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EUROPEAN PARLIAMENT, THE ECONOMIC AND SOCIAL COMMITTEE AND  
THE COMMITTEE OF THE REGIONS ON THE**

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

{SEC(2001)1922}

## 1. SUMMARY AND PRINCIPAL CONCLUSIONS

The Lisbon European Council was a landmark for the converging European electronic communications sector. The Heads of State and of Government stamped their authority on the shift to a **digital, knowledge-based economy for Europe**, subsequently embodied in the eEurope Action Plan. An important milestone is now approaching, the adoption by the European Parliament and Council of the new regulatory framework. This report follows the precept that the new framework, which is designed for increasingly **competitive and converging markets**, should be founded on the full and coherent implementation of the current EU regulation. Indeed, the new framework has mechanisms to ensure that competitive safeguards remain in place until they are shown to be unnecessary. The report:

- presents some of the **key indicators from the market**
- examines some of the essential prerequisites for transition in terms of **implementation of the current framework**
- focuses on outstanding **regulatory issues**.

The **main message** is that, against a generally pessimistic macroeconomic background, the telecommunications services sector is **remarkably buoyant**, the national regulatory authorities continue to progress implementation, but that, on the eve of adoption of the new framework, a number of **regulatory bottlenecks** remain.

### 1.1. Market developments

The telecommunications services sector continues to represent **a substantial growth factor in the European economy**. The combined national markets of the fifteen Member States will expand to an estimated €218 billion in terms of revenue by end 2001, representing **growth of 9.5%**. This is a fall of three percentage points over actual growth in 2000, but a slight increase over the rate of 9% forecast in the last implementation report. Since then, users and consumers have continued to enjoy an **increased choice of operators** accompanied by **declining tariffs overall**. At the same time, **incumbents' market shares continued to decrease** in all fixed call markets.

The main developments are the following:

#### 1.1.1. Growth<sup>1</sup>

The fastest expanding segment in revenue terms is again **mobile services**, where revenue growth is expected to reach around 22.3%, from €67 billion to €82 billion by end 2001. This is down on the actual growth rate of 38.1% for 2000 but up on the forecast of 20%. By end 2001 the mobile services market is expected to account for 38% of the combined EU telecommunications markets in terms of revenue. **Mobile penetration** continues to rise dramatically, with substantially higher rates in every single Member State since last year and **36% more mobile subscribers** in Europe. The average penetration rate is now 73%, with rates at 75% or higher in seven Member States.

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<sup>1</sup> Growth estimates are based on European Information Technology Observatory (EITO) 2001

The **fixed voice telephony** segment, including internet dial-up services, continues to represent the largest share of the EU market at an estimated 51% in terms of revenue, but estimated growth remains at the 2000 level of 2.7%. However, this figure hides continuing growth in voice and in particular dial-up internet traffic in terms of minutes, as prices for these calls fall.

The **data and leased lines** segment represents 11% of the market and is estimated to be growing at 3.8% in 2001.

#### *1.1.2. Price developments*

Competition is **bringing prices for consumers down overall**. Incumbents' long distance calls are down 11% in price since last year and 45% down since 1998. Overall average monthly expenditure for national calls (local and long distance calls and fixed charges) went down from €37.02 in 1998 to €32.75 in 2001 for residential users, and from €85.57 to €68.54 for business users over the same period<sup>2</sup>. Incumbents' international calls are also further down in price, by 17% since 2000 for residential users and by 21% for business users.

**New entrants' prices are in most cases considerably lower**, with one new entrant in Germany offering prices 75% lower than the incumbent's for long-distance, for example, and reductions for local calls of up to 29%. New entrants in Belgium, France, Spain and the United Kingdom charge between 36% and 56% less than the incumbent for long-distance calls.

Within Member States there is a tendency to reduce or eliminate price differences for calls over different distances, that is, the prices of local, regional and long distance calls are converging. This is a positive trend, as it indicates that **prices are starting to reflect the actual cost of providing the service**.

Accompanying these reductions is an increase in the monthly rental charge since last year of 7% for residential users and 3% for business users. This is in line with the need to **remove price distortions** in access charges, and will encourage new market entry as anti-competitive cross-subsidies by incumbent operators are eliminated. Overall, the cost of **local calls** remained stable in Europe.

#### *1.1.3. Choice*

The strength of **competition in the telecoms sector** is evident from the fact that the whole population of twelve Member States can choose between more than five operators for long distance and international calls. For local calls, six Member States report that the whole population has a choice of more than five operators.

There has been a rapid increase in the use of **carrier pre-selection**, in addition to the heavy use already made of carrier selection via access codes. Around 110 operators in Europe can now be accessed for local calls without the use of codes, and 214 for long distance and international calls.

#### *1.1.4. Market structure*

**Incumbent operators' market shares** by retail revenues have fallen since liberalisation on average by 10% for local calls and by around 20% for long distance and 30% for international

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<sup>2</sup> All PSTN prices are expressed in € PPP (purchasing power parity)

calls. The incumbent's share of retail revenues for international calls is below 50% in one Member State, around 60% in four Member States and between 70% and 75% in three more. However, while incumbents' market shares for local calls are around 70% in two Member States, they remain at between 90% and 100% of the market in at least ten.

At the same time the **market share of leading mobile operators** has decreased since 2000 and is now below 50% in two thirds of Member States.

#### *1.1.5. Internet penetration*

The average level of **internet penetration in EU households was around 36%** in June 2001. Sweden had the highest penetration, with around 64%, compared with a level in Greece of just under 12%.

Eight Member States have exceeded the figure of 41.5% penetration in households achieved in the US in August 2000<sup>3</sup>.

### **1.2. Regulatory developments**

As regards **transposition** of the framework, national legislation that removes major concerns on the part of the Commission has been notified by three Member States (France, Italy, Luxembourg). The national framework has been consolidated in a further Member State (Greece), bringing increased clarity and legal certainty.

At the heart of the regulatory process are the **national regulatory authorities (NRAs)**, which provide the necessary interface for implementing Community principles in line with national legal frameworks and market conditions. They have over the reference period deployed increasing expertise and authority in regulating the sector. The results are evident in the market, where the choice of services and suppliers continues to expand and prices to decrease.

In some Member States work is already under way to adapt the regulatory authorities to the converged electronic communications environment, in some cases by increasing coordination with the national competition authorities or assigning competition powers to the NRAs. Increased cooperation between NRAs at European level is an encouraging precursor to coordination under the new framework.

The hearings held to prepare this report showed clearly that the most **crucial issues** facing regulators, apart from the need to refine and clarify their own methods of operation, are currently competition in local access in particular for broadband, call termination charges in mobile networks, flat rate interconnection for internet access, the pricing and provisioning of leased lines, general tariff and cost accounting principles, and the roll-out of third generation mobile networks. Questions also continue to revolve around numbering, universal service, rights of way and the transposition of the data protection directive.

### **1.3. Principal conclusions**

On balance, while the market remains dynamic and there has been continuing progress in implementation, a number of **regulatory bottlenecks** persist at European level. These arise from several factors. The current framework is **not yet applied fully in all Member States**,

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<sup>3</sup> Based on latest data published September 2001 by the US Department of Commerce (US Census Bureau)

nor is it applied **consistently across the Community**. Further, certain of the implementing measures adopted at national level are **not necessarily coherent** with one another. The framework itself also leaves a margin of manoeuvre to the implementing authorities in certain areas, which has led to **regulatory divergences** in the Member States.

The most important concerns are the following:

1. Competition in local broadband access, in particular the implementation of the Regulation on **local loop unbundling** to permit high speed internet access: the Commission believes that progress is not satisfactory, and should be speeded up on the basis of hands-on monitoring by NRAs, binding deadlines and credible penalties. The Commission also believes that regulators need to act to ensure that wholesale DSL is offered to entrants on non-discriminatory terms.
2. Interconnection, including the **cost of terminating calls in mobile networks** and the provision of **flat rate interconnection for calls to the internet**: the Commission considers that the wide range of peak time call termination charges in mobile networks as between Member States cannot be justified in terms of the actual costs of terminating calls, nor in terms of their level in relation to average fixed to fixed tariffs. Moreover, the Commission believes that flat rate interconnection for internet calls should be encouraged, and that in any case it must be provided to new entrants where it is supplied to an incumbent's downstream arm.
3. Continuing high prices, lengthy delivery times and absence of cost orientation for **leased lines**, particularly at speeds designed to allow **broadband and e-commerce** roll-out: the Commission considers that the wide range of prices across the Community and remarkably different lead times for supply cannot be justified in terms of differing costs or conditions.
4. Persisting **tariff distortions and price squeezes**: the Commission believes that NRAs need in some cases to apply greater rigour in verifying regulatory accounts rapidly after they are closed, and in supplying statements of compliance for the benefit of the market.
5. The full functioning of **numbering** policy: the Commission considers that the full range of carrier selection and pre-selection services should be available now in all Member States.
6. The disparate roll-out of **rights of way**: the Commission believes more work needs to be done to remove uncertainties relating to the role assigned to local and municipal authorities, and to facilitate the roll-out of third generation mobile services.
7. **Consumer protection**: the Commission believes that the monitoring of consumer issues should be strengthened and that consumers should benefit from equivalent protection of their interests throughout the Community, in particular as regards the monitoring of service quality, price transparency and contract issues and the provision of redress mechanisms.

There are also concerns relating to the organisation of the **national regulatory authorities**, in particular as regards the assignment of powers and the ability to resolve disputes rapidly. Lengthy appeal procedures in virtually all Member States lead to regulatory uncertainty, and can be exploited by incumbents. Many NRAs consider themselves under-resourced, or staff numbers do not yet match the establishment plan. The new framework will place **additional responsibilities on regulators**, and further work needs to be done now to remove these concerns.

Finally, while reference is made in the report to disparities in the **licensing and roll-out conditions for third generation mobile services**, the Commission's substantive views are set out in its March 2001 Communication. As regards **international roaming**, the Commission has carried out investigations pursuant to Regulation 17/62, in particular in relation to concerns as to collusion and excessive pricing. Pending completion of this proceeding, the Commission is not in a position to make its findings public.

# Seventh Report on the Implementation of the Telecommunications Regulatory Package

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## 2. METHODOLOGY AND OBJECTIVES

### 2.1. Methodology

The Commission, in a series of implementation reports submitted to the European Parliament and Council, has sought to examine successively the transposition of the directives making up the current telecommunications package and the effective application of the rules transposed into national law. The reports have also set out data which have enabled trends in key aspects of the market such as growth, tariffs for retail services, leased lines and interconnection, local access and incumbents' market shares to be established.

The fifth and sixth reports focussed in particular on progress in implementing key regulatory requirements relating to national regulatory authorities (NRAs), licensing, interconnection, local access, universal service, mobile services, tariffs, cost accounting, leased lines, numbering, data protection and rights of way. They were prepared on the basis of a series of bilateral meetings between the Commission's services and market players (new entrants and incumbents), users' and consumers' representatives, NRAs and ministries, together with market data provided by the NRAs.

In order to compile this, the seventh implementation report, the Commission's services held **preparatory bilateral meetings** with the same actors in the national capitals of the fifteen Member States, supplemented by **hearings** in Brussels to which representative bodies of market players, users and consumers, and the national authorities, including the national competition authorities, were invited. The hearings took place during September and October 2001. The Member States were invited to make written submissions to the Commission as a basis for discussion in the hearings, and these were placed in advance on the Commission's website<sup>4</sup>. A number of submissions were also made in writing by market players and associations.

Market and regulatory data were supplied by the national regulatory authorities on the basis of a questionnaire compiled by the Commission's services. They are the source of most of the data given in the Report and show the situation at 1 August 2001, unless otherwise stated.

The regulatory situation described is that at 31 October 2001, unless otherwise stated.

### 2.2. Objectives

In July 2000 the Commission submitted to the European Parliament and Council **proposals for five directives** laying down a framework for the regulation of electronic communications markets and measures relating to access and interconnection, authorisations, universal service and users' rights, and data protection in the telecommunications sector. These will replace the regulatory framework set up by the current package of directives. A further proposal for a decision covers the coordination of action by the Member States in relation to radio spectrum. A proposal for a regulation on the unbundling of the local loop was adopted by the European Parliament and Council in December 2000 and entered into force at the beginning of January 2001.

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<sup>4</sup> [http://europa.eu.int/information\\_society/topics/telecoms/implementation/index](http://europa.eu.int/information_society/topics/telecoms/implementation/index)  
<http://europa.eu.int/comm/competition/liberalization/others>

Common positions on four of the directives were adopted by the Council on 17 September. Full adoption of the whole of the new regulatory framework can therefore be expected shortly, with transposition scheduled not later than fifteen months from that date.

The Commission has consistently taken the position that a prerequisite for successful transposition of the new regulatory framework in national legislation and its implementation in the Member States is the **full and effective functioning of the current framework**. On the eve of the adoption of the new framework, therefore, the Commission is seeking to pinpoint, both horizontally at European level and as regards each of the Member States, those aspects of the current framework that are not sufficiently well-implemented to provide a solid basis for implementation of the new.

This report provides an overview of **market developments**, as previously, then sets out some considerations relating to implementation in the context of the **transition to the new framework** together with a summary of the **main regulatory bottlenecks** in Europe. The annexes to the report provide detailed market analysis and regulatory data and country chapters giving more extensive information on the regulatory situation in each. The aim throughout is to avoid, where possible, repeating references to developments already summarised in the Sixth Report, which can be consulted on the Commission's website.

In 1999 the Commission submitted a report to the European Parliament and Council on the operation of Directive 95/47/EC<sup>5</sup> (the **TV Signals Directive**). The Commission now provides in Annex 2.3 an updated assessment of implementation and market developments, as required by the directive.

The last report contained in the Annex a chapter on WTO implementation in third countries. The Commission is holding hearings on this subject during November 2001, and will report separately to the Member States in the appropriate Council forum.

It should be noted that the Commission is currently carrying out **sector enquiries** under Regulation 17/62 in the leased lines, local loop and roaming markets.

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<sup>5</sup> Directive 95/47/EC of the European Parliament and of the Council on the use of standards for the transmission of television signals

### 3. MARKET OVERVIEW

#### 3.1. Market growth

The telecommunications services market continues, despite the negative indicators from financial markets, to represent **a substantial growth factor in the European economy**. The combined national markets of the fifteen Member States were worth around €199 billion at the end of 2000, and will grow to an estimated €218 billion by end 2001, representing **growth of 9.5%**. While this represents a fall of three percentage points over actual growth in 2000, it constitutes a slight increase over the rate forecast in the last implementation report of 9%. Over the period August 2000 to August 2001 users and consumers continued to enjoy an **increased choice of operators** accompanied by **declining tariffs overall**. At the same time, **incumbents' markets shares continued to decrease** in all fixed call markets.

The fastest expanding segment is again the **mobile services** market, where growth is expected to reach around 22.3%, from €67 billion at end 2000 to €82 billion by end 2001. In 2000 the actual rate of growth was 38.1% as against a forecast of 20%. By end 2001 the mobile services market is expected to account for 38% of the combined EU telecommunications markets. While the voice telephony market, including internet dial-up services, continues to represent the largest share of the EU market at an estimated 51%, growth remains at the 2000 level (2.7%), and in some Member States, in particular Spain, Italy, Austria and Finland, its value is either matched or slightly overtaken by the mobile market.

EU residents spent an average of €762 per capita on telecommunications services (including cable TV) in 2000, up 14%. Higher than average per capita expenditure was recorded in Denmark, Ireland, the Netherlands, Austria, Finland, Sweden and the United Kingdom, with the figure for Spain in particular increasing rapidly.

#### 3.2. Mobile market

**Mobile penetration** continues to rise dramatically, with substantially higher rates in every single Member State since last year. In August 2001 there were 36% more mobile subscribers in Europe than one year ago. The average penetration rate is now 73%, with rates at 75% or higher in Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland and Sweden.

The average **market share of leading mobile operators** has decreased since 2000 and is now below 50% in two thirds of Member States. The redistribution of market shares in the last year has benefited in particular the smaller competitors in Belgium, the Netherlands, Austria, Finland and the United Kingdom.

#### 3.3. Choice of operators

For **long distance and international calls** there is a choice of more than five alternative operators for the whole population in twelve Member States. The choice in two (Belgium and Luxembourg) is slightly more restricted. New licensed operators had not yet started operation in Greece at 1 July 2001.

The situation is more complex for **local call services**. Six Member States (Denmark, Ireland, Austria, Portugal, Sweden and the United Kingdom) report that the whole population can choose from more than five alternative providers, whereas in Spain and Luxembourg the choice is between 3 and 5 operators. In other Member States a choice between 3 to

5 operators is available to 85% (Italy), 40% (Belgium) and 22% (Germany) of the population respectively. Finally, only 1% of the French population can actually choose not to route local calls through the incumbent operator. The situation in Belgium, Spain and Italy represents significant progress in comparison to the situation one year ago.

The alternative provision of **direct access** services is less developed: some degree of choice is recorded in Belgium, Germany, France, the Netherlands, Austria and the United Kingdom

There has been a rapid increase in the use of **carrier pre-selection**, with about 110 operators using it for the provision of local calls to residential users, i.e. 58% more than last year, and 214 for long-distance and international calls. In addition **carrier selection**, which is already heavily used for the provision of long-distance and international calls, is increasingly being used for the provision of local calls. More than one thousand new entrants have been allocated an access code in the EU.

### 3.4. Overall reduction of tariffs

As part of the ongoing **rebalancing of tariffs** which saw average monthly rentals increase by 12% over the period 1997 to 2000, average EU monthly rental charges have increased by 7% for residential users and by 3% for business users since last year. Tariffs charged by incumbents for **local calls** have remained overall stable since last year at cent 42 for a ten-minute call and cent 14, as compared to last year's cent 13, for a three-minute call. However, significant increases occurred in Portugal (by 100% for short local calls and by 30% for ten-minute calls), and in Belgium and France (respectively 33% and 25% for three-minute calls). The most expensive local calls are in Belgium, Austria, the United Kingdom, Portugal and Ireland, which all charge prices higher than the EU average for both three-minute and ten-minute calls.

At the same time incumbents' tariffs for **long distance calls** continue to fall, with a three-minute long-distance call costing on average cent 40 as compared to last year's cent 45 (11% down since last year and 45% down since 1998). The cost of a ten-minute call went down from cent 144 to cent 124 (14% down since last year and 47% since 1998). Major reductions over 2000 took place in Belgium (60% to 70% depending on the length of the call), Austria (58%) and Greece (about 30%). Price decreases also occurred in Portugal, Italy and Spain which, however, remain above the EU average.

Overall EU average monthly expenditure for **national calls** (local and long distance calls and fixed charges) has consistently gone down over recent years, from €37.02 to €32.75 between August 1998 and 2001 for residential users, including VAT, and from €85.57 to €68.54 for business users, excluding VAT. However, some Member States recorded an increase in the overall cost of national calls for residential users, especially over the last year.

As far as local and long-distance calls are concerned, last year saw a consolidation of the tendency towards the **reduction or elimination of price differences for calls over different distances**. As of 1 August 2001 tariffs for calls at peak times are no longer differentiated according to distance (local, regional and national calls of respectively 3, 50 and 200 km) in smaller Member States such as Belgium and Denmark (this was already the case in Luxembourg), while in Austria existing differences are now negligible. In Greece the incumbent has eliminated tariff differences for local and regional calls. The process of eliminating differences between calls of 50 and 200 km, which was already established in Ireland, Italy, the Netherlands, Finland and the United Kingdom, and was more recently

introduced in Belgium, Denmark, Germany, France and Sweden, has been consolidated. Differentiation of call charges according to distance still occurs in Spain and Portugal.

There has been an overall decrease in the cost of **international calls** via incumbents since last year from €1.43 to €1.18 (17% down since 2000) for residential users and €1.02 to €0.81 (21% down since 2000) for business users; this represents a decrease from €1.84 and €1.33 respectively for residential and business users in 1998.

In August 2001 the EU average monthly expenditure for a composite basket of **national and international calls** decreased overall with respect to last year by 4% for residential and 4.6% for business expenditure. On average, one third of monthly expenditure is due to fixed charges (including rentals and a portion of installation charges) and two-thirds to usage charges for local, long-distance, international calls and calls to mobile networks. However, the proportion differs across Member States, with fixed charges in Luxembourg representing 58% of monthly expenditure and in Greece only 23%.

**New entrants** usually charge considerably lower rates than incumbent operators, depending on the type and duration of the call. The following examples are given on the basis of a limited sample of alternative operators' offerings (see Annex 1.3).

For long-distance calls, one alternative operator in Germany charges 75% less than the incumbent, while new entrant operators in Belgium, France (for longer calls), Spain and the United Kingdom charge between 36% and 56% less than the respective incumbent operators. On the other hand the major new entrant in Sweden applies tariffs only 10% below those of the incumbent, which are, however, among the cheapest in the EU.

For local calls, new entrant operators offer smaller, but still substantial, reductions in tariffs, of between 25% and 29% in Germany, 12% and 18% in France and the United Kingdom, and about 8% in Sweden.

### **3.5. Reduction in incumbents' market shares**

The market shares of incumbent operators by retail revenue **continued to decrease in all fixed call service segments** over the last year. It is estimated that on average incumbent operators have lost approximately 10% of local call markets (all local calls) and around 20% of the long-distance and 30% of the international calls markets since liberalisation.

The incumbent's share of retail revenues from **international calls** is below 50% in one Member State (the United Kingdom), and is estimated at around 60% in three Member States (Germany, Italy and Sweden) and approximately 70% to 75% in three more (France, Ireland and the Netherlands). The fall in market share has been particularly remarkable in those countries such as Germany, France, Italy and the Netherlands which liberalised on 1 January 1998, and Ireland, which opened its market almost one year later. Decreasing market shares are also evident in the **local calls** segment (e.g. incumbents hold about 70% of the market in Germany and the United Kingdom in terms of retail revenues), although incumbent operators in at least ten Member States retain shares of between 90 and 100% of the market.

Detailed graphs and tables illustrating all of the points made above, supplemented by additional data on market values, penetration rates, market shares, retail tariffs and tariffs for interconnection and leased lines, are set out in Annexes 1 and 2.

## 4. REGULATORY OVERVIEW

This section sets out some general considerations that arose during the preparation of the report in relation to the current framework and the transition to the new. It then gives an overview of the main concerns raised in relation to the practical implementation of the current regulatory framework at European level.

In this context the **national regulatory authorities** have without exception made considerable progress in supervising the implementation process in the period since the Sixth Report, and have continued a pattern of cooperation with the other European regulators that prefigures future coordination in the European Regulators' Group for Electronic Communications Networks and Services.

### 4.1. Regulation in Europe prior to the transition to the new framework

As far as new entrants are concerned, the challenges posed by the current financial and market situation militate in favour of a **measured transition** to the more flexible regulatory environment set up by the new framework. This will clearly be a matter for the Member States to consider in particular under the arrangements in the new Access Directive relating to the review by NRAs of existing obligations for access and interconnection under the Interconnection, Voice Telephony and Leased Lines Directives.

In this perspective, any relaxation of existing obligations that will be possible under a new regulatory framework adapted to a competitive environment will only be appropriate when the current framework has been **fully implemented**. As regards local loop unbundling and the pricing of leased lines, for example, measures to ensure cost orientation still need to be taken in a number of Member States, and would under the new framework not be removed until justified by the market analysis to be carried out by the NRAs. The candidate countries will similarly not be in a position to implement the new framework without having laid the foundations on the basis of the current framework.

It is also clear that the current framework needs to be applied **consistently across the Community** before the new framework is implemented, if the objective of a level competitive playing field for all market players throughout Europe is to be achieved under the new directives. Great care will have to be exercised to ensure that single market rules are respected, in particular if a number of new services are to be viable. Continuing regulatory fragmentation will clearly deter the emergence of pan-European operators capable of providing pan-European services. Pan-European players are currently dismayed at those regulatory divergences that continue to exist and to which they are exposed because of the nature of their operations, including incumbent operators that are also new entrant operators in the markets of other Member States.

It is also important that the various aspects of the current regulatory framework are **applied coherently** within each Member State. The principles relating for example to tariffs, cost accounting and non-discrimination are interlinked, and require a consistent implementation strategy by NRAs armed with the appropriate powers and procedures in order to prevent market foreclosure through tariff distortions. This also requires a **clear separation** of the roles of the various bodies with regulatory functions. An overly complex distribution of responsibilities, or any overlapping of competences, not only damages regulatory certainty and consistency but tends to be inefficient in terms of resources. It is also vital that political considerations are not allowed to justify intervention in the regulatory and market process, for

example by imposing or supporting retail tariffs that are set at artificially low levels. The dangers of this to competition are clear: in the market for local broadband access, for example, the combination of a high price for local loop unbundling and collocation, a lack of shared access, failure to provide a wholesale DSL service by the incumbent, and authorisation by the regulator for the incumbent to provide its own DSL services at low retail prices will conspire to keep entrants out of the market.

Most Member States have *transposed* the concept of **non-discrimination** in line with the Directives (in particular the Interconnection and Leased Lines Directives), but many have failed to ensure implementation of the principle in detail. Non-discrimination means that incumbents must treat new entrants in the same way as their downstream arms; NRAs must therefore act to ensure that this treatment extends in particular to the communication of information on the launching of retail products. Indeed, what appears to be equal treatment by making available wholesale offerings at the same time as retail offerings must not be undermined by the provision of notice of the offering to the incumbent's downstream arm in advance of notice to competitors. Some incumbents are in the process of restructuring, and where this leads to transparency and the avoidance of discrimination, this is to be welcomed.

There is demand, in particular from new entrants and users'/consumers' bodies, for continued **benchmarking and best practice** guidance. Benchmarks have proved very useful in the transition to full verification of costs of regulated services. However, the continuation of formal benchmarking in relation for example to interconnection through recommendations could be counter-productive, since it sends the signal that cost oriented tariffs can to a certain extent be achieved without imposing cost accounting principles. Continued publication of data on interconnection and on leased line pricing, in particular deviations from the ceilings in the 1999 Recommendation<sup>6</sup>, together with provisioning, is however clearly important, and is ensured through successive implementation reports and publicly available ONP Committee documents. Reporting on best practice for example in relation to dispute resolution by NRAs or consumer price guides is also clearly important.

It should be pointed out that certain **pro-competitive measures** under the new framework as it exists in the common positions adopted on 17 September 2001 are already being applied in a number of Member States. One example is number portability in mobile networks, which is effective in Denmark, Spain and the United Kingdom and will enter into force in Italy in early 2002 and Germany and Ireland in late 2002 to open up competition in a sector regarded by some regulators as being uncompetitive. This move towards advance application of competitive safeguards, as opposed to premature lightening of regulation, is to be welcomed.

#### 4.2. Main regulatory bottlenecks in Europe

The following is an overview of significant horizontal regulatory problems in the Member States. The most crucial issues facing regulators, apart from the need to refine and clarify their own methods of operation, are currently **call termination charges in mobile networks, flat rate interconnection for internet access, competition in local access in particular for broadband, the pricing and provisioning of leased lines, and general tariff and cost accounting principles**. The **roll-out of third generation mobile networks** is also referred to given its importance to the future development of the market; this was the subject of a

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<sup>6</sup> Commission Recommendation on leased lines interconnection pricing in a liberalised telecommunications market, C(1999) 3863, November 1999

Commission Communication in March 2001<sup>7</sup>. Questions also continue to revolve around **numbering, universal service, rights of way and transposition of the telecommunications-specific data protection directive**.

#### *4.2.1. National regulatory authorities and appeal mechanisms*

To ensure effective market entry and regulatory certainty, there is a need for clearly defined decision-making powers on the part of NRAs, swift procedures and deterrent sanctions to control the incumbents' behaviour. This is often not the case, and new entrants in the market request increased proactivity and ex ante action by the regulators. An area where the lack of proactivity and/or powers on the part of NRAs was highlighted in nearly all Member States was the implementation of local loop unbundling. Regarding the functioning of the regulators, there is concern as to the division of powers between the relevant ministries and the independent regulators which is often unclear and delays regulatory intervention. This is an issue in particular in Italy as regards licensing and Austria concerning spectrum and numbering management. In Spain the wide division of tasks leads to complexity in coordinating regulatory decisions.

In a fast-moving market, players look to the NRA to **resolve disputes** rapidly. There is, however, clearly a trade-off between the quality of decisions on the one hand and rapid decision-making in line with market developments on the other. In some Member States the incumbent (and in some cases its subsidiaries) has been able to seize a first mover advantage in the roll-out of DSL services while entrants have been engaged in lengthy proceedings with regulators and the courts. There is clearly also a difficulty in that the authorities are loath to suspend the introduction of new services by incumbents, in particular broadband, if it leaves them open to accusations of 'blocking the roll-out of the Information Society'. Political encouragement of the roll-out of high speed services must take account of the need to facilitate market entry in this important new market.

Concerns exist in a number of cases regarding the lack of enforcement powers, in particular to ensure that incumbents apply NRA decisions. Enforcement appears to be hampered by lengthy and cumbersome procedures in France, Italy, Austria, Portugal, and by low penalties in Ireland and Germany in particular.

In a related matter, it appears that incumbents have, as a matter of strategy, continued the practice of **appealing systematically** against NRA decisions (Germany, Greece, Spain, Italy, Ireland, Austria, Finland, Sweden in particular) despite the fact that in most cases the appeals have not been successful. While due process is a fundamental legal principle, NRAs need to put in place disincentives for excessive delaying measures. Operators are concerned at lengthy appeal procedures in Belgium, Germany, the Netherlands, Austria and Finland. In Germany the NRA has suspended its decisions relating to the roll-out of DSL services, pending rulings by the courts on the issue of suspension, and in Sweden the courts have suspended the NRA's decision in regard to the lowering of mobile interconnection charges.

The new regulatory framework will impose new and complex tasks on NRAs, relating in particular to market analysis and the designation of undertakings with significant market power using the dominance test. It is therefore crucial that they should be **fully functioning** in accordance with the current framework in terms of powers, assignment of tasks, resources and

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<sup>7</sup> Communication on the introduction of third generation mobile communications in the European Union: state of play and the way forward, COM(2001)141 of 20 March 2001

operational skills. Certain of the NRAs themselves made clear in the hearings that they require an increase in budgetary and human resources; some have not yet reached the level of staffing set out in their establishment plans. Table 1 in Annex 2.4 gives an overview of the financing and staffing of the NRAs.

#### 4.2.2. *Interconnection – call termination in mobile networks*

There is concern in a number of Member States as to whether the **mobile call termination market** is competitive. While the average peak time charge in Europe for mobile call termination decreased by around 10% over the last year, it is, at cent 18.16, about ten times as high as the average charge for fixed to fixed interconnection at double transit level. While it is clear that the cost drivers in mobile networks are different from those in fixed, this represents a difference of an order of magnitude that is difficult to explain.

As regards the **range of prices** between the Member States, the peak time charges in three Member States (Greece, Italy and Portugal) are around twice as high as in the Member State with the lowest tariffs (United Kingdom); in three others (Spain, France and Finland) they are close to the highest, while in three others (Luxembourg, Austria and Sweden) they are close to the lowest (see Annex 2.2). The tariffs for mobile call termination referred to here do not take account of the United Kingdom NRA's most recent price control review.

Regulators generally agree that the problem arises from the fact that it is the **calling rather than the called party who in effect pays the termination charge**. Fixed operators argue that an indication of the level of mobile termination charges in a competitive market can be gauged by halving the level of the cost of an on-net call in the mobile network concerned, and that this test reveals discriminatory levels of charging.

Mobile operators on the other hand argue that there are inherent cost-savings on on-net calls, that competition exists by virtue of the number of methods of making a call to the called party (fixed, mobile, VoIP etc), and that reductions in mobile termination charges will tend to lead to an increase in the retention charges, and therefore the margins, of fixed operators, in particular the incumbent. Furthermore, competitive pressure is exerted by the fact that business users of mobile services will tend to gravitate to the operator with the lowest termination charges in cases where they, the business users, make a large number of calls from fixed to mobile networks in the form, for example, of calls from headquarters to a mobile sales force. However, it is argued in response that mobile operators address the price sensitivity of business users by offering targeted packages (i.e. by applying price discrimination); moreover, lack of mobile number portability and integration of fixed and mobile services impose high costs on business users wishing to switch mobile operator.

Regulators have at their disposal the **ONP rules** in the directives, including cost orientation principles for operators with significant market power (SMP) in the national market for interconnection, together with, in a number of cases, **competition or other regulatory powers** under national rules. The Commission is currently investigating a formal complaint under Article 82 of the Treaty (abuse of a dominant position) concerning a number of mobile network operators.

There are currently nine regulatory scenarios in Europe:

<b>Table 1 – Regulation of termination charges in mobile networks in Europe</b>	
France, Ireland, Sweden; Austria until October 2001 <sup>8</sup>	NRA designates one or more mobile operators as having SMP in the national interconnection market, and imposes cost orientation obligations (currently under review in Austria)
Belgium	NRA designates one or more mobile operators as having SMP in the national interconnection market, but imposes tariff reductions based on European comparisons
Italy	NRA designates one or more mobile operators as having SMP in the national interconnection market, but the tariff control measures applied have not been updated
Spain	NRA designates one or more operators as having SMP in the national interconnection market, but has not finalised the verification of their regulatory accounts
Portugal, UK	NRA makes no SMP designation in the national interconnection market, but uses competition powers to impose ‘appropriate’ or ‘proportionate’ tariff controls on all mobile operators
Denmark, Luxembourg, the Netherlands	NRA makes no SMP designation in the national interconnection market, and accordingly imposes no interconnection tariff controls
Germany	NRA makes no SMP designation in the national interconnection market or mobile market
Greece	NRA makes SMP designation in the mobile market, but no mobile operator is designated as having SMP in the national interconnection market
Finland	NRA makes SMP designation in the mobile market. Mobile operators levy an end-user charge (as opposed to an interconnection charge) for terminating calls originating in a fixed network

The Commission considers that a range of peak time call termination charges in mobile of **cent 12.44 to cent 23.69** as between Member States cannot be justified in terms of the actual costs of terminating calls, nor in terms of its level in relation to the average fixed to fixed tariff. Regulators therefore need to act to remedy excessive prices, either on the basis of the Interconnection Directive or by virtue of their competition powers. However, while the power of mobile operators in the national mobile markets and the national interconnection markets clearly varies from Member State to Member State, the range of regulatory solutions adopted,

<sup>8</sup> By decision of 5 November 2001 the NRA no longer applies cost orientation to any of the mobile operators (since there are now no SMP designations as regards the national market for interconnection) but applies the principle of ‘appropriate prices’ under dispute resolution powers

and the spread of peak call termination prices as set out in Chart 8 of Annex 2.2, illustrate the divergences possible under the current regulation.

#### *4.2.3. Interconnection – flat rate Internet access call origination (FRIACO)*

The vast majority of users in Europe currently obtain access to the internet over ordinary telephone or ISDN lines, known as ‘**narrowband**’ access. One deterrent to greater use of the internet is the customer’s awareness that, in the absence of flat rate or unmetered usage charges, the bill is mounting with every minute spent on line. Many market players regard increased narrowband access as the gateway to the higher quality services available over ‘broadband’ solutions, notably DSL/ADSL (digital subscriber lines/asymmetric DSL) and TV cable. Where incumbents offer retail internet access services on an unmetered basis they are bound under the non-discrimination principle to offer the same interconnection to their competitors to enable them to offer the same services.

Following its decision to require the incumbent operator to provide **flat rate interconnection** in May 2000, the United Kingdom regulator determined in February 2001 that FRIACO should be provided at a higher level in the network rather than at local exchanges, making it easier for new entrants to offer flat rate services because it removes the need for them to invest in capacity to reach local exchanges. The retail price of unmetered narrowband internet access currently starts at €21, and 40% of the ten million homes in the United Kingdom with internet use unmetered packages.

Progress in the other Member States has been slower as a result of various factors. In Germany the NRA ruled in November 2000 that the incumbent, whose subsidiary was offering a flat rate product, should make a flat rate interconnect offer to competitors; the incumbent’s subsidiary’s flat rate retail offer was scrapped in March 2001 and the incumbent’s appeal against the ruling subsequently upheld in the courts. In the Netherlands the NRA determined in November 2000 that a flat rate interconnect offer should be made by the incumbent. This was at first limited to ISDN, but a consultation is now under way on extending the offer. The price set by the NRA in April 2001 has been appealed by the incumbent. Flat rate tariffs were introduced for the incumbent’s own services in Portugal in December 2000, but the NRA’s determination of interconnect tariffs has been appealed against, although without suspensory effect.

The incumbent in France has made flat rate interconnect offers to new entrants at both local and regional level, and the service is expected to begin operation in the autumn. In Spain the NRA has set flat rate interconnection prices for internet call origination. Reviews of internet access pricing are under way or have been announced in Belgium, Ireland, Italy and Sweden.

An analysis of dial-up internet access prices is set out in Annex 1.6 for residential and business profiles based on internet packages available in the Member States.

#### *4.2.4. Competition in the local access market*

The Lisbon European Council recognised, in the light of the conclusions of previous implementation reports, that one of the keys to **competitive broadband** access was the opening up of the local access network. One important element is local loop unbundling

(LLU), including shared access<sup>9</sup>, as part of a range of methods of access including TV cable, wireless local loop and access to the incumbent's bitstream<sup>10</sup>.

The implementation of **local loop unbundling**, which became mandatory from January 2001 pursuant to Regulation 2887/2000<sup>11</sup>, has been very disappointing. Reference unbundling offers covering both unbundling and collocation<sup>12</sup> have been published in all Member States, but do not cover shared access in Germany, Greece, Italy, Luxembourg or Portugal (see table 1 in Annex 2.1 for the dates of publication of reference offers). Full unbundling agreements have been concluded in ten Member States and involve more than two hundred operators, half of them in Germany, where unbundling was mandated under national law in 1998. The numbers of lines that have actually been unbundled varies greatly (see table in this section), from a handful to a substantial quantity. No lines have been unbundled in Ireland or Luxembourg. Shared access is actually operational only in Belgium, Denmark, Finland and Sweden, although the number of lines is limited to a few hundred. Trials are proceeding in France.

Translation of the political imperative into operational reality has been complex for all parties and subject to a number of delays. The NRAs and operators have had to ride a steep learning curve to overcome practical difficulties relating in particular to **collocation and pricing**. Further, LLU is subject to precisely the same factors that have slowed the provision for example of leased lines at competitive prices and with non-discriminatory provisioning times, such as poor supervision of cost accounting systems and slow dispute resolution procedures. To this must be added the reluctance or inability of some incumbents to open this service fully to non-discriminatory and effective access by competitors, and the ability afforded by their relative size, and in some cases State holdings, to 'sit out' the current financial situation. High one-off costs (collocation, line connection, investment in equipment or backhaul links) are difficult to amortise and have to a large extent deterred entry into the market. However, the financial downturn should not give cause to incumbents to delay unbundling in the hope or expectation that it will force competitors out of the market. In the current climate NRAs will need to be particularly alert to this factor.

The **collocation** of new entrants' equipment at incumbents' premises or under arrangements allowing 'virtual' or 'distant' collocation has proved a complex and time-consuming issue. In the United Kingdom, for example, new entrants designed the specification for collocation, which had to be revised in the light of practical experience. The Italian regulator opted to conclude collocation work before actually unbundling lines. Collocation is estimated to be operational at more than 20% of all main distribution frames (MDFs) in Germany and at 12.5% in Denmark, and at lower levels in other Member States. Graph 2 in Annex 2.1 shows the percentage of MDFs for which collocation was operational as at July 2001.

Nonetheless, while the **number of fully unbundled lines** currently represents a small percentage of the total access lines in Europe, the number is growing in Denmark (40 000 lines), Germany (550 000), Italy (about 1 000, including those delivered in the test phase), the Netherlands (6 650), Austria (2 900) and Finland (40 000). Unbundled lines are

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<sup>9</sup> Access to the non-voiceband frequency spectrum of the twisted copper pair

<sup>10</sup> The incumbent installs a high speed access link to the customer's premises and then makes this access link available to third parties to enable them to provide high speed services to customers

<sup>11</sup> Regulation 2887/2000 of the European Parliament and of the Council of 18 December 2000 on unbundled access to the local loop

<sup>12</sup> Collocation means the provision of physical space and technical facilities necessary to accommodate and connect the new entrant's equipment

also operational in Sweden (1 605) and to a limited extent the United Kingdom (137). Trials are being carried out in France and Portugal.

In spite of the progress made, the pace of **implementation of the new Regulation** is overall not satisfactory, and should be speeded up to open local networks to competition, particularly in the new market for retail broadband services. This requires hands-on monitoring by NRAs, the setting of binding deadlines and the imposition of credible financial penalties on incumbents not complying with the requirements imposed.

The incumbent operator offers its own **high speed internet access retail service** in 13 Member States. The incumbent's service has been developing rapidly in Belgium, Denmark, Germany, Spain, Italy, the Netherlands, Austria, Finland and Sweden (as a percentage of the incumbent's total subscriber lines). Under the non-discrimination principle<sup>13</sup>, retail offerings by incumbents should be matched by wholesale offerings to competitors. Agreements relating to the provision of wholesale services by the incumbent to new entrants have been concluded in Denmark, Spain, Italy, Austria, Sweden and the United Kingdom, with trials under way in France. A wholesale service is also provided in Belgium, the Netherlands and Portugal, and has recently become available in Sweden but is not yet, apparently, taken up by entrants. However, only in two Member States (Denmark, the United Kingdom) is the number of high speed access lines held by new entrants comparable to the number of the incumbent's retail access lines (see Chart 5 in Annex 2.1). In seven Member States (Belgium, Germany – where new entrants claim the incumbent's service is below cost, France, Luxembourg, the Netherlands, Portugal, and Sweden) the incumbent (in some cases with its subsidiaries) holds all or virtually all DSL access lines. This **first mover advantage** is exacerbated where shared access to the local loop is not offered. In Germany, where the incumbent currently has 1.2 million customers for his high-speed service and aims to connect a further million before end 2001, neither wholesale DSL nor shared access is offered. Where wholesale DSL services are on offer, new entrants indicate that such offers usually provide ADSL services which do not enable them to address their SME customers with VDSL services more suited for business needs.

All Member States have taken on board the message from Lisbon concerning the need to ensure **cheap internet access** as a stepping stone to the information economy, but some have not taken sufficient measures to ensure that low-cost DSL access is provided on a competitive basis. Where artificially low access prices are provided by incumbents they may constitute predatory pricing; where imposed by government or regulatory action they may constitute an infringement of the tariff principles in the ONP framework. In either case they tend to strengthen the dominant position of the incumbent player and foreclose entry by competing players. In addition, questions of price squeeze arise where unbundled local loop and shared access tariffs are set too high to allow entrants a margin on their own retail offerings; price squeeze may also exist between the wholesale price of bitstream access and the incumbent's DSL offering.

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<sup>13</sup> Article 16(7) of Directive 98/10/EC (New Voice Telephony); Article 1(3) of Regulation 2887/2000 (Local Loop Unbundling)

<b>Table 2 – Availability of unbundled and shared loops and bitstream access in Europe</b>							
	Refer- ence offer for full un- bundling	Refer- ence offer for shared access	Incumbent's subscriber lines (millions)	Fully unbundled lines	Shared access lines	Incumbent's retail DSL lines	Wholesale DSL lines supplied by the incumbent <sup>14</sup>
B	Yes	Yes	5.0	50 <sup>15</sup>	24 <sup>15</sup>	140 000 <sup>15</sup>	n.a. <sup>16</sup>
DK	Yes	Yes	2.8 <sup>17</sup>	40 000 <sup>18</sup>	0 <sup>17</sup>	45 000 <sup>18</sup>	0 <sup>17</sup>
D	Yes	No	39.6	549 167 <sup>18</sup>	0	1 200 000	n.a.
EL	Yes	No	5.6	76	0	0	0
E	Yes	Yes	17.9 <sup>19</sup>	7 <sup>19</sup>	0 <sup>19</sup>	158 345 <sup>20</sup>	n.a.
F	Yes	Yes	34.0	20	0	257 000	n.a.
IRL	Yes	Yes	1.6	0	0	0	0
I	Yes	No	27.2	1 000	0	165 000	135 000 <sup>21</sup>
L	Yes	No	0.3	0	0	1 000	0
NL	Yes	Yes	9.9	6 650 <sup>22</sup>	350	125 000	n.a.
A	Yes	Yes	3.2	2 900	0	60 800 <sup>17</sup>	8 000 <sup>17</sup>
P	Yes	No	4.3	30 <sup>23</sup>	0	1 000	0
FIN	Yes	Yes	2.8 <sup>19</sup>	40 000 <sup>19</sup>	500-1 000 <sup>19</sup>	35 000 <sup>19</sup>	0 <sup>19</sup>
S	Yes	Yes	6.0 <sup>18</sup>	1 605 <sup>18</sup>	160 <sup>18</sup>	134 000 <sup>18</sup>	38 000 <sup>18</sup>
UK	Yes	Yes	35.0	137	0	54 000	45 000 <sup>15</sup>

n.a. : not available

Source: NRAs

Situation as at 31 October 2001

Views on the role of **wireless local loop (WLL)** in opening local access competition diverge widely in the Member States. In some the takeup has been extremely slow, whereas in others, in particular Italy, WLL is regarded as a potential alternative to local loop unbundling and certain leased line applications, although entrants have complained regarding uncertainty of

<sup>14</sup> Not including the incumbent's high speed services offered to new entrants on the basis of unbundling, shared access and resale

<sup>15</sup> Estimate

<sup>16</sup> 32 000 lines are supplied via resale

<sup>17</sup> As of 30 June 2001

<sup>18</sup> As of 30 September 2001

<sup>19</sup> As of 15 October 2001

<sup>20</sup> As of 15 October 2001. This figure corresponds to the companies of the Telefónica Group

<sup>21</sup> However, the number of retail DSL lines of the new entrants is significantly lower (estimated in approximately 14 000) because wholesale lines are sold in lots

<sup>22</sup> In addition 116 000 lines are supplied to KPN's business unit broadband

<sup>23</sup> Delivered under trial conditions

licensing terms and delays. Large numbers of local licences in particular have been granted in Germany, France, Finland and the United Kingdom. National licences have been granted in Belgium, Denmark, Greece, Spain, France, Ireland, Luxembourg, Austria, Portugal and the United Kingdom. A full overview is given in table 3 in Annex 2.1.

**Regulatory approaches to WLL** have also varied widely, with some NRAs excluding participation by the incumbent operator in the licensing process (the Netherlands; Italy for a period of four years) in view of its dominant position in the local access market. Overall, WLL seems, because of its cost, to be more suited to serving the needs of business customers rather than a broad residential clientele.

In eight Member States (Belgium, Germany, Spain, France, the Netherlands, Portugal, Austria and the United Kingdom – see graph 8 in Annex 2.1), **cable TV infrastructure** is currently used to provide voice telephony services, and in eleven Member States between 60% and 100% of households are passed by cable networks (see graph 7 in Annex 2.1). These networks also provide competition or the potential for competition in broadband access. This will have an effect on the take-up of other means of access such as unbundled local loop and on the way in which regulators balance infrastructure and service competition.

Data on penetration and prices for broadband services are set out in Annex 1.6.

#### 4.2.5. *Leased lines*

There is considerable concern on the part of new entrant operators and corporate users in relation to the **pricing and provisioning** of leased lines. As regards short ‘tail’ lines used for access to corporate networks, broadband and e-commerce there is particular concern in regard to the 2 Megabit per second (Mbit/s) lines most in demand.

As regards **national leased lines**, tariffs for **2 Mbit/s** still show significant variations across Member States, with rental charges per annum for 2 km lines ranging from €13 360 in the Netherlands to €1 950 in Denmark, for 50 km lines ranging from €35 300 and €33 500 respectively in Spain and the Netherlands to about €9 200 in Sweden, and for 200 km lines from as high as €63 500 in Spain and over €50 000 in Italy, Portugal and the United Kingdom to about €12 700 in Sweden.

However, between August 2000 and August 2001 **average EU charges decreased by about 16% for all lengths of 2Mbit/s circuits**, with significant reductions in Belgium, Spain, Italy and Luxembourg.

From August 2001, **average EU charges for 2 km and 50 km lines have achieved parity with the standard charges of two US reference companies**, Verizon and Pacific Bell, which remained stable overall during the last year. Furthermore, EU average rates appear to be about half the standard charges set in the US for long-distance lines, although it should be borne in mind that this analysis does not take account of any discounts applied.

As far as **international leased lines** are concerned, for 64 Kbit/s circuits, Greece and the United Kingdom stand out as having standard rates significantly higher than average for lines to near EU destinations and to the US. For 2 Mbit/s half-circuits to near EU Member States, distant EU Member States and the USA, Belgium, Greece, Spain, Austria, Finland and United Kingdom charge, depending on the route, standard rates more than 50% above average.

However, overall, **average annual rentals for international half-circuits continued to decrease in the EU over the last year**, with lines to near EU destinations, regardless of bit

rates, showing the biggest price reductions. Reductions ranged over the last year from 13% to over 30% and with respect to previous years from approximately 40 % for 64 Kbit/s and 2 Mbit/s lines since 1998 to 50% for 34 Mbit/s lines since 1999, although last year price reductions for lines to other destinations appear more modest (about 7%) with respect to those over the past two years. For instance, in the case of 2 Mbit/s half-circuits to the US, while price decreases took place in five Member States (Denmark, Greece, Luxembourg, the Netherlands and Portugal), standard rates remained at August 2000 levels in the remaining Member States.

**Leased line interconnection charges** usually relate to lines connecting customers' premises (SMEs, large corporate customers) to new entrants' networks, and are used predominantly for Internet and e-commerce traffic. They are normally included in the incumbent's reference interconnection offer, with the exception of three Member States (France, Finland and Sweden).

Monthly rental charges for **leased line interconnection of 2 and 5 km** vary significantly between Member States. As regards **64 Kbit/s circuits**, in the majority of Member States, charges for 5 km circuits appear to be higher than the price ceiling of €80 per month indicated in the 1999 Commission Recommendation, whereas in six Member States prices are higher than the €350 ceiling for 2 Mbit/s circuits. Deviation from the ceilings is particularly noteworthy in five Member States (Belgium, Spain, France, Ireland and Luxembourg) for both types of line. No data are available for Finland.

In four Member States (Spain, France, Ireland and Austria), charges for **34 Mbit/s** circuits are above the ceilings (up to four times higher in the case of Ireland) for both 2 km and 5 km local ends, whereas in two (Portugal and Luxembourg, the latter on the basis of estimates) the ceiling is exceeded in the case of 2 km circuits. No data or estimates based on retail rates are available for the Netherlands or Finland.

For **155 Mbit/s** lines, Greece stands out as having charges four times as high as the average EU rate. Higher than average rentals also appear to be charged in France, Ireland and Italy. Data are not available for Belgium, Luxembourg, the Netherlands and Portugal.

As regards **lead times for the provisioning** of leased lines, the latest Leased Lines Report<sup>24</sup> submitted to the ONP Committee on 10 October 2001 shows wide variations as between Member States<sup>25</sup>. The typical delivery time for 64 Kbit/s lines is more than 5 months in the Netherlands, almost 4 months in Ireland, more than 3 months in Austria and more than 2 months in Denmark, compared to 10 days in Portugal and Finland. For 2 Mbit/s lines, delivery times range from around 7 months in the Netherlands and Austria, 3 months in Ireland, 2.5 months in Spain, 2 months or slightly less in Germany, France and Sweden, to 2-3 weeks in Portugal and the United Kingdom. For 34 Mbit/s lines, delays of more than a year are experienced in Austria, 4.5 months in Germany, and 3.5 months in the United Kingdom. Portugal reported delivery periods of 2-3 days. Finally, as regards 155Mbit/s lines, delivery times vary between 3-4 months in Germany and France, 2.5 months in Denmark, Greece, the Netherlands and Austria, down to 20 days in the United Kingdom.

While prices are coming down for lines at all speeds and distances, and while there are no glaring anomalies in relation to standard US prices, the **wide range of prices** between

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<sup>24</sup> Available on Commission website, see footnote 4

<sup>25</sup> Note that the Leased Lines Report indicated methodological anomalies that limited the scope of the analysis and of the comparisons between countries

Member States is hard to justify on the basis of differing costs. Similarly, it is difficult to understand the **remarkably different lead times for the delivery of lines** over the range of speeds demanded. Furthermore, while it is notoriously difficult for new entrants to provide evidence that the lead times to which they are subject are discriminatory in comparison to those applicable to the incumbent's downstream arm, it is clear, first, that even non-discriminatory lead times will be more disadvantageous to new entrants than to incumbents, since customers will tend to stay with their original supplier, the incumbent; and second, that discrimination may reside not only in lead times, but also in all of the conditions and penalties in the contracts imposed by the dominant supplier. New entrants continue to demand a more pro-active stance by NRAs to enforce the non-discrimination principle, and have proposed the imposition of more stringent reporting obligations and transparency. Regulators should also consider imposing service level agreements and credible penalties for failure to comply with regulatory requirements.

Finally, discounts are usually applied to very large users such as mobile operators, and may be justified by reductions in the cost of providing large product volumes. However, the application of discounts in other circumstances may be discriminatory and thereby anti competitive.

#### *4.2.6. Mobile services - 3G licensing and roll-out*

The last implementation report expressed concerns that the **licensing process** for third generation (3G) mobile services might not be completed on time in all Member States to allow roll-out of the service from January 2002. It should be noted that the UMTS Decision does not mandate the launch of 3G from 1 January 2002, but was rather designed to ensure that licensing procedures did not act as an impediment to roll-out from that date. The objective of issuing licences to allow roll-out from that date has been met in nearly all Member States but not yet in two (Ireland, Luxembourg). A detailed overview of the current status of 3G licensing and of fees and charges is given in tables 1 and 3 of Annex 1.5.

**Roll-out and coverage conditions** vary considerably between Member States, with some licences envisaging the launch of services from 1 January 2002, while others only set requirements by reference to population coverage some years in the future. Some Member States (Spain, Portugal) have, in the light of market conditions and the relative unavailability of terminal equipment, taken a formal decision to defer the deadline for roll-out as provided under the deployment obligations in the original licensing conditions. Operators in others, in particular Sweden and the United Kingdom, are confident that roll-out will commence in 2002 according to schedule, that is, in accordance with the roll-out obligations in the national licences. Details of the roll-out obligations in the Member States are set out in table 2 of Annex 1.5.

There has been considerable criticism of the **differences in approach** between the NRAs to the licensing and roll-out of 3G mobile services. These differences are the result of the relatively wide margin for individual action by NRAs inherent in the current licensing framework. They are also the product of different market structures and conditions, geographies, demographics and administrative cultures in the Member States, and the detailed assessment of these factors by the NRAs. However, **these very contrasted situations risk, in practice, preventing the emergence of a level playing field for third generation services.** The Commission has set out a number of considerations relating to the deployment of

3G networks under current legislation in its March 2001 Communication<sup>26</sup>. Difficulties in rolling out 3G networks arising from the imposition of lower **limits for electromagnetic radiation** than those laid down in the relevant Council Recommendation<sup>27</sup> were reported in Belgium and Italy, as well as in Luxembourg, where limits are imposed on mobile services but not on other radio emitters such as broadcasting transmitters. Concerns have also been raised in a number of Member States regarding the difficulties of obtaining sites for antennae in the light of **planning and environmental constraints**.

#### 4.2.7. *Tariffs and cost accounting*

The **tariff principles and cost accounting requirements** in the liberalisation and ONP directives are intended to fulfil two primary functions: to ensure that users and consumers pay prices that, in the transition to a fully competitive market, are related to their cost, and to prevent dominant suppliers from foreclosing market entry in certain segments by cross subsidising prices from other, less competitive, segments. Following the Sixth Report, infringement proceedings were opened in respect of eight Member States for failure to implement correctly the provisions of the Interconnection and Voice Telephony Directives on cost accounting principles<sup>28</sup>. According to the NRAs' own assessments, tariffs are not yet fully rebalanced in eight Member States, although in most cases there are no regulatory barriers to full rebalancing. In certain cases, however, the Commission considers either that there are regulatory/political barriers to rebalancing or that price distortions are present as a result of failure to implement tariff principles.

**Price squeeze** in various segments of the market is still also claimed by new entrants to be relatively widespread, and is considered by them to be one of the most potent factors in foreclosing entry in the markets for high speed internet access and for voice telephony. In this connection the lack of effective supervision and the publication of statements of compliance was documented in the Sixth Report, and infringement proceedings subsequently opened in a number of cases. New entrants also complain that they have limited access to information on the parameters used in cost models, such as the cost of capital, without which they cannot have confidence in the suitability of the incumbents' accounting systems for the regulatory purposes for which they are required.

In the case of the **provision of leased lines**, new entrants are concerned that incumbents' cost accounting methodologies are not suitable for the economic pricing of products for the broadband and e-commerce markets, and that disparities in pricing indicate lack of adequate supervision by the NRAs.

Tables 2, 3 and 4 in Annex 2.4 give an overview of the assessments provided by NRAs of the level of **tariff rebalancing** and the **tariff regulation** in place, the **cost methodologies** used for calculating interconnection charges, whether compliance with the cost accounting systems is verified, and when a **statement of compliance** was last published.

Four Member States, Belgium for voice telephony, Greece, Luxembourg, and Finland, have not ensured **compliance with the cost accounting system**, although in the case of Finland some verifications have taken place on an ad hoc basis, with cost orientation not required for

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<sup>26</sup> See footnote 7

<sup>27</sup> Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz), OJ L 199, 30 July 1999, p59

<sup>28</sup> The current status of proceedings can be checked at [http://europa.eu.int/comm/secretariat\\_general/sgb/droit\\_com](http://europa.eu.int/comm/secretariat_general/sgb/droit_com)

international or long-distance calls or for certain local calls because there is considered to be effective competition in these markets. In two Member States, Germany and Austria, costing data is verified by the NRA in the context of individual proceedings for approval of the incumbent's tariffs and interconnection dispute settlement proceedings; however, no verification is done on an annual basis. In three Member States (France, Italy and Portugal) **the last accounts to be verified were those for years preceding the year 2000.**

#### 4.2.8. *Numbering*

The requirements relating to carrier selection, carrier pre-selection and number portability are widely regarded by new entrant operators as being among the most pro-competitive measures introduced in the regulatory package. Following the Fifth Report, infringement proceedings were opened in regard to nine Member States in the absence of the full provision of these services. Their current availability in the different Member States is indicated in tables 5 and 6 in Annex 2.4.

**Carrier selection and pre-selection** are considered by the NRAs to be available for all call types (local, long-distance and international calls, calls to mobile networks and calls to non-geographic numbers) in eight Member States (Belgium, Denmark, Spain, Ireland, Italy, Luxembourg – not long-distance, Austria and the United Kingdom). Carrier selection and carrier pre-selection are not available for calls to local or non-geographic numbers in Germany and France, and for calls to non-geographic numbers in the Netherlands, Finland and Sweden. Portugal has a derogation until end 2001, but has implemented all forms of number selection except calls to non-geographic numbers, while Greece's derogation extends to end 2002.

**Number portability** is available for both geographic and non-geographic<sup>29</sup> numbers in twelve Member States (Belgium, Denmark, Germany, Spain, Ireland, Italy, the Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom), but is not available for non-geographic numbers in France or Luxembourg. Greece's derogation again extends until end 2002.

Carrier pre-selection **procedures** are still regarded as being cumbersome in two Member States (Germany, Luxembourg). The misuse by incumbents in a number of Member States of information relating to customers who have opted to take the pre-selected services of a competing operator has in many cases led to attempts by incumbents to 'poach' business back.

The **cost** of number portability is an issue in Ireland, Finland and Sweden, and as regards carrier pre-selection in Finland.

#### 4.2.9. *Universal service and consumers*

New entrants in the only two Member States that have so far implemented a universal service funding mechanism (France, Italy) continue to favour the funding of universal service through the **general system of taxation**. Failing that, they would prefer a 'pay or play' mechanism whereby they contributed directly to provision of the universal service instead of or as part-contribution to its provision by the designated provider, usually the incumbent.

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<sup>29</sup> For example, emergency, free-phone and premium rate numbers

In one other Member State (Spain), the relevant regulatory body has rejected the incumbent's estimate of a net cost of universal service provision of €1.15bn for 1999 and has determined that the company did not suffer a competitive disadvantage. Furthermore the relevant regulatory body has issued guidelines on how the determination of net cost is to be carried out for subsequent years.

Incumbent operators in only three Member States (France, Italy, United Kingdom) appear regularly to measure the **quality of the voice telephony service** and to make the results publicly available. The NRAs in Belgium, Austria and Finland publish this information, and those in Germany, Ireland and the Netherlands are to do so this year for the first time. The table 7 in Annex 2.4 provides a fuller picture of the action taken by the Member States and the use of ETSI<sup>30</sup> standards.

Following the publication in the Sixth Report of information concerning the lack of availability of an adequate level of itemised billing, the Commission opened infringement proceedings against six Member States. Of these, three have indicated that they are now examining the introduction of itemised billing on request and free of charge.

There are continuing consumer complaints about the lack of **transparency concerning the pricing of services**, the terms and conditions for contracts and invoicing. In Denmark the regulator has set up an on-line system for comparing tariff offerings, which could constitute best practice for other Member States. The NRAs in Spain and Austria also provide comparative price data on their websites.

All Member States except Greece and Luxembourg publish reports on tariff developments (see Table 2 in Annex 2.4) in accordance with the Voice Telephony Directive.

#### *4.2.10. Rights of way*

There are still problems in a number of Member States relating to the granting of rights of way arising from the **multiplicity of local and regional authorities** with powers in this area. In some Member States (Belgium, Spain, Italy, Luxembourg and Austria), obtaining rights to erect mobile masts has become more difficult. Further, NRAs do not always ensure that facility-sharing is offered in the absence of the granting of new rights of way.

As far as the **central authorities** in many Member States are concerned, rights of way are beyond their competence. In such cases Member States must ensure that the obligations flowing from the telecoms package are respected at local and regional level.

Additional burdens are imposed in a number of countries, either directly, as in Belgium, where additional **taxes are imposed on the erection of mobile antennae**, or indirectly, through high digging fees (Italy) and above-cost reinstatement of highways. In some cases (in particular Italy) there is concern as regards the application of the non-discrimination principle where exclusive or privileged digging rights are granted to companies in which municipalities have direct or indirect holdings.

#### *4.2.11. Data protection*

A directive on data protection in the telecommunications sector to replace the current directive is under negotiation in the European Parliament and Council. Neither the current nor

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<sup>30</sup> European Telecommunications Standards Institute

future directive prevents Member States from taking measures to safeguard national or public security or defence, to enforce criminal law or to prevent unauthorised use of the telecommunications system. However, such measures are by definition outside the scope of this report.

The report accordingly sets out updated information on matters falling within the scope of the current directive, in particular unsolicited calls and electronic mail, the storage of traffic data and calling line identification, in Annex 2.4.

Infringement proceedings have been opened in a number of cases in relation to the transposition of the current directive. Corrective action has been taken by the Member States concerned in nine cases, but five proceedings remain open.

## **5. FURTHER REPORTING**

The Commission will continue to report on market developments and implementation, with increasing focus on progress in the Member States in transposing the new regulatory framework into national law.

The Commission will also continue to encourage the use of the Open Network Provision (ONP) and Licensing Committees as fora for examining completion of the current framework, as it has done in relation to the Regulation on local loop unbundling. Where appropriate, output from the Committees will be made public on the Commission's website.