



COMMISSION OF THE EUROPEAN COMMUNITIES

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**SIXTH REPORT ON THE IMPLEMENTATION OF THE
TELECOMMUNICATIONS REGULATORY PACKAGE**

(presented by the Commission)

INTRODUCTION AND SUMMARY

1. This report looks at the state of implementation of the EU regulatory framework after a year of rapid political, regulatory and market developments in the European Union since the adoption of the last communication on implementation. Within this perspective, the report carries forward the work done in previous communications by:
 - sketching out the major **developments in the market**, supported by detailed annexes;
 - analysing, also on the basis of detailed annexes, the implementation of the **key regulatory principles** covered by the current framework; and
 - drawing **conclusions** which are intended to contribute to the attainment of the eEurope objectives set at Lisbon and Feira during the transition to the new regulatory framework.
2. The **national regulatory authorities** (NRAs) have over the last year increasingly stamped their authority on the market to open up competition by ensuring access to the facilities of the incumbent operators. They have also laid the groundwork for greater **competition in local access**, where eight Member States have already regulated for unbundled local loop and where 62 operators in eight Member States are already licensed for **broadband or narrowband wireless local loop**. Considerable work has also been done on flat-rate access to the Internet, including interconnection for flat-rate call origination, enabling new entrant access carriers to offer **flat-rate packages** in competition with incumbent operators. The national administrations and regulators have also presided over the rapid expansion of **mobile service provision**, including the first stages of the roll-out of **third-generation (3G)** systems, where 24 licences have been granted so far and a further 11 decided.
3. As a result, the key message from the market is that **growth continues** at an average rate of 9% over 1999, in an aggregate market worth an estimated €191 billion in 2000.
 - In the market for mobile services, **penetration** has gone up over the last year from 36% to 55%; there are now **194 million subscribers to mobile services** in the EU; there are 54 operators licensed for the provision of digital mobile services, up from 52 in 1999.
 - In the fixed market an aggregate of **461 operators** are actually in the market offering **public voice telephony for long-distance calls**, up 89% on 1999; 468 for international calls, up around 67%, and 388 for local calls, up 74%. Carrier pre-selection is used by around 180 new entrant operators for the provision of long-distance and international calls, and by 69 for the provision of local calls; 861 operators have been allocated access codes for the provision of voice telephony via carrier selection.
4. Tariffs continue to move downwards, with EU average monthly expenditure for **national calls** (local and long-distance) offered by the incumbent operators decreasing by 10.5% on 1999 for business users, and by 4.6% for residential users; prices offered by new entrant operators undercut these tariffs in most Member States. Over the same period, the average price of international calls decreased by 15.1% for business users and 13.5% for residential users. New entrants in many cases offered substantially lower prices.

The price of the **leased lines** usually used for **national Internet traffic** (2Mbit/s) over the period 1997 to 2000 fell by around 30%, prices for tail (2 kilometres 2Mbit/s) lines dropping by around 20%. Since liberalisation, charges for **interconnection** have decreased substantially for double transit (20.2%), have come down by 6.5% for single transit but have remained stable at local level

5. The **main regulatory conclusion** is that the **current levels of implementation of the regulatory framework** form a solid basis for the continued roll-out of the European electronic communications services industry and the wider objectives of *eEurope*. **Strong and empowered NRAs** will continue to play a central role in the transition to the revised regulatory framework. For this they must be supported with the necessary human and financial resources, not least because, overall, the **market power of the incumbent operators** is still the single most significant barrier to market penetration by new entrants; new entrant players strongly support the continuation of sector-specific regulation to ensure a level playing field. European **Internet penetration levels**, at an average of almost 30%, are **set to rise** through increased broadband access competition, the introduction of 3G and lower leased line prices.

However, a number of matters remain to be addressed:

- **licence procedures** are still in some cases cumbersome;
- there are concerns on the **timing of the licensing of 3G** in a small number of countries;
- **tariff** rebalancing has still to be completed in some Member States; in particular, further work remains to be done by a significant number of NRAs on the supervision of **cost accounting systems** to eliminate price squeezes via cross-subsidised retail prices;
- a full range of **carrier pre-selection** services is not available in all Member States;
- negotiation of the physical requirements for the installation of new entrants' equipment at local exchanges for the provision of **local access services** may require decisive regulatory intervention;
- difficulties in obtaining **rapid and equitable interconnection** remain; **call termination tariffs in mobile networks** are in some cases still uncompetitive, and this needs to be tackled;
- the **timely delivery of leased lines** has become a more significant problem than price levels;
- the incumbent continues to enjoy first mover advantage in the roll-out of **ADSL** in some Member States;
- designated operators have few difficulties in fulfilling their universal service obligation; there is continued concern at the lack of monitoring at national level of **consumer issues**.

The Commission will continue to report on implementation during the transition to the new regulatory framework.

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY

OBJECTIVES AND METHODOLOGY

MARKET OVERVIEW

REGULATORY ASSESSMENT

CONCLUSIONS

ANNEXES

Telecommunications market data

Overview of implementation in the Member States

Regulatory issues: supplementary data

Commission assessment of implementation of the GATS by certain third countries

List of operators, associations, organisations involved in information-gathering for the Sixth Report

Glossary of terms and acronyms

OBJECTIVES AND METHODOLOGY

In March 2000 the European Council set a new objective for the Union for the next decade: to become **the most competitive and dynamic knowledge-based economy in the world**¹. One of the prerequisites is a **fully integrated and liberalised telecommunications market**². This can be achieved³ by the **rapid adoption of the new regulatory framework** proposed by the Commission for electronic communications networks and services⁴, and the immediate introduction of measures to ensure **greater competition in local networks in order to promote high-speed Internet access**⁵.

In this context the Commission has stressed the need for Europe to build on its strengths, while acting rapidly to make good its weaknesses. One of these strengths is quite evidently the **regulatory framework liberalising telecommunications services** and setting the conditions for the **creation of a single European market for the sector**. As previously reported⁶, the **framework is substantially in place in the Member States**; there are, however, a **number of weaknesses that remain to be addressed**.

The regulatory framework

In order to open markets to effective competition, the EU regulatory framework requires the Member States to incorporate an extensive set of principles into national law, assigning in particular asymmetric rights and obligations to market players, with heavier obligations falling on those with significant power in the market. The EU framework is considerably more extensive, but covers in its entirety, the framework in the reference paper annexed to the GATS agreement.

In parallel with the reporting exercise of which this communication is part, the Commission continues to open infringement proceedings where it considers Member States to be in breach of their Treaty obligations by failing to transpose, notify or apply the principles set out in the directives making up the regulatory framework. There are currently 16 proceedings open under the liberalisation (Article 86) directives and 51 under the harmonisation (Article 95) directives. The Commission's practice of scrutinising the implementation of the EU framework in detail means that the full implementation of the more widely-drawn GATS principles is ensured.

Information gathering

In order to gather information for the report, the Commission's services held meetings between end May and September 2000 with representative groupings of operators, pan-European operators and associations, consumer and user groups, incumbent operators and representatives of the national regulatory authorities and relevant ministries, covering all

¹ Lisbon, 23,24 March 2000, Presidency conclusions.

² eEurope Initiative, European Commission, December 1999.

³ Commission Action Plan, endorsed by the Feira European Council, June 2000.

⁴ Proposals for Directives: Framework (COM(2000) 393 final), Access (COM(2000) 384 final), Licensing (COM(2000) 386 final), Universal Service (COM(2000) 392 final) and Data Protection (COM(2000) 385 final) together with a Commission Directive consolidating the series of liberalisation measures adopted progressively from 1990 and leading to the Full Competition Directive in 1996.

⁵ Proposal for a Regulation, COM(2000) 394 final.

⁶ Fifth Implementation Report, COM(1999) 537 final.

fifteen Member States. Included in the meetings were representatives of a number of non-European operators.

The situation described in the report is that on 16 October 2000. Member States were given an opportunity to verify, as at end October 2000, the exactitude of the information used.

The market data was gathered directly from the NRAs, except where stated, on the basis of an extensive return setting out the situation as at 1 August 2000.

Method of assessment

In order to update its assessment of the effective application of the current EU regulatory framework in the Member States, the Commission has taken the key regulatory issues identified in previous reports (national regulatory authorities, licensing, interconnection, universal service, tariffs, cost accounting, numbering, rights of way and competition in local access) and added comments on:

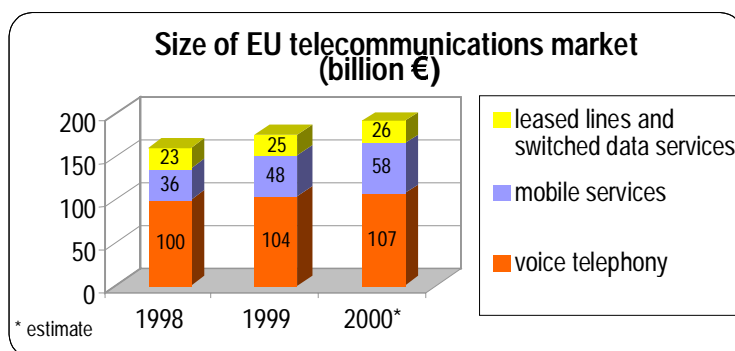
- mobile services, including third-generation and roaming, to take account of the need to monitor the roll-out of third-generation mobile services and to report on roaming issues;
- leased lines, in the light of their importance for the introduction of Internet services;
- data protection, given the final deadline in October 2000 for transposition of the current Data Protection Directive; and
- Internet, in particular those aspects covered by the existing regulatory framework.

The Commission's assessment of implementation of the regulatory framework is, as was the case with the Fifth Report, based on the situation described in the country chapters set out in Annex 2, together with the market data supplied by the NRAs (Annex 1).

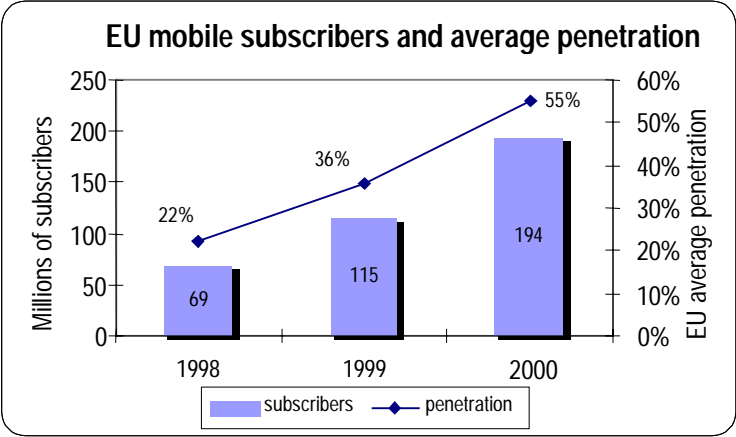
MARKET OVERVIEW

The telecommunications services market this year again justifies its claim to be a **significant driver of growth in the EU**; at the same time it continues to provide users and consumers with an **increasingly wide choice of operators and services, with prices decreasing steadily overall.**

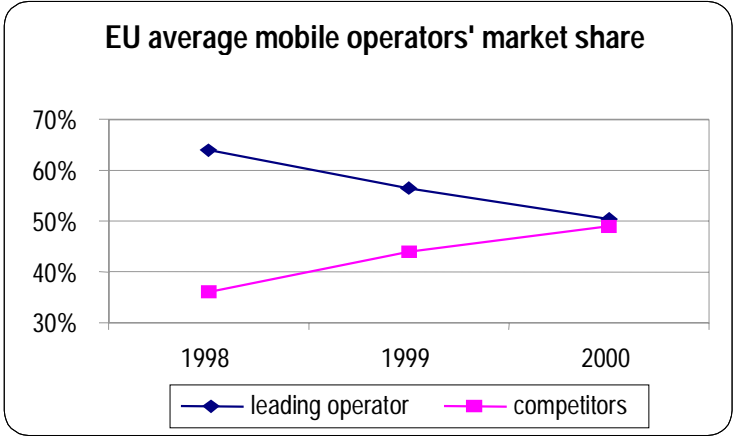
The **national markets for telecommunications services will be worth an estimated € 191 billion in 2000**; the value of national markets is **growing by an average of 9%**, an increase in the growth rate of two percentage points over 1999. Data and leased lines services grew by 8%, while voice telephony increased by around 4%.



Mobile services remains the fastest growing sector, with average growth in terms of value of around 20% and penetration rates up from 36% in August 1999 to 55% in August 2000.

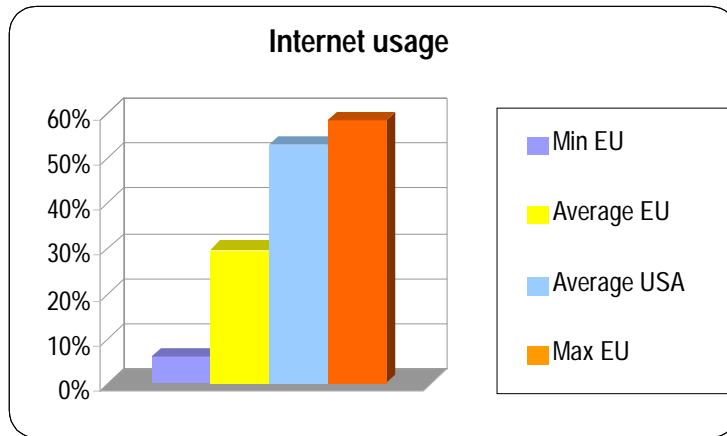


The **market shares** of the leading providers of **mobile telephony services** (usually the subsidiary of the incumbent in the fixed market) have decreased from 68% to 50% over the last three years.

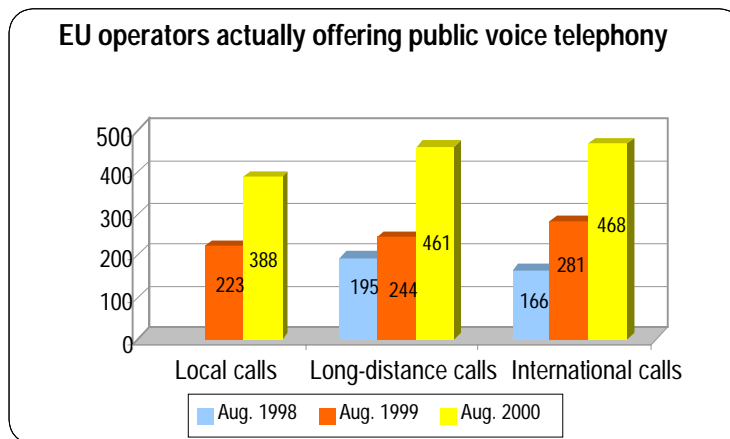


There are currently **122 operators** (of which 68 are mobile service providers) with national licences for the provision of **digital mobile services**. One Member State has 51 competing operators offering digital mobile services, one has 13, one has 11, one has 7 and 11 have between 3 and 5 such operators. Thirty-five national licences for third-generation (3G) mobile services have already been granted or decided.

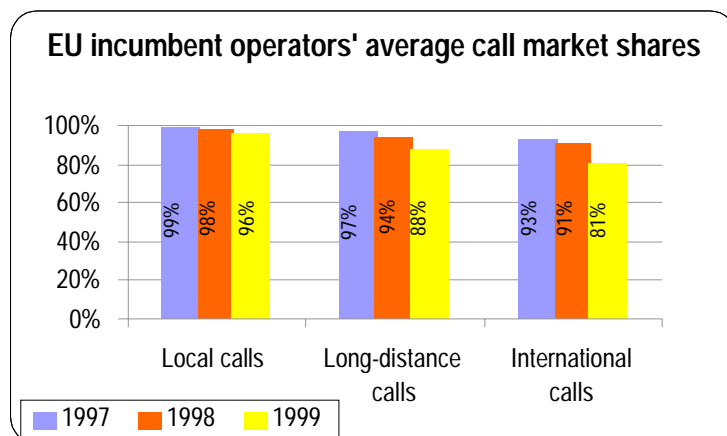
A quarter of the population of the EU made use of the **Internet** during the first half of 2000. Penetration (usage) rates vary greatly between Member States, however, ranging from less than 10% in one Member State to over 50% in two. The remaining Member States show an average penetration rate of around 25%. Average Internet use in Europe is still well below that in the United States. As regards Internet service provision, while there are at least 10 Internet service providers (ISPs) per million inhabitants on average in the Member States, a significant share of the market is in the hands of the ISP subsidiaries of the incumbent telecommunications operators, which account for an estimated average of 40% of Internet subscriptions.



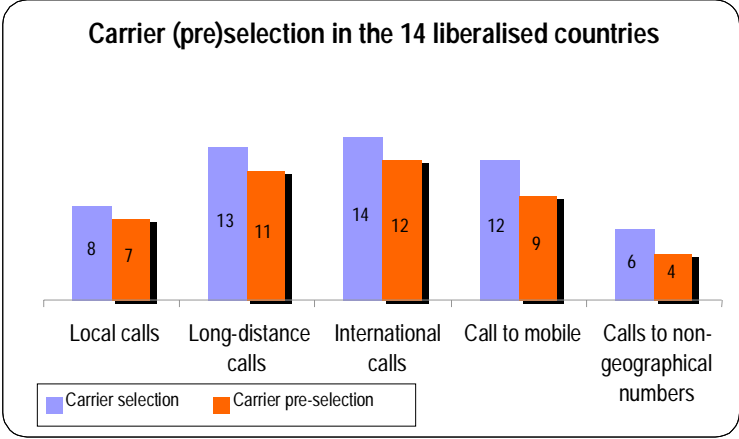
The aggregate of the **number of operators actually offering** long-distance calls is now 461, up from 244 in 1999; 468 for international calls, up from 281 in 1999; and 388 for local calls, up from 223 in 1999. An aggregate of some **1 215 operators are now authorised to offer public voice telephony**, an increase of 35% over 1999, following an increase of 42% in 1999 over 1998.



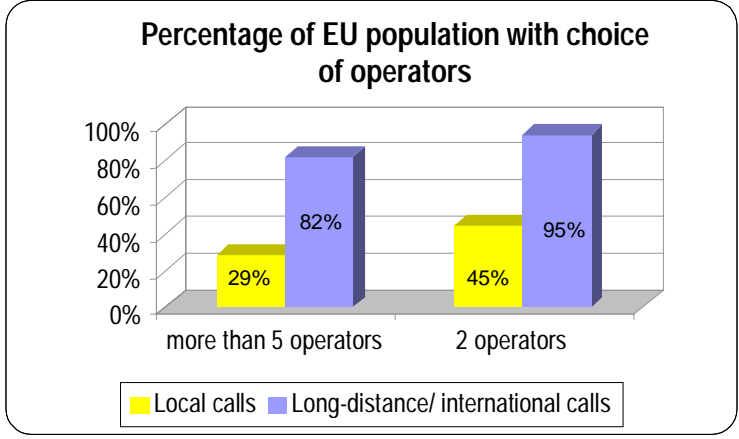
Figures for end 1999 confirm the general **downward trend of incumbent operators' market shares in the voice telephony market**. The rate at which new entrants are taking over market share varies from one market segment to another, and is higher for international and national long-distance calls than for local calls.



It should be borne in mind that most local calls provided by new entrant operators are carried over the incumbent’s local infrastructure, and that incumbents retain an overwhelming share of the market for local access. Indeed, 69 operators use **carrier pre-selection** for the provision of local calls and 180 for long-distance and international calls, while 129 operators use **carrier selection** for providing local calls and 311 for long-distance and international calls. In all, 861 access codes have been allocated to new entrant players for the provision of such calls.

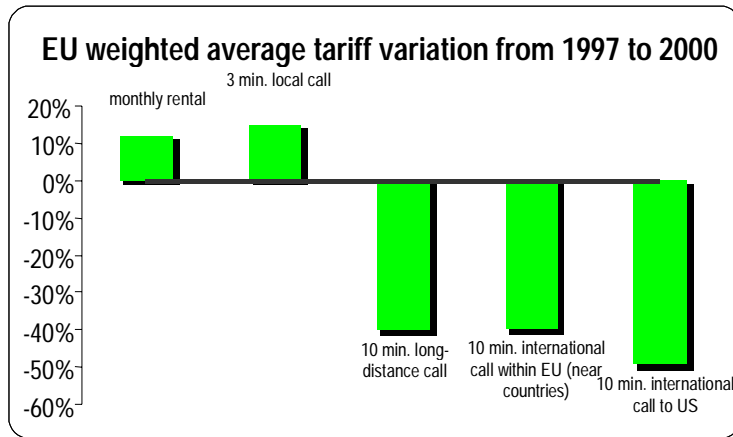


However, the extent of competition in the voice telephony market can be gauged by the fact that an EU average of around **82% of the population can choose** between more than five operators for long-distance and international calls (95% have a choice between at least two), while around 29% can choose between more than five operators for local calls (45% have a choice between at least two).

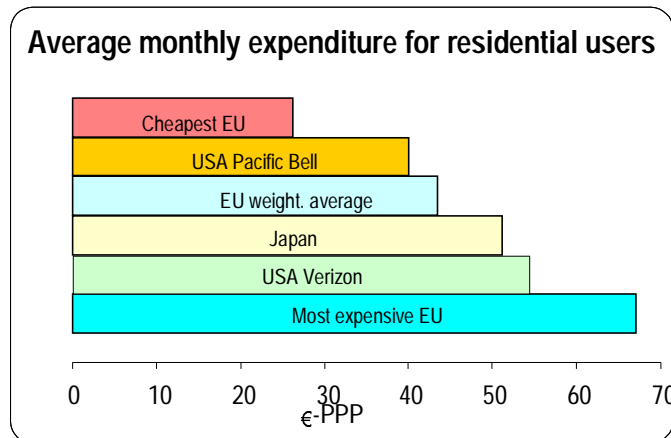


Finally, not least as a consequence of **tariff rebalancing**, which has seen EU average monthly rentals increase by 12% over the period 1997 to 2000, and local calls by 7.5% for a ten-minute call and 15% for a three-minute call, the EU average⁷ price⁸ of ten-minute long-distance and international calls has declined steadily over the same period, by 40% for long-distance and international calls (near EU) and 49% for calls to the US. It should be borne in mind that these prices are for the services of incumbent operators; many new entrant operators offer services at **significantly lower tariffs**.

⁷ Averages for tariffs/prices are EU weighted averages. For all other data, simple EU averages are used.
⁸ PSTN and leased line prices are expressed in €-PPP as at August 2000 (see Annexes); all other prices/values are expressed in € as at August 2000.

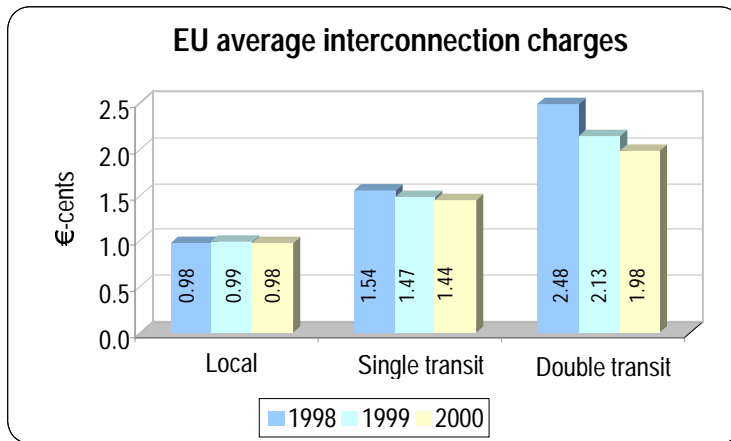


The **average monthly bill** for residential users of the incumbents' services is now below that of the incumbent in Japan and of Verizon in the USA; the EU average is above the bill paid by customers of Pacific Bell in the USA, which in turn is above the cheapest EU incumbent operator.

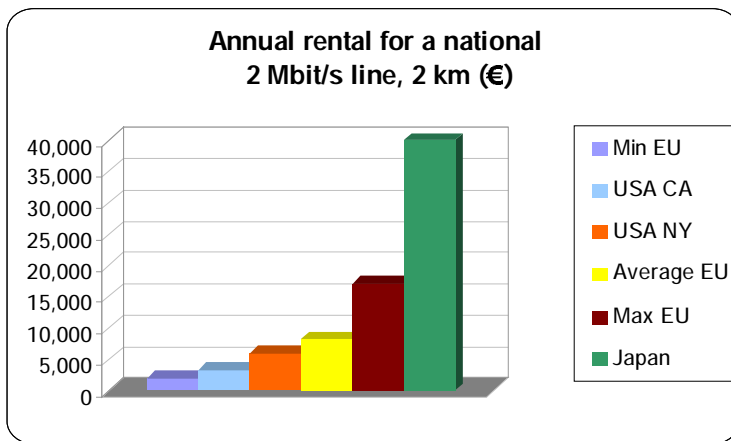


Interconnection charges for call termination in fixed networks decreased overall by around 9% over 1999: by 20.2% for double transit, 6.5% for single transit and remained stable for interconnection at local level. EU average interconnection charges are within the best current practice levels for single transit and slightly above for local interconnection and double transit (7.7% and 9.1% respectively). The deviations from best practice levels are higher in 2000 than 1999 because the published best practice levels⁹ have been revised downwards.

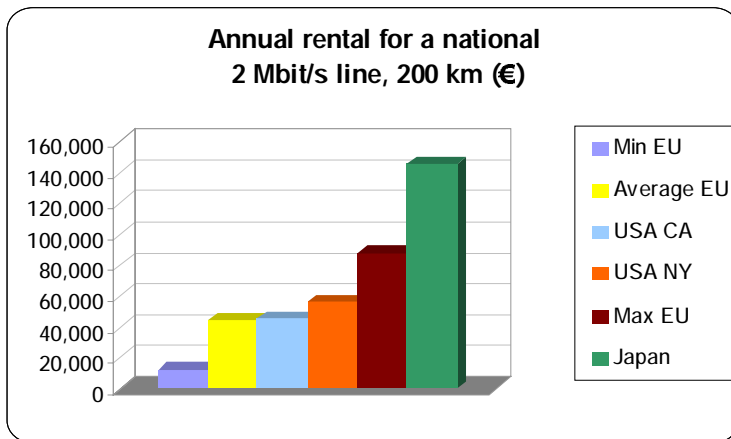
⁹ Best practice for 2000: Commission Recommendation of 20 March 2000, OJ L 83, 4.4. 2000 p.30.



While **leased line** prices have decreased significantly since 1997, annual rentals for both national and international lines vary remarkably from one Member State to another, in particular for national 2 Mbit/s lines, for which prices range from one third of the EU average to twice the EU average. Furthermore, rental prices for international 2 Mbit/s half-circuits to the nearest EU country are on average three times more expensive than 200 kilometres national lines.



However, national leased lines in the EU are considerably cheaper than in Japan; short 64 kbit/s and 2 Mbit/s lines in the EU are generally more expensive than in the US, whereas long-distance lines are on average cheaper.



REGULATORY ASSESSMENT

National regulatory authorities

The Fifth Report emphasised the central importance of the role played by the national regulatory authorities (NRAs) in the implementation of the regulatory framework. In the present stage of transition to the future EU framework, it is clear that the NRAs are bearing the major burden of the practical implementation exercise, the mass of detailed problems that remain to be settled once the broad principles have been transposed from EU into national law and the market opening process launched. This is particularly true of, but not limited to, the Member States which pioneered liberalisation, where difficult questions have arisen over the last year relating for example to the pricing of access to mobile networks and flat-rate Internet access call origination. Further, all NRAs have had to grapple with complex and in some cases contentious issues such as the roll-out of wireless local loop, the costing of number portability and carrier pre-selection, and the licensing of third-generation mobile networks. In addition, most regulatory authorities are facing an increasing number of consumer complaints (one regulator, OFTEL, dealt with 78 000 last year) and requests for dispute resolution between market players; this is natural as the market grows, but means in practice that resources have to be deployed accordingly. Finally, NRAs are faced with the need to adjust their structures in response to the convergence of telecommunications and broadcasting, while retaining their independence as required under the directives.

Independence from market players

Effective separation of regulatory functions and functions connected with State holdings in the incumbent was identified in the Fifth Report as a source of concern in a small number of Member States.

Separation of regulatory and State ownership functions

In one case the Minister with responsibility for the State's shareholding in the incumbent operator is still also the head of the regulatory authority (Belgium). In one Member State where new entrants have expressed concern that the same Ministry is responsible both for the State shareholding and for regulatory functions relating in particular to licensing and tariff approval (France), certain legal and constitutional arrangements have delegated powers to the Secretary of State responsible for telecommunications, to allow him to exercise his regulatory tasks independently of the Minister with responsibility for the State shareholding. In a case where the Ministry retains the power to propose the appointment of members of the board of the NRA and, along with the Minister of Finance, those members of the board of the incumbent representing the State's 11.11% shareholding (Portugal), the forthcoming sale of the remaining State holding is likely to remove concerns. In another case, previous concerns relating to the appointment of a member of the staff of the Ministry responsible for regulation to the board of the incumbent (Luxembourg) have been allayed by a reorganisation of the board.

The Commission notes in the context of the independence of regulators that lack of clarity as to the separation of regulatory functions from the operation of the incumbent, even where independence is in fact guaranteed by the mechanisms put in place, appears to act as a strong market disincentive.

Powers in relation to licensing, interconnection, leased lines, universal service, tariff principles, cost accounting, numbering, frequencies, rights of way

The Fifth Report referred to inadequate empowerment of some NRAs, in particular with regard to interconnection, and a reluctance in some cases to make use of powers where they existed. Market players agree that operators with a diligent regulator in their home market are entitled to a similar level of regulatory activity in other EU markets. Operators are also entitled to expect regulators to play an active role in the event of market failure in difficult matters such as collocation for the provision of local loop.

Powers appear still to be lacking in four countries, in particular in relation to the ability of the NRA to intervene in interconnection disputes (Belgium, France, Germany, Luxembourg). The powers of the NRA in three Member States have been increased (Greece, Austria) or are about to be (Ireland). The NRAs in two countries were reported to be reluctant to exercise their full powers in relation to interconnection (Spain, Sweden).

The degree of proactivity of the NRA was questioned by some new entrants in Greece as regards licensing; the Netherlands; Austria as regards numbering; Sweden and the United Kingdom. New entrants were concerned at the length of time taken by the NRAs in some countries to take decisions (Belgium, Italy, Sweden); a lack of transparency in the decision-making process was criticised by new entrants in Belgium, France in relation to tariffs, and Italy. New entrants in four countries expressed concerns at the time taken by the NRA to resolve interconnection disputes, which in some circumstances exceeds the period laid down in the Directive (Spain, Austria, Sweden, United Kingdom). New entrants favoured greater proactivity in dispute resolution in one country (Portugal), and expressed concern that dispute resolution procedures in another were not always clear or followed in practice (the Netherlands).

As regards the resources necessary for the NRAs to carry out their functions, action has been taken in three Member States to alleviate the personnel problems referred to in the Fifth Report (Belgium, Sweden, United Kingdom). Shortages of budgetary resources and personnel nonetheless remain a problem in a significant number of NRAs (Belgium, Greece, Italy). A table showing the financing and staffing levels of the NRAs, together with an overview of activities, is given in Annex 3.

Clarity in assignment of regulatory tasks

In one Member State, despite a recent reorganisation of the respective powers assigned to the Ministry with partial responsibility for regulation, the independent regulatory body, the Ministry with powers to approve tariffs and the competition authority (Spain), concern remains as to the clarity of the division of powers as far as market players are concerned. In another, an apparent overlapping of powers between the NRA and the competition authority continues to cause uncertainty and additional expense as a result of the need felt by market players in certain circumstances to apply to both bodies for redress

(Finland). Some lack of clarity remains in one Member State (Italy) as to the functions that have been transferred from the Ministry to the independent regulatory body.

Appeals against NRA decisions to a body independent of the parties involved

Recourse against NRA decisions is available in all Member States. Appeals mechanisms need to take account of the fact that incumbents will naturally attempt to delay market roll-out by appealing against NRA decisions. In most cases the period before a court decision is reached is relatively lengthy; in a number of Member States, however, NRA decisions are not suspended automatically as a result of an appeal (Denmark, Germany, Greece, Ireland, Italy, the Netherlands, Austria). In many cases the courts are empowered to reach decisions on appeal only on the procedural aspects of the case; recent legislation in one country gives greater powers to the courts to overturn NRA decisions on the substance (United Kingdom).

Licensing

The last report pinpointed the wide divergences between national licensing regimes, and drew attention to the onerous conditions, lengthy procedures and high fees in some Member States. Since then, the first introduction of wireless local loop and preparations for the roll-out of third-generation mobile networks have focussed attention on the considerable variations in licensing regimes in the EU. Despite an increase of 66% in the number of licensed operators in the EU since 1999 (voice telephony and network services), problems remain with the complexity and duration of procedures at a time when the market is demanding light and rapid licensing to permit the roll-out of new services and extensions to the coverage of existing operators. Indeed, there appears to be a relationship between the number of operators authorised in a Member State and the difficulty or cost in obtaining a licence or authorisation. Thus there are fewer operators proportionate to the size of the population in countries whose regimes are perceived to be more complex or costly. On the other hand, the pressure on Member States to reform their regimes appears to have slackened as operators already in the market are content for newer market entrants to have to tackle the same problems they themselves had to deal with at an earlier stage.

Individual licences only for public voice telephony or public networks, or for use of scarce resources, or to impose universal service conditions, competition safeguards, or essential or public interest requirements

Open, non-discriminatory and transparent procedures

In most Member States the letter of the Directives is observed to the extent that individual licences are required only for the provision of voice telephony or networks or where the allocation of scarce resources is involved. No major problems are reported in connection with the transparency of regimes. In one country the recently completed simplification of rules has opened up the use of general authorisations and declarations for data and satellite communications (Italy). In three Member States the problems experienced by operators relate to the detail and nature of the information requested, either before or after the award of a licence (Belgium, Luxembourg), or in the case of the award of a regional licence (Germany).

Operators in several countries complain particularly about the degree of work and time required for the extension to another region of an existing regional licence (Belgium, Germany, France). This is costly in itself but could also be disproportionate to the extent that the NRA already possesses extensive information on the applicant which is relevant to the activity being licensed.

Conditions limited to those listed in the Licensing Directive

There have been improvements in one country (Belgium) with the abolition of licence conditions previously imposed and going beyond those listed in the Licensing Directive, namely requirements to contribute to research and development. France is now the only Member State to impose a research and development obligation.

Applicants fulfilling conditions laid down should be entitled to receive a licence

A particular problem in three Member States (Greece, Spain, Italy) is the delay in converting licences issued under previous licensing regimes, which apply different conditions to those under the licences obtained by new entrants, and which may not be in conformity with EU legislation. This creates uncertainty not only for the operators concerned, but also for competitors, because of the confused legal situation with regard to the different rights and conditions in the respective licences.

Number of licences may be limited only to ensure efficient use of scarce resources

Greece has yet to introduce the rules on licence conditions for voice telephony to bring its regime into conformity before liberalisation on 1 January 2001.

6-week time limit for issue of licences, extended to 4 months where justified and by a further 4 months where comparative bidding

As well as imposing a burden on new and smaller operators in terms of procedure, in some cases the detail and nature of information required result in delays in licence approval. In this regard, there appear to be problems with the duration of procedures and the respect of deadlines under the new regulations in Greece, and recently delays have been reported in the UK linked to the implementation of new legislation. Otherwise, there appear to have been few developments in the Member States in regard to the average length of time taken to issue licences.

Fees should seek to cover only the administrative costs incurred in administering the licence; charges may reflect the need to ensure optimal use of scarce resources

Operators in a number of Member States have expressed dissatisfaction with the level of licence fees, but there have been few developments since the Fifth Report with the exception of France, where there has been a significant reduction in annual licence fees. While there have been attempts to moderate the fees applied in Germany, the high one-off fees reported last year continue to be applied.

A table setting out fee levels in the Member States for the provision of fixed voice telephony services is given in Annex 3.

Interconnection

The Fifth Report stressed the crucial importance of the terms for the provision of interconnection for the emergence of a competitive European telecommunications market, and highlighted a number of problems experienced by market entrants. There have been a number of improvements in this area over the last year, with NRAs taking action in particular to

ensure the timely publication of reference interconnection offers (RIOs) in accordance with market needs. As a result, a large number of interconnection agreements with incumbent operators have entered into force (currently 1 362 fixed/fixed and fixed/mobile in total). Nonetheless, new entrants in many Member States continue to experience difficulties in obtaining rapid and equitable interconnection, ranging from high tariffs and slow negotiation processes to the reluctance of NRAs to act or intervene in disputes in a forceful, timely and effective manner. In a number of Member States high interconnection tariffs (notably for local calls) combined with low end-user tariffs by the incumbent have the effect of squeezing new entrants' margins and thereby hinder competition. In this connection, inadequate NRA supervision of cost accounting systems for interconnection means that the cost orientation of tariffs of operators with significant market power (SMP) cannot in many cases be verified. Reference interconnection offers are still in some cases published or approved late. In some cases they also do not cover all the services demanded by the market, even though the same services are supplied to the incumbent's downstream arm. Finally, the powers assigned to NRAs to supervise the interconnection market are not exercised to their fullest extent in a number of Member States.

Obligations to meet reasonable requests, and of non-discrimination, transparency, on SMP operators

In general, operators complain about the unwillingness of incumbents to negotiate, or about what they regard as delaying tactics by the incumbent, even in Member States where a significant number of agreements has been concluded.

In one Member State (Luxembourg) it can take up to nine months to negotiate an interconnection agreement with the incumbent operator where services not covered by the RIO are involved; the prescribed period is four months. In Germany, where there is no time limit for negotiation (and where the average in practice is two months), new entrants claim that negotiations for services not covered by the RIO take longer. Further, entrants claim that in Germany they are forced to resort to dispute resolution in order to obtain interconnection. In one Member State (Portugal) new entrants refused to sign agreements with the incumbent until the NRA intervened to impose conditions and time limits. In another Member State (Sweden) there appear to be a limited number of interconnection agreements as a result of the reluctance of the NRA to intervene in the past. Lack of powers of the NRA in Belgium also appears to contribute to the fact that there is a limited number of interconnection agreements.

In two Member States (Italy, the Netherlands) there are concerns on the part of new entrants because it is not possible to choose the level at which they can interconnect; the incumbent requires them to interconnect at the local level, in particular for IP networks. In the case of Italy the NRA is considering imposing a new interconnection structure independent of the incumbent's network. In Luxembourg the NRA is currently examining new entrants' requests to interconnect at local exchange level.

In two Member States (Spain, Portugal) a large number of interconnection points for national traffic is required, obliging entrants to duplicate the incumbent's network. In another (Germany) the incumbent imposes up to 23 further interconnection points once a

certain capacity of traffic to a given interconnection point is exceeded, and new entrants take the view that the authorities have not established the necessity of this rule on the basis of proof that there is a threat to the integrity of the network.

In one Member State (Luxembourg) entrants have only recently been able to implement existing interconnection agreements, the incumbent having remedied its previous refusal to allow collocation for interconnection. In another (Greece), the incumbent is still not providing facility-sharing for mobile operators, despite discussions initiated by the NRA two years ago.

The time-limit for interconnection delivery in Germany (3 months) appears not to be observed, despite regulatory intervention, and poses a serious problem for new entrants.

NRAs empowered to intervene on own initiative

There is some concern on the part of new entrants at the perceived inability in some cases on the part of NRAs to intervene to counter the delaying tactics referred to above.

The legal framework in one Member State (Luxembourg) does not allow the NRA to take binding decisions to resolve disputes, with the result that a number (including disputes on facility sharing, collocation, local interconnection, interconnection for premium services and interconnection of leased lines half-circuits) have not been resolved within the six months required by the Directive. In Belgium, the legal framework setting up an Interconnection Chamber within the NRA for dispute resolution is now in place, but new entrants are concerned that legal certainty has been compromised by the fact that the incumbent has lodged an appeal against the framework. The NRA in that country appears not to have used the powers provided for in the Directive to intervene on its own initiative to resolve continuing disputes relating to the standard interconnection agreement. In Austria the NRA's powers to request modification of the RIO have now been strengthened by legislative amendment. In one Member State (Germany), operators have expressed concern that the NRA does not have the power to take decisions on interconnection on its own initiative and that it thereby cannot take action to prevent disputes.

Cost orientation applied to tariffs of SMP fixed/voice telephony operators

Overall, Belgium, Denmark, Ireland (for fixed-to-fixed calls), Italy, Sweden and the United Kingdom fall within the new best practice price range for interconnection for all calls (for Denmark charges for double transit calls now fall below the Commission best practice range). For local calls, ten Member States are at or fall within the Commission's best practice limits for 2000, twelve Member States for single transit calls and eight for double transit. Even though most of the tariffs in Austria are still higher than the European benchmark, they have fallen by an average 30%. In Portugal interconnection prices for 2000 have fallen by 37%. In Finland, there is no differentiation between the local and the single transit rate and in Luxembourg there is only one interconnection rate. In France, where there has been a significant

reduction in interconnection tariffs in the 1999 and 2000 RIOs, the differentiated interconnection tariffs previously applied as between network and service providers have now been abolished.

Monthly rental charges for leased interconnection (short-distance) lines of two and five kilometres provided by the incumbent vary significantly between the Member States, and deviate significantly from the Commission's recommended price ceiling for 2 Mbit/s 2 kilometre lines in Belgium, Spain, Luxembourg and the Netherlands, while for 2 Mbit/s 5 kilometre lines the deviation is significant in these countries together with Denmark, Ireland and Austria. In the case of 34 Mbit/s 5 kilometre lines, prices deviate significantly from the recommended ceiling in Belgium, Spain, Austria, Portugal and the United Kingdom.

Cost orientation applied to tariffs of mobile operators with SMP in mobile interconnection market

The obligation of cost orientation on mobile operators with SMP in the national market for interconnection pursuant to the Directive should have the effect of bringing down tariffs for calls terminating on a mobile network. New entrant fixed-network operators claim that some NRAs have been slow to designate mobile operators having SMP in the national market for interconnection. With an EU average of €0.21, interconnection charges for termination on mobile networks are highest in Germany (€0.34) and Greece (€0.27) and lowest in Austria (€0.14). In a number of cases the fact that one operator or more has been notified as having SMP in the national market for interconnection and therefore as having cost orientation obligations has not brought down the call-termination tariffs of competing operators that have not been so notified.

Eight Member States have in fact designated one or more mobile operators as having significant market power in the national market for interconnection (Belgium, Spain, France, Ireland, Italy, Austria, Finland, Sweden). In the Netherlands the necessary decision was announced over a year ago but has not been taken so far.

In some Member States (France, Ireland), however, new entrants reported the failure of the authorities to enforce the obligations which fall upon operators with SMP, and notably the cost orientation obligation which applies to notified mobile operators for the national market for interconnection.

SMP operators with cost orientation obligations subject to cost accounting requirements, including accounting separation

Given that cost accounting requirements are also imposed in connection with the supply of leased lines and voice telephony by SMP operators, this subject is dealt with horizontally under 'cost accounting'.

Fixed SMP operators to publish reference interconnection offer

Late publication of the RIO, due to long negotiations or shortcomings in the proposals, is considered to be a problem in Belgium, Greece and the Netherlands. Action has been taken in Belgium and France to remedy entrants' complaints in this regard. In Greece the RIO 1998 is still applicable as agreement has yet to be reached on updated mobile-to-fixed interconnection charges. In addition, the RIO does not include all of the services requested by new entrants in a number of countries (Belgium, Greece, France, Luxembourg, Portugal). In two Member States (Italy, Austria) where shortcomings were previously reported, the RIO 2000 has been modified to extend the number of services included.

Competition in the local access network

There have been considerable developments in this area since the Fifth Report. Following its Recommendation and Communication on local loop unbundling, the Commission brought forward a proposal for a Regulation on 12 July 2000 to give legal force to the eEurope Action Plan objective of full unbundled access to the copper loop by 31 December 2000. Provision is also made for shared access to the local loop, whereby new entrant operators have the opportunity to provide high-speed access over the loop used by the incumbent to provide voice services.

Full local loop unbundling

Full local loop unbundling (LLU) is currently operational, to a greater or lesser extent, in six Member States (Denmark, Germany, the Netherlands Austria, Finland, Sweden). Full data on the number of lines for which LLU is provided is not available for most of the countries where the facility is on offer. While it is clear that the number of unbundled loops is at present limited, rapid developments in most Member States mean that this is likely to increase significantly over the coming months. In Italy, where the decision to unbundle covers both copper and fibre, tests were being carried out in September involving eleven new entrants, following legislation in March and the submission of the incumbent's offer in May, to which the NRA is expected to respond in November; availability of the facility is expected before the end of the year. Trials have also begun in the United Kingdom following the amendment of the incumbent's licence on 8 August 2000 to require unbundling and the provision of collocation; the incumbent has published a reference unbundling offer and began accepting orders in September. The NRA has laid down pricing principles and a draft determination is due in November; delivery is expected from January 2001. Trials are also being carried out in France, the introduction date for full unbundling being 1 January 2001, but no price has yet been set. Belgium and Spain have announced full LLU starting on 1 January 2001; in Spain this date is mandated in legislation, while in Belgium draft legislation is going through the procedural stages. Due to technical issues which still have to be settled, full LLU is not expected to be available until June 2001 in Portugal. In Ireland and Greece consultations are ongoing. Luxembourg is committed to setting the necessary conditions in the incumbents' 2001 reference offer.

In countries where full local loop unbundling is already offered or imminent, conditions for collocation, in particular delays in responding by the incumbent operator, are in some cases creating problems for new entrants. Indeed, new entrants regard the pricing and delivery of collocation as probably the most thorny issue confronting them in relation to LLU. The

Commission considers in its Recommendation that this is an area where close monitoring by NRAs is crucial to the effective opening of competition in the local loop.

Shared access

Shared access, whereby the incumbent continues to provide traditional telephony services while new entrants rent high bandwidth spectrum allowing them to deliver DSL services using their own equipment, is not yet offered in any of the Member States. In Denmark the right to shared access has been confirmed but it is not yet operational. Discussions between the incumbent operator and new entrants have commenced in a number of Member States. In its Communication on unbundled access to the local loop of 26 April 2000, the Commission indicated that, irrespective of regulatory requirements, a refusal by an incumbent to provide shared access could amount to an abuse of a dominant position in breach of competition rules.

High-speed bit-stream access

Bit-stream access, whereby new entrants are able to offer DSL services using the incumbent's DSL equipment on the basis of ONP and competition principles, is offered in eight countries (Denmark, Germany, Spain, Italy, Austria, Finland, Sweden, United Kingdom). In France the introduction of the wholesale offer has been delayed because of a dispute on the terms, while the right of the incumbent to proceed with its own retail offer is under examination by the competition authority. In Belgium, the incumbent began offering a consumer ADSL product in the second quarter of 1999, but will only be obliged to provide an offer to new entrants from 1 January 2001. In Spain, the Spanish regulator imposed obligations in March 1999 on the incumbent to offer ADSL to new entrants only. As the incumbent's subsidiaries were better prepared, provisions were not to be put in place until six months later. Due to technical problems for all operators involved, the service became available only from 15 September 2000. In Germany, ADSL wholesale prices are the same as retail prices for large users. This is also the case in the Netherlands. In Denmark the incumbent began offering a retail service in 1999. New legislation in June 2000 confirmed the incumbent's obligation to provide bit-stream access on a wholesale basis and a number of operators have received an offer for such access, but to date no agreement has been concluded. In Finland retail ADSL services were first offered by incumbent network operators in 1999. There is no specific legislation mandating bit-stream access in Finland, but the Commission understands that a few wholesale agreements for this type of access may have been entered into on a commercial basis. In Sweden, there is also no specific legislative obligation, and no agreements have been concluded, although ADSL is on offer by the incumbent operator, which indicates that the incumbent will have a first mover advantage, as is the case in Finland, the Netherlands, Belgium, Denmark and Germany. In the United Kingdom, Spain and Italy, the incumbents' wholesale and retail products were introduced simultaneously. A table with details of the roll-out of ADSL is given in Annex 3. Failure to provide a wholesale offer, or delays in making an offer, by incumbents which themselves already offer retail DSL services clearly puts new entrants at a competitive disadvantage.

Tables setting out the availability and conditions for LLU, shared access and bit-stream access are given in Annex 3.

Wireless local loop

Wireless local loop (WLL) does not yet constitute a viable alternative means of local access to the extent that the service is not yet operational in most Member States, although the potential is extensive and is likely to begin to be realised in the coming months. Five Member States

(Germany, Spain, Ireland, Portugal, Finland) had granted broadband wireless local loop licences in 1999; since then France, where licences were awarded in September, and Luxembourg, where frequencies have been assigned to five operators, have joined them. In Sweden licences were granted but then revoked for procedural reasons; all licensees are required to re-apply, but it is expected that the number of available licences will be adequate for the number of applicants. In the United Kingdom licences will be awarded through an auction due to start by end October 2000. In the Netherlands the licensing procedure has been delayed and is no longer intended for 2000. In Belgium, entry into force of the necessary legislation has been postponed and the licensing procedure put off until the end of the year. Denmark and Greece are expected to award licences in December 2000. After some delays, the licensing procedure in Austria is not expected to resume before January 2001. In Italy a decision concerning the provision of WLL services will be made before the end of the year.

Cable TV local infrastructure

Voice telephony services are currently being provided by operators using cable TV (CATV) infrastructure in seven Member States (Belgium, Germany, Spain, France, the Netherlands, Austria, United Kingdom). Services are expected to commence very soon in Ireland. Numbers of operators range from one (Austria) to twenty-seven (Spain); numbers of subscribers vary from a few thousand to approximately 200 000 in the Netherlands and five million in the United Kingdom.

Universal service, including consumer issues

As last year there appear to be few difficulties with the supply of a quality universal service throughout the EU. The availability in the market of a full range of voice and data services at competitive prices, including low-use fixed and mobile tariffs, mobile SMS services and free Internet access or reduced Internet connection, has removed any concerns which may have been expressed at the outset of liberalisation concerning the availability of a comprehensive service for the entire population. As markets develop and the number of operators grows, some interest is being expressed in the possibility of dividing universal service obligations among several operators, by allowing operators to opt in to the provision of a particular service.

Obligation on Member States to ensure provision of a minimum set of services at affordable prices

The only difficulties reported in relation to the provision of universal service are in the production and supply of a universal service directory, which has a knock-on effect on the quality of directory enquiry services. In France and Sweden difficulties between the incumbent and other operators have meant that a universal directory is not available, which is of real concern as the number of subscribers using alternative providers increases and with the imminent arrival of unbundling. In Germany, operators are critical of the high charges levied by the incumbent on competitors for access to its database of subscribers, although the Competition Authority has accepted the tariff charged in a particular case. In Italy, on the other hand, as a result of merger conditions the incumbent now provides access free of charge.

Net cost may be shared among market players where unfair burden on designated provider National funding schemes must be objective, transparent, proportionate and non-discriminatory

Since the Fifth Report, Italy has decided to activate the funding mechanism, which requires a financial contribution by new entrants to the costs incurred by Telecom Italia in the provision of the universal service. This means that there are now two Member States which operate a universal service funding mechanism. In France, the level of contributions went down over the last year following the termination of the tariff rebalancing element in the calculation of France Télécom's universal service costs.

In both countries, the identified net cost of universal service provision is rather negligible in comparison with the total turnover in the telecommunications market. However, when compared with the new entrant's profits it can no longer be considered as such.

While the differences in costs between France and Italy can be partially explained by differences in network characteristics, geographic conditions and population density, each country applies different rules and calculation methods. For instance, the intangible benefits accruing from the provision of universal service are not subtracted from the end result in France. The tables in Annex 3 provide a comparison of the outcome of the calculation for France and Italy. Not only the calculation methods, but the rules concerning the sharing of the burden among operators differ. In Italy, operators whose potential contribution to the fund is calculated as less than 1% of the total fund are exempted, in order to avoid a situation where contributions become an entry barrier, whereas, in France, contributions are simply proportional to traffic volumes. Thus it would appear that, apart from the obvious differences in national markets, different methods of calculating and funding universal service costs can confront operators with substantially different market entry conditions.

Seven other Member States retain the possibility of operating a financing mechanism if the cost of universal service provision is deemed to become an unfair burden, and Greece is expected to introduce similar legislation shortly. Since last year, four of these countries (Greece, Spain, Ireland and Portugal) are now actively analysing whether the costs associated with the universal service justify the activation of a financing mechanism. Belgium has introduced new legislation on the methodology for calculating such costs.

User and consumer issues

There is still little evidence of a systematic effort at national level to monitor the protection of consumers and the promotion of users' interests as regards telecommunications services. While institutional arrangements vary from country to country, there appears to be a disappointingly low level of coordination between NRAs and other agencies responsible for consumer protection. This makes it difficult to discern particular trends or problems at EU level, even in relation to the services and quality of service indicators the use of which is obligatory under the EC framework. Insofar as the data available can be compared, there still appear to be significant differences between Member States in the quality of essential elements of the fixed telephony service, such as the time for supplying an initial connection, for repairing faults, or for responding to calls to operators or directory enquiries.

Tables setting out service quality indicators for the Member States are given in Annex 3.

Dispute resolution/ consumer protection

An office or agency dealing with consumer complaints in relation to telecommunications is in operation in nine Member States (Belgium, Denmark, Germany, Spain, Italy, the Netherlands, Austria, Portugal, United Kingdom), sometimes associated with the NRA. The other Member States have tended to rely on generalised consumer protection bodies for dealing with telecommunications services, sometimes in close cooperation with the NRA, as in Sweden. It is in some cases unlikely that the horizontal agencies on their own have sufficient resources to deal with the speed and complexity of developments in telecommunications services, in relation to contract terms, supply or pricing.

Billing

One of the basic tools for improving consumer confidence is the provision of itemised billing. The current EU framework requires a basic level of itemised billing at no extra cost to the user, and requires that bills show a sufficient level of detail to allow verification and control of the charges incurred. Itemised billing is required to be introduced gradually, first as an obligation on incumbent operators and then by all operators for 31 December 2001.

In the majority of Member States (11 out of 15), the standard bill does not provide for itemisation on a per-call basis. It usually mentions the cost (and sometimes the duration) for the total number of calls made in each of the following categories: local calls, long-distance calls, international calls, calls to mobile networks and data/Internet connections. In Spain, France, Portugal and the United Kingdom, the standard bill is itemised: for each call, the full/partial number of the called party, the date of the call, the starting (or ending) time of the call, the duration of the call and the price per call are mentioned.

However, it is possible to request an itemised bill from the incumbent, free of charge, in Germany, Italy, Finland, and Sweden. It is also possible to request an itemised bill from the incumbent, for a certain charge, in the seven other Member States (Belgium, Denmark, Greece, Ireland, Luxembourg, the Netherlands, Austria).

A table on the billing systems in the Member States is set out in Annex 3.

Tariffs

Few changes have been reported with regard to the transparency of fixed and mobile tariffs since the Fifth Report. Consumer organisations and telecommunications operators alike are conscious that the development of flat-rate services will be a major issue over the coming year, for telephony as well as Internet services, but there is considerable uncertainty as to how this is to be monitored and user protection ensured. Charging for calls based on the actual duration is increasingly being used, and this appears to provide the fairest and most transparent system for consumers. However, there are considerable difficulties with the transparency of call set-up charges, with different rates being applied, including different rates depending on the distance of an international call (Belgium). While this situation continues, consumers who cannot have access to transparent information concerning call set-up rates will continue to require comparative information on the cost of individual calls.

Mobile services, including third-generation and roaming

Market development; second-generation mobile networks

The mobile telecommunications market has continued to grow very strongly over the last year, with the mobile penetration rate (in terms of subscribers/population) growing by 63% on average in the EU. The rate of growth has been particularly marked in Germany and Greece, which have seen the number of subscribers more than double over the last year. This indicates a trend towards an evening-out of the mobile penetration rate across the EU, with those having lower penetration rates showing a higher level of growth. The mobile penetration rate now ranges from 70% in Finland to 39% in Belgium, with an average EU rate of 55%.

There are currently either three or four licensed second-generation networks in all Member States except for the Netherlands (which has five licensees) and Luxembourg (which has two). The last year has seen the licensing or operational launch of additional second-generation (GSM or DCS) network operators in Ireland, Italy, Austria and Finland, bringing the total in the EU to 84. There are plans for the issue of further 2G licences over the coming months in Denmark, Spain, Ireland and Sweden.

The high prices charged for international roaming services remain a concern across the European Union. The Commission is currently examining this issue in the context of a sector enquiry launched pursuant to Article 12 of EEC Regulation No 17 of 1962. The findings so far suggest that during the period 1997-2000, national wholesale roaming prices differed considerably between the Member States, and probably by more than is justified by cost differences. In addition, there have been substantial increases in wholesale roaming prices. As retail prices are calculated by adding a mark-up to the wholesale rate, retail prices have also increased, in contrast with domestic retail mobile prices. Operators which had the lowest tariffs in 1997 have increased their tariffs gradually over the period 1997-2000, while operators with relatively high tariffs have reduced them. Wholesale tariffs have clearly converged on a higher overall level during the period under review.

Service providers (that is operators authorised to offer mobile services under their own brand name and providing their own marketing, billing, etc. but using a third party's mobile network) are operating in a number of Member States (notably Denmark (1), Germany (9), Luxembourg (2), Finland (6), Sweden (3) and the United Kingdom (47)), and this type of activity is likely to grow over the coming months.

Developments in the market for network services provided to broadcasters

In many Member States there is no distinction between the licensing of television broadcasters and the licensing of the operation of the terrestrial networks actually transmitting the signals in the relevant frequency bands. The latter are in some cases covered by the provision of national broadcasting legislation. In most of the Member States the companies operating the networks have been legally separated from the companies providing the content (broadcasting).

However, it is not always economically viable to duplicate broadcasting networks, even if certain countries like the Netherlands have imposed extensive requirements for antenna-sharing. In a country with a low population density such as Finland, the broadcasting network might constitute a natural monopoly, and concerns might arise as to the terms of access. Only Germany applies the same regulation for broadcasting networks as for other communications networks (i.e. the requirement to propose a reference interconnection offer to be approved

a priori by the NRA). In Spain, maximum tariffs have been fixed by the Ministry, while in Ireland, the Government intervened also in 1990 to review the tariffs RTE envisaged to apply to broadcast the programmes of independent channels. In Portugal the access tariffs of Portugal Telecom are part of the 'price convention' approved by NRA and Competition authority.

National frequency plans

No major concerns have been reported in relation to the management of the national frequency plans in general. However, a frequency allocation plan has not yet been established in Luxembourg and some problems have been identified concerning the transparency of the frequency plans in Greece and Italy. In Italy modifications to the national frequency plan are expected shortly in response to pressure from operators for the re-farming of frequencies for second-generation services, to cope with increasing demand. A review of the national frequency plan is under way in Ireland.

Analogue systems to be phased out

The phasing out of analogue systems operating in the frequency bands reserved for GSM continues, with three countries (France, the Netherlands, Portugal) having completed the process during the last year and a further two (Finland, Sweden) expected to do so by the end of 2000. Of the other Member States that still have to complete the process (Denmark, Germany, Spain, Ireland, Italy, Austria, United Kingdom), those with the most extended timetable are Austria, Italy and Spain, with planned completion dates of 2004, 2005 and 2007 respectively. In the remaining countries (Belgium, Greece, Luxembourg) analogue services had either already been phased out or did not use frequencies in the relevant bands.

3G licence regimes by 1.1.2000 to permit services by 1.1.2002

The licensing process for third-generation mobile networks is now firmly under way throughout the Community. As at 16 October 2000, third-generation licences had been granted in five Member States (Germany, Spain, the Netherlands, Finland, United Kingdom), and a further five (Belgium, Italy, Austria, Portugal, Sweden) were scheduled to be completed by the end of 2000. Of these, the licensing procedures in Italy, Austria and Sweden were well advanced.

The UMTS Decision called upon Member States to establish authorisation systems for third-generation networks no later than 1 January 2000 so as to ensure the coordinated and progressive introduction of third-generation services on their territory by 1 January 2002. Whether licensed third-generation operators will be in a position of readiness to commence their operations by 1 January 2002 as anticipated by the UMTS Decision is an issue particularly for those countries in which licences are not due to be granted until 2001 (Denmark, Greece, France, Ireland, Luxembourg).

The licensing procedures chosen by Member States for the granting of third-generation licences are evenly balanced between a comparative selection process ("beauty contest") and a competitive bidding process (auction), with some Member States opting for a hybrid, two-phase system containing elements of the two. Licensing procedures

incorporating an auction mechanism have been chosen by seven countries (Belgium, Denmark, Germany, Italy, the Netherlands, Austria, United Kingdom), while the remainder have opted for a beauty contest (Spain, Ireland, Luxembourg, France, Portugal, Finland, Sweden) with the exception of Greece, which is still considering the issue.

The current EU regulatory framework, notably the Directives on licensing and mobile services, leaves it to the Member States to determine what procedures they use to assign the limited frequency spectrum available for third-generation networks, provided that these comply with the principles set out in the Directives, notably those of objectivity, non-discrimination, proportionality and transparency. Furthermore, Member States are entitled to impose charges for the use of scarce resources, provided that they reflect the need to ensure the optimal use of those resources, are non-discriminatory and take into account the need to foster the development of innovative services and competition. Provided that these requirements are met, the use of a beauty contest or an auction procedure can be compatible with Community law.

The level of the licence fees achieved in the auctions which have occurred to date, in particular those in the United Kingdom and Germany, as well as the divergence between the different methods used, has given rise to considerable debate throughout the EU, and certain operators have complained that the way in which licences have been awarded in certain Member States was not in conformity with Community law.

In most Member States the number of third-generation network licences issued will exceed, by at least one, the number of currently licensed second-generation networks, thus allowing the establishment of at least one new entrant in the national market concerned. This was not the case in the Netherlands, where there were already five second-generation licensees. The number of third-generation licences remains to be decided in Denmark and Greece.

3G roaming to be encouraged¹⁰

Most Member States are planning to provide for the possibility of mandatory national roaming between third-generation and second-generation networks, in order to facilitate the establishment of competitive networks by third-generation operators who do not own a second-generation network in the same territory. Germany and the Netherlands have not provided for this as a matter of law, but leave it to commercial negotiation. In Greece, Ireland and Luxembourg the question is still under consideration.

Most of these national roaming obligations will be limited in time, reflecting the anticipated roll-out period for third-generation networks. They are normally applicable only to national roaming between third

¹⁰ In line with competition law.

and second-generation networks, rather than also between second-generation networks. However, in Denmark and Italy regulatory provision does exist to require national roaming between second-generation networks in certain circumstances, while in Sweden a new entrant with a combined second-generation and third-generation licence would also have national roaming rights.

Tariffs

Users are having to spend less on fixed voice telephony services, irrespective of the call duration and time of day of the call. From August 1999 to August 2000, average monthly expenditure on national calls (local and long-distance) offered by incumbent operators fell by 4.6% for residential users and by 10.5% for business users. This suggests that business users have gained more from liberalisation than residential customers in terms of prices, because new entrants tend to target the most lucrative markets, thereby driving prices down in those segments.

Restrictions on tariff rebalancing to be removed

The data show that some degree of tariff rebalancing has taken place in all Member States, i.e. the cost of international and long-distance calls has fallen and the cost of local calls and line rental has risen. The price of both 3-minute and 10-minute long-distance calls fell by around 39% between 1997 and 2000. In the same period, the average price of international calls fell by 32% for residential users and by 34% for business users. The fall in the average price of international calls shows a similar trend for both categories of user. The average price of local calls increased by 15% for a 3-minute call and by 7.5% for a 10-minute call between 1997 and 2000. The large increase in the average price of 3-minute calls is due to changes in billing systems (see below) and the rebalancing process. The trend towards cost-oriented tariffs has resulted in smaller variations in end-user tariffs between countries.

Prices are generally lower in countries which opened their market to competition earlier, or which have more operators per inhabitant.

SMP operators' tariffs to be cost-orientated and unbundled

About two-thirds of Member States consider that tariffs have not yet been fully rebalanced (see table, Annex 1), although some indicated that they were close to that situation. However, there are still doubts regarding some Member States that the process of progressively adjusting tariffs to costs has been completed. Likewise, several incumbents claim that there is still an access deficit and/or that the line rental charge does not cover its costs (Belgium, Spain, France, Germany, Ireland, Italy, Luxembourg, Sweden). No access deficit recovery scheme has so far been implemented.

In other Member States (mainly those that had already liberalised their services before 1 January 1998), this does not seem to be a major bone of contention, irrespective of whether tariffs actually comply with the principle of cost orientation. Greece has been granted an additional period to implement full competition, and is not required to complete tariff rebalancing until the end of 2000. The Commission has indicated

in its Communication on local loop unbundling that the scope for margin squeezes is likely to be higher where the incumbents' tariffs have not yet been fully rebalanced on a cost recovery basis.

In some Member States new entrants have expressed concerns about the margin between retail tariffs and interconnection charges and possible price squeeze effects (France, Belgium, the Netherlands – for the latter two as a result of the way tariff areas have been defined) or about the discounts offered by the incumbents (Spain, Italy, Austria), or about bundled offers between voice telephony and advanced services and combined discounts for long-distance calls with the line rental (Germany). In the United Kingdom, price squeeze effects have been alleged in relation to the price cap basket.

Tariff constraints related to USO permitted

End-user tariffs for public voice telephony services are still regulated in almost all Member States. In Finland tariffs are freely set by operators, subject to an obligation on SMP operators to ensure cost orientation for local calls. In Luxembourg, tariffs are freely set by operators without any supervision by the NRA. Nine Member States (Belgium, Denmark, Germany, Spain, Ireland, Italy, the Netherlands, Sweden, United Kingdom) have set up a price cap mechanism to ensure the affordability of telephony services, to foster the efficiency of the incumbents and, in some cases, to provide further increases in access revenues. In other Member States (Greece, France, Germany, Italy, the Netherlands, Austria, Portugal), the authorities approve the incumbent's end-user tariffs ex ante; in some cases such a mechanism is implemented in combination with a price cap. As competition increases, the incumbents tend to claim that regulation of retail tariffs should be relaxed and/or price caps lifted (Denmark, France, Italy, Germany, the Netherlands, Sweden). This issue is currently under consideration in some Member States (Germany, Sweden, United Kingdom). Incumbents tend to respond to increasing competitive pressure by de-averaging service prices to particular groups of customers (i.e. offering special discounts) or by de-averaging the price of services for which they are most vulnerable to competition.

Most Member States require notified operators in the fixed public voice telephony markets to give advance public notice of tariff changes. The period of notice required is set at the discretion of the NRAs, and varies widely across the EU. Concerns about the transparency of procedures for approving tariffs have been raised in France.

A table giving an overview of the regulation in the Member States of end-user tariffs for fixed public voice telephony services, including the degree of rebalancing, is set out in Annex 3.

Cost accounting

The Fifth Report identified cost accounting as one of the most critical areas of implementation. Under Community law, the NRAs are responsible for ensuring that the cost accounting systems of relevant operators are suitable for the purposes of the EU Directives. Community law explicitly leaves such responsibility to the NRAs and requires compliance to be verified by an independent body specialised in the field, such as an independent auditor. It is the role of the Commission to ensure that the appropriate mechanisms to verify compliance and to monitor the effective implementation of such mechanisms have been put in place at national level.

Tariff principles to be enforced through accounting systems suitable for costing the services in question

Accounting separation to ensure transparency of provision of interconnection by SMP operators

Some progress can be reported both with regard to the auditing of the accounts of the relevant operators and with regard to the definition of specific implementing measures at national level. The shift from the systems currently used by most incumbents, which were developed in a monopolistic environment, towards models consistent with a competitive market is, however, reported to be slow and difficult, although some Member States are due to start implementing new cost accounting systems in January 2001 based on current costs. Against these positive developments, concerns still remain in all but one Member State (United Kingdom) with regard to the implementation of effective and operational cost accounting systems which are suitable for the verification of the principles of cost orientation and transparency and of appropriate accounting separation so as to identify all elements of costs and revenue.

In some countries the issue remains quite critical, possibly as a result of lack of proper transposition of the relevant provisions into national law. In four countries (Greece, Luxembourg, Austria, Finland), no verification of compliance has taken place so far in either area identified by Community law, i.e. voice telephony and interconnection (see table in Annex 1). In Finland the authorities consider that effective competition exists in the international and long-distance voice telephony markets and that therefore the obligation for cost-orientation can be relaxed¹¹ in those areas, as well as the need for systematic verification of compliance with the cost accounting systems. In all other Member States audits have been carried out. However, in four (Belgium, Denmark, France, Italy), a statement concerning compliance does not appear to have been published (nor, clearly, has a statement been published in the four countries referred to above where no verification of compliance has taken place).

With regard to leased lines, there are concerns in almost all Member States as to whether relevant organisations have put in place a cost accounting system for the implementation of cost orientation and transparency principles and whether the NRAs keep available, with an adequate level of detail, information on the cost accounting system applied by notified operators. In one case (Finland), the authorities

¹¹ Pursuant to Articles 17(6) on tariff principles and 18(1) on cost accounting of Directive 98/10/EC.

have decided not to apply the requirement of cost orientation and cost accounting to leased lines, since they consider the market competitive¹².

In several Member States new entrants have expressed concerns about the transparency of the cost accounting systems and the lack of publication of the elements necessary to allow market players to be in a position to ascertain that charges have been fairly and properly calculated. The regulatory framework provides for access to a description of cost accounting systems showing *inter alia* the rules used for the allocation of costs and the main categories under which costs are grouped. In this respect, a few Member States do not provide access to relevant cost accounting information on request to third parties (France, Italy, Luxembourg, Finland). In several other cases, access to information is limited for reasons of confidentiality or is provided to a certain level of aggregation and/or in general reports.

The regulatory framework does not specify a particular cost accounting system. The Commission recommended the NRAs¹³ to set deadlines for implementation by incumbent operators of a new cost accounting system based on current costs and activity-based costing. Four Member States have implemented such a system (Germany, the Netherlands, Austria, United Kingdom) and several others have set a specific deadline to update accounting systems (Belgium, Denmark, Greece, Spain, Ireland, Italy). In five Member States, such a deadline has not yet been set (France, Luxembourg, Portugal, Finland, Sweden).

In addition, with regard to the pricing of interconnection, the Commission¹⁴ has recommended the use of a LRAIC model. Such a methodology is currently applied in only two Member States (Germany, United Kingdom). However, there is a moderate trend towards the further use of such an approach.

Some Member States have been working actively on their systems, and NRAs have designed specific rules and guidelines regarding the cost accounting system to be used, and progress can therefore be reported in this respect. In some cases NRAs have drafted specific guidelines concerning the cost accounting methodology for mobile operators notified as having significant market power.

¹² Pursuant to Article 10(4) of Directive 92/44/EEC as amended.

¹³ Commission Recommendation of 8 January 1998, OJ L 73, 12.3.1998, p. 42.

¹⁴ Commission Recommendation of 8 January 1998 and Commission Recommendation of 8 April 1998, OJ L141, 13.5.1998, p.6. Recital No 10 of Directive 97/33/EC indicates that “charges for interconnection based on a price level closely linked to the long-run incremental cost for providing access to interconnection are appropriate for encouraging the rapid development of an open and competitive market”.

Leased lines

The Commission has consistently stressed the importance, not least for the provision of cheaper Internet services, of the rapid availability of leased lines at cost-oriented prices. In this connection the Commission has issued a Recommendation¹⁵ on the pricing of 'local tails' and has opened a sector enquiry pursuant to Article 12 of EEC Council Regulation No 17 of 1962.

As regards standard (undiscounted) prices, levels have decreased significantly since August 1997, that is, following infrastructure liberalisation. However, the price reductions that have been carried out are more limited in segments where little or no alternative exists to incumbent operators' infrastructure, in particular for short-distance lines of two kilometres. The broad picture for that period is as follows:

- 64 kbit/s national leased lines: around 20-25% decrease for 50 kilometres and 200 kilometres circuits; about 15% decrease for 2 kilometres circuits
- 2 Mbit/s national leased lines: about 30% decrease for 50 kilometres and 200 kilometres circuits; about 20% decrease for 2 kilometres circuits
- 64 kbit/s international leased lines: 25-27% decrease for circuits to nearest and most distant EU countries; 33% decrease for circuits to the US
- 2 Mbit/s international leased lines: 25% decrease for circuits to nearest, and almost 35% decrease for circuits to most distant, EU countries; more than 30% decrease for circuits to the US. These changes bring the average price for circuits to the far EU in line with those to the US.

Annual rentals for both national and international lines vary remarkably from one Member State to another, especially in the case of domestic 2 Mbit/s lines, for which values range from one third of the EU average value up to twice the EU average value. It is in the Commission's view unlikely that such variations actually reflect real differences in the underlying costs of providing these lines.

The ratio between the annual rental for international and national leased lines remains high in the majority of Member States. Underlying costs for national long-distance lines and international lines to the nearest EU country should in the Commission's view not be very different. In fact, annual rentals for international 2 Mbit/s half circuits to the nearest EU country are, on average, three times as expensive as 200 kilometres national lines. National leased lines in the EU are nonetheless considerably cheaper than in Japan (NTT). As regards comparison with the US, short 64 kbit/s and 2 Mbit/s lines are generally more expensive in the EU than in the US, whereas long-distance lines appear on average to be cheaper.

All of the above data are based on standard prices; actual prices charged to users are subject to a great variety of discounts, which in the case of national lines may bring about reductions of up to 35% of published prices. Moreover, case-by-case prices are often applied.

As regards high-speed lines, the number of incumbent operators that publish prices for such services is increasing, especially in the case of national 34 Mbit/s lines, which are now provided in two thirds of the Member States. The availability of public price information is

¹⁵ Commission Recommendation of 24 November 1999, C(1999)3863.

more limited in the case of national 155 Mbit/s leased lines and international 34 Mbit/s lines (incumbents in about seven to nine Member States) and extremely limited (incumbents in two or three Member States only) in the case of international 155 Mbit/s lines. Over the last year, prices for 34 Mbit/s national leased lines decreased between 10% and 15% depending on the distance.

Although the price trends referred to provide grounds for optimism, despite the slowing of the overall pace of price reductions over the past year, concerns have begun to arise regarding the difficulty in a number of countries in obtaining delivery within a reasonable timescale, in particular in relation to 2 Mbit/s and 64 kbit/s local tails. According to new entrants, the reasons vary from asymmetric agreements imposed by incumbents to lack of powers on the part of regulators to impose sanctions. In many cases there appears to be no discrimination as between the incumbent's downstream arm and new entrants, but the fact is that any new business will tend to be lost by the new entrant rather than the incumbent. One entrant has estimated its losses in terms of direct revenue foregone at € 1 million in two Member States and at €8-9 million throughout Europe. The impact in terms of loss of repeat business is considered to be many times greater.

Further problems for new entrants in a number of countries relate to the lack of provision of service level agreements (SLAs) by incumbent operators, or lack of regulatory enforcement of such agreements where they exist. Further, new entrants are faced in at least one Member State (the Netherlands) with the difficulty that if they themselves are late in taking up delivery they have to take their place at the end of the waiting list.

Numbering

New entrant operators clearly regard fully-implemented carrier selection, carrier pre-selection and number portability as being indispensable to the achievement of full market liberalisation. Carrier pre-selection (CPS) in particular allows new entrants the easiest form of access to the end-user for voice telephony services. In this context it is essential that national legislation allow the full range of CPS services to be offered by new entrants, in particular local, long-distance and international calls and calls to mobile. It should not be left to incumbent operators to decide whether or not a given service is likely to be financially attractive to new entrants, who need to be able to provide a full range of services to their customers.

The importance of these services can be judged by the fact that most of the five Member States granted varying periods for deferring full liberalisation of telecommunications markets, and which thereby also had the option of deferring their obligations with regard to the introduction of CPS and number portability, have chosen to implement ahead of the deadlines set (Spain, Ireland, Portugal).

Carrier selection by 1.1.1998

Call-by-call carrier selection is available for long-distance and international calls in all Member States except Greece¹⁶. Carrier selection for calls to mobile networks is in place in all Member States except Finland, and for local calls in seven Member States (Denmark, Ireland, Italy, the Netherlands, Austria, Sweden, United Kingdom). Of the seven where carrier selection is not yet available for local calls,

¹⁶ Greece is due to introduce full liberalisation on 1 January 2001.

Belgium and Spain plan its introduction in November 2000 and Portugal on 1 January 2001.

Carrier pre-selection for all calls by 1.1.2000

Carrier pre-selection (CPS) for long-distance and international calls is available in virtually all Member States. CPS for calls to mobile networks is available in ten Member States (Denmark, Germany, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Sweden). It is due to be introduced in Belgium at end 2000. CPS for local calls is available in three Member States (Denmark, Ireland, Italy), and in a further three (the Netherlands, Austria, Sweden) if the area code is dialled. Of those that have not yet introduced the service, Belgium and Spain plan implementation in November 2000.

Autodiallers are in use in Portugal (for national calls) and the United Kingdom.

The delivery times to consumers as set by NRAs vary considerably, with seven Member States fixing no deadlines while in France the maximum delivery period is set by the NRA at 72 hours.

Pricing for CPS interconnection to be cost orientated; charges to consumers not to act as disincentive

CPS interconnection charges are subject to supervision by NRAs in the same way as all other interconnection charges, and are covered in the section on 'cost accounting'.

Fixed number portability in place by 1.1.2000

Number portability for geographic numbers is available in all Member States with the exception of Greece, Ireland and Portugal, which all have deferments of the introduction of full liberalisation and thereby of number portability. The date set in Ireland is 30 November 2000 and in Portugal 30 June 2001.

Non-geographic number portability is available in eleven Member States. It is not provided in Greece (under the deferment), France or Luxembourg. Its introduction is planned in Portugal for 30 June 2001.

The delivery times to consumers as set by NRAs vary, with seven Member States fixing no deadlines while in Austria the maximum delivery period is set at between three and seven days by the NRA.

Charging for number portability varies considerably between the Member States. End users are not required to pay charges in Belgium, Germany, France, Ireland, Italy, Luxembourg and Sweden. Part of the costs can be charged to end users in Denmark, the Netherlands, Austria, Finland and the United Kingdom. No decision on charging has been reached in Spain.

Numbering plans to be published

Numbering plans exist in all Member States with the exception of Greece. No difficulties relating to the management of numbers are reported except in the case of Greece and Italy. In Greece, according to the Telecommunications Act, the management of numbers is the responsibility of the NRA but, in practice, all geographic and non-geographic numbers are still allocated to the incumbent. The Greek NRA says that this will remain the situation until the end of the

deferment period on 31 December 2000; the incumbent insists that all requests for numbers have so far been met. In Italy, operators indicate that the numbering database is still managed by a subsidiary of the incumbent, although number allocation as such is dealt with by the Ministry via the NRA. The NRA states that the transfer of the database is planned.

112 pan-European emergency number

The 112 emergency number is in place in all Member States; no problems relating to its use have been reported.

In the 1999 Review Communication¹⁷, the Commission considers that geographical location details should be provided by fixed and mobile operators to the emergency authorities when emergency calls are made. The Commission proposes that location information should be made available to emergency authorities by 1 January 2003. In addition, the eEurope Initiative highlights the possibility for all citizens on the move throughout Europe of having full access everywhere to multilingual support, call localisation and fully organised provision of emergency services through the 112 number. The industry is studying the necessary technical solutions.

Rights of way

Many of the problems identified in the Fifth Report remain to be settled, with market entry in a number of Member States delayed owing to the multiplicity of authorities with powers to grant rights of way, particularly at local level. An increasingly important concern on the part of operators relates to requirements regarding the siting of antennae under town-planning, environmental and public health rules. In this respect Member States, when considering environmental and health protection measures, should take account of relevant EU recommendations in order to avoid creating market distortions with respect to the roll-out of mobile networks.

Rights of way to be granted on non-discriminatory terms

Since the last report the application of the non-discrimination principle by public authorities for granting the right to use public ways has still not been ensured in one country (Luxembourg), where only the incumbent operator has been authorised to lay cable. In a further country (Greece) the incumbent operator is reported to enjoy a broader right of access to public ways than new entrants.

Long delays for granting rights of way still pose a problem in six countries (Belgium, Greece, Spain, Ireland, Italy, Austria). The reasons reported are still those identified in the Fifth Report, that is, excessive requirements on the part of municipalities on co-digging, facility-sharing and the reopening of public highways, lack of clarity regarding the applicable rules in particular at local level, and the difficulties with coordination of the public services involved in the granting of rights of way. In one country new entrants have not yet been granted rights of ways at all (Luxembourg). In two of the countries referred to, measures

¹⁷ COM(1999)539.

are currently under examination to improve the situation (Spain, Luxembourg).

Fees pose a problem in four countries (Belgium, Italy, Ireland, the Netherlands), partially due to the diversity of approaches followed by municipalities (Italy, Ireland) or lack of a consistent application of the legal framework (Belgium) which leads to charging which varies substantially; in the Netherlands, it is not always clear to operators whether an additional local fee will be charged for the siting of antennae.

Municipalities or regions exercise powers with respect to the siting of antennae and/or facility-sharing in eight countries (Belgium, Denmark, France, Italy, Luxembourg, the Netherlands, Austria, Sweden). As regards five countries (Belgium, Italy, Luxembourg, the Netherlands, Austria) increasing problems at the level of municipalities have been reported. In three countries (Italy, Luxembourg, the Netherlands) measures are currently under examination to improve the situation, in particular with a view to allowing for a coordinated antenna policy with respect to the roll-out of 3G networks.

Second-generation mobile network operators appear to share masts and antennae in a majority of countries (Belgium, Denmark, Germany, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden) and have not expressed concerns in this regard. In most of these countries the conditions for mast-sharing are set on a commercial basis with the exception of one (the Netherlands) where conditions are set by the NRA and a further country (Italy) where the first two mobile operators must provide sharing of sites and antennae on a cost-oriented basis. However, there is increasing concern about the possible setting of requirements on limitations to exposure of the general public to electromagnetic emissions that are higher than required under the relevant EC recommendations.

Duct-sharing is reported to be offered in seven countries (Germany, Spain, France, Ireland, Austria, Portugal, Finland); no information was forthcoming in the remaining countries.

Absence of a clear regulatory framework for access to sea-cable head-ends still poses a problem in one country (Greece). In another country (Portugal), new entrants complain about the de facto monopoly for undersea cables and backhaul services; the situation is currently under examination by the NRA. No problems have been reported in the remaining countries. In one country (Italy) previous concern has been remedied due to the revision of the RIO, which now includes access to landing stations.

Independence to be ensured where local authorities act as regulators

An additional source of concern relates to municipalities which have in certain countries themselves entered the market and rolled out their own networks while simultaneously having powers to grant rights of way to new entrants. In one country (Italy) new entrants have raised the question of possible discrimination which appears in certain municipalities which have themselves entered the market to have led to denial of rights of way to other operators. In two Member States (Belgium, Italy) there have been reports that some municipalities and the State Agency for Public Roads impose forms of payment which can be regarded as inappropriate. One country (France) has taken measures to restrict municipalities from rolling-out dark fiber to be leased to new entrants and another country (Germany) has taken measures to prevent possible conflicts of interest by shifting responsibilities for granting rights of way away from municipalities with shareholdings in network operators. In one country (Italy) the NRA is currently examining how to strengthen the enforcement of operators' rights of way (revision of the licensing scheme, ad hoc decisions).

Data protection

Data protection in the telecommunications sector has gained increasing importance, in particular in view of the need to preserve customers' confidence in the confidentiality and integrity of telecommunications facilities. In addition, data protection has gained in complexity as a result of technological and market developments. The risk of breaches of network security is increased by the number of operators now involved in connecting calls, which has multiplied the points where confidentiality can be compromised.

The Telecommunications Data Protection Directive also requires the monitoring of storage of traffic data and data processing, grants customers rights with respect to unsolicited calls and provides for privacy options with regard to directory entries, together with certain facilities such as elimination of call forwarding and calling line identification. The overall picture which emerges is that these facilities are available in almost all Member States, even though they are not always regulated. A further major objective of the Telecommunications Data Protection Directive is to ensure the confidentiality of communications; the relevant provision was required to be transposed by the Member States by 24 October 2000.

The Directive has now been substantially transposed¹⁸ by ten Member States (Denmark, Germany, Greece, Spain, Italy, Austria, Portugal, Finland, Sweden, United Kingdom); the legislation is in the view of the Commissions' services not yet fully in conformity with the Directive in one Member States (Belgium). Two Member States (Luxembourg, Ireland) have not yet notified and two further Member States (France, the Netherlands) have notified only partially.

All Member States have set up authorities to monitor application of the general Data Protection Directive, which are also responsible for data protection in the telecommunications sector. In almost all countries the authorities involved in data protection have investigative

¹⁸ This term refers to the method of assessment defined in Annex II of the Fifth Report on the Implementation of the Telecommunications Regulatory Package. The Commission reserves the right to bring infringement proceedings where concerns are expressed or a subsequent examination shows the proper transposition or implementation is lacking.

and administrative powers. In some countries (e.g. Germany, Finland) the authorities responsible for enforcement of the Telecommunications Data Protection Directive have issued detailed rules on security management.

Confidentiality of communications	Measures have been notified by ten Member States; notification is awaited from France, Ireland, Italy, Luxembourg and the United Kingdom.
Traffic data	Traffic data is erased or made anonymous immediately after calls are made in eleven countries (Belgium, Denmark, Germany, Greece, Spain, Italy, Austria, Portugal, Finland, Sweden, United Kingdom), with the exception of those data necessary for billing purposes. There is no obligation to erase traffic data in three countries (France, Luxembourg and the Netherlands). The period considered necessary for keeping data for challenging bills and pursuing payment varies substantially between the Member States from 80 days (Germany) and 6 months (Portugal) to several years (Denmark, Greece, Spain, Finland, Sweden, United Kingdom); in some countries information on time-limits is not easily accessible (Italy, Austria) ¹⁹ . In a number of Member States, this period is under review.
Operators may process data relating to subscribers if the latter have given consent	In all Member States, traffic data stored for billing purposes may only be further processed on the basis of the consent given by the subscriber and for the purpose only of marketing the services of the operator concerned. Forms of consent vary, consent in writing being required in some countries. In Greece, consent by the subscriber must be in writing where one operator intends to transmit data to another. Details are set out in Annex 3.
Subscribers have right to receive non-itemised bills	Subscribers can request non-itemised bills in all Member States. They cannot object to deletion of the last three digits as part of the itemised bill in two (France, Italy; in the latter case this has given rise to concerns on the part of consumers and operators). Details are set out in Annex 3.
Calling users can eliminate presentation of calling-line identification	The table in Annex 3 shows the situation regarding calling line identification.
Subscribers can stop automatic call forwarding	In eleven Member States (Belgium, Denmark, Greece, Spain, Italy, the Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom) subscribers can, free of charge, stop automatic call forwarding by a third party to the subscriber's terminal; this facility is also available in two further Member States (Germany, France). Details are set out in Annex 3.
Subscribers entitled to be omitted from directories	In eleven Member States (Denmark, Germany, Spain, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, United

¹⁹ This information is based on the replies of the national regulatory authorities to a questionnaire prepared by the Commission.

Kingdom) subscribers can request to be omitted from directories free of charge, while a fee is imposed in the remaining Member States. In Greece, the operator may impose a fee on condition that it is limited to the actual cost incurred by the operator. Details are set out in Annex 3.

Internet

The market for Internet service provision has grown considerably in most Member States in the last year. The number of Internet service providers (ISPs) has increased in most Member States, with at least one hundred local or national ISPs in the market in many, in some several hundred.. At the other end of the scale it has to be said there is one Member State with less than twenty ISPs. The number of Internet hosts per 1 000 inhabitants has increased in all Member States, with average growth in the EU of 33% between July 1999 and January 2000; nonetheless, the average number of Internet hosts per 1 000 inhabitants is still lower than in the US. In many Member States there has also been substantial growth in the number of Internet connections (in one Member State the number grew by more than 300% between March 1999 and March 2000).

A quarter of the EU population used the Internet (at work, at home, or at school) during the first half of 2000. However, Internet usage varies greatly between Member States, ranging from a low percentage of the population (less than 10% in one Member State (Greece)) to over 50% in two Member States (Denmark, Sweden). The remaining countries show an average usage rate of some 25%. As with the number of Internet hosts, average EU usage is still lower than in the US, however.

In most Member States, ISPs related to the incumbent still have large market shares, with incumbents in Ireland, Italy, Luxembourg, the Netherlands and Finland providing access to 50% or more of national Internet subscribers, whereas in the United Kingdom the incumbent has less than 10% of the market. The average market share of the ISPs related to the incumbent is 40%, which can be considered high in comparison to the number of ISPs present in the market.

In some Member States ISPs and operators have recently developed flat-rate tariff packages for users (unmetered access to the Internet for a fixed sum), often launched by the incumbent with others following suit. Few Member States have regulated flat-rate Internet access call origination (wholesale flat-rate Internet access for interconnection purposes), although in the United Kingdom, following a complaint by an operator, the NRA determined that the incumbent had to provide flat-rate wholesale Internet access to other operators to enable them to launch their own retail flat-rate packages. The regulator in one other Member State (the Netherlands) has made a similar decision, which, however, has not yet been implemented. The regulator and Ministry in a further Member State (Spain) are considering how to implement a Royal Decree mandating flat-rate off-peak Internet access. The Minister responsible in France has announced that the incumbent will be required to offer an unmetered interconnection rate in its reference offer. The regulator in Germany has opened a proceeding to examine whether the incumbent's wholesale prices for Internet access are discriminatory, given that the incumbent's subsidiary already offers a flat-rate charge. Other Member States are at various stages of examining the possibilities for flat-rate access.

The tables in Annex 3 show Internet access costs in the Member States for residential users.

CONCLUSIONS

The eEurope objective

After nearly three years of full liberalisation of telecommunications services, market and regulatory indicators show that Europe is not only capitalising on its strengths, but also rapidly making good its traditional weaknesses. The eEurope Initiative pointed to the strengths, in particular mobile services and the potential for Internet-on-the-move. The report confirms that, with penetration rates as high as 70% and not lower than 39%, Member States continue to build on their achievements.

Fixed Internet access has traditionally been weak in Europe, with penetration levels as low as a few percent of the population in one Member State. Here too there has been considerable progress over the last year in tackling some of the underlying reasons for Europe's generally poor performance in relation to the US, where *average* penetration is approaching 50%. First, Member States have already begun the process of opening up competition in the local access network, hitherto dominated by the former monopoly fixed-line providers, by issuing licences for access to the end-customer for voice and Internet services via wireless local loop. Second, they have already begun to put in place the practical arrangements needed to give effect to the forthcoming EC Regulation on local loop unbundling. Third, prices for the kinds of leased line generally used by Internet service providers are coming down.

Market situation

The report shows that the news is good from virtually every segment of the market, retail and wholesale. In the retail market, consumer choice is widening as substantially more operators become active, with around 80% more offering voice telephony than a year ago. Tariffs for residential and business users continue to move steadily down overall, even though tariff rebalancing has pushed up the price of some calls, together with the line rental. In the wholesale market, overall prices for leased lines continue to decrease, in particular where there is competitive pressure. Interconnection charges have continued to fall, mainly under pressure from benchmarking; the increased use of appropriate accounting under the supervision of regulators should enable a closer link with actual costs to be established.

Regulatory situation

Underlying these headline indicators is an assessment of regulatory developments which points to further substantial progress in implementing the current regulatory framework. This is clearly a solid basis for Europe's ultimate objective of becoming the most competitive knowledge-based economy in the world. At the heart of the process are the national regulatory authorities, which have increasingly stamped their authority on the markets in all Member States as they tackle a new wave of complex regulatory questions such as competitive flat-rate Internet access and access to mobile infrastructure. New entrant operators expressed the very clear view during the preparation of the report that they rely on authoritative and empowered NRAs to secure market position in the face of continued domination by the incumbent fixed-line operators, which includes an average 40% market share for Internet service provision. They also expressed the overwhelming view that regulators continue to need to be able to rely on strong sector-specific regulation in the transition to a fully competitive market. The Commission is of the opinion that Member States should continue to ensure that NRAs are given full regulatory powers in accordance with the regulatory framework, together with the human and financial resources necessary to deploy them.

Despite this overall extremely encouraging picture there remain a number of areas to which Member States need to turn their attention to ensure full implementation.

Licensing

The last report pointed out that licensing procedures were still cumbersome in a number of Member States, with sometimes onerous conditions and heavy fees. The situation has in general not changed radically, and this clearly still represents a barrier to market entry, in particular in new segments or geographical areas. There is in this connection some indication that there are fewer operators proportionate to the size of the population in countries where regimes are more complex or financially burdensome than in countries with light regimes. Reference should, however, be made to the significant reduction in fees in one Member State and an ongoing initiative to reduce them in another.

Interconnection

Despite falling interconnection tariffs, the greatest problem for new entrants remains the fact that regulators are in a large number of cases unable to verify that the incumbents' prices are cost oriented in accordance with the regulatory framework. Very few Member States have put in place mechanisms to ensure that appropriate cost accounting systems are in place to supervise incumbent operators' costs and to provide the transparency and reporting required under the regulatory framework. In addition, new entrants continue in many cases to experience difficulty in obtaining interconnection rapidly and on equitable terms.

Mobile market

While third-generation licensing is well under way in the majority of Member States, five countries will issue licences only in 2001. Because operators in one or two of these countries will not secure licences until late that year, there is some concern that they will not be able to deploy their networks in time for the launch of services at the beginning of 2002 as required by Community decision.

In the second-generation market, most mobile operators are not required to apply cost-oriented tariffs for call termination. In some cases regulators have taken action to reduce the sometimes very high prices that have resulted, while in others, the prices charged appear to impose a burden on new-entrant fixed-line operators.

Tariff rebalancing

A number of Member States have indicated that tariff rebalancing remains to be completed, leaving incumbent operators in some cases able to cross-subsidise tariffs in particular in the local call market in order to squeeze new entrants' margins. Here, too, entrants depend on regulatory supervision by regulators as referred to above.

Carrier pre-selection

While carrier pre-selection is being widely used in most Member States to enable new entrant operators to reach end-customers via the local access network of the incumbent operator, in many cases new entrants are not able to offer the full range of local, national and international calls and calls to mobile networks. In some cases the regulatory authorities have indicated that the provision for example of local calls by this method is uneconomic; however, it is clear that new entrants need to be able to provide a full range of services to their customers, in

particular in the business market, and should therefore be able to access them for an unrestricted range of calls.

Collocation for local loop unbundling

It is clear that commercial negotiation is the basis on which new entrants should obtain physical access for the installation of their equipment at local exchanges. In some Member States, however, a genuine shortage of space means that regulators are called upon to facilitate pragmatic solutions; in others, decisive regulatory action appears necessary to prevent incumbents from foreclosing competition.

Leased lines

While leased line prices overall continue to fall, lengthy delivery times by the incumbent may be beginning to constitute as great a threat to continued activity in the market by new entrants as prices, even in those segments such as local tails where they remain high.

Users and consumers

Designated operators appear to have few difficulties in fulfilling the universal service obligation imposed on them; there is some interest on the part of non-designated operators in the possibility of sharing the universal service obligation. There are still disparities in the way in which consumer and user protection is monitored in the Member States and in mechanisms for ensuring transparency of information and consumer redress.

Internet

In general the action taken by regulators in particular to increase local access competition means that the prognosis for future Internet penetration rates is good. However, although access by new entrants to the incumbent's high speed ADSL service is already ensured in a number of Member States, it remains unavailable in others, despite the significant first mover advantage thereby gained by the incumbent, or is available at an uneconomic price.

In the Commission's view the reporting and transparency exercise of which this report is part has produced results, in terms of the extensive implementation of the regulatory framework, which go well beyond those that would have been obtained if reliance had been placed solely on the enforcement procedures provided for in the Treaty. It will continue therefore, in the transition to the new framework, to update the market and regulatory data in this report.