket before starting the calculation of the SMS message cost, up to the number of messages in the basket.

For each of the operators covered a set of packages shall be included so that the cheapest package offered by that operator can be calculated for each of the 3 baskets.

Multiple operators in each country shall be included, with at least the two operators with highest number of subscribers in each country. The operators included shall have a total market share of at least 50% based on subscriber numbers.

Basket results are calculated for a period of one year.

Data on national population used in this report

	2004	2005
BE	10396400	10445900
CZ	10211500	10220600
DK	5397600	5411400
DE	82531700	82500800
EE	1351100	1347000
EL	11040700	11073000
ES	42345300	43038000
FR	60200000	60561200
IE	4027700	4109200
IT	57888200	58462400
CY	730400	749200
LV	2319200	2306400
LT	3445900	3425300
LU	451600	455000
HU	10116700	10097500
MT	399900	402700
NL	16258000	16305500
AT	8140100	8206500
PL	38190600	38173800
PT	10474700	10529300
SI	1996400	1997600
SK	5380100	5384800
FI	5219700	5236600
SE	8975700	9011400
UK	59699700	60034500
EU 15	383047100	385380700
EU 10	74141800	74104900
EU 25	457188900	459485600