



COMMISSION OF THE EUROPEAN COMMUNITIES

**Brussels, 18.02.1998
COM(1998) 80 final**

COMMUNICATION FROM THE COMMISSION

**TO THE COUNCIL, THE EUROPEAN PARLIAMENT,
THE ECONOMIC AND SOCIAL COMMITTEE
AND THE COMMITTEE OF THE REGIONS**

**Third report
on the implementation of the telecommunications regulatory package**

Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions

Third report on the implementation of the telecommunications regulatory package

1. State of play

Since **1 January 1998**, telecommunications markets have been **fully liberalised in most of the European Union**. This marks the culmination of a ten-year process of gradual market opening, set in train at European level by the Commission's 1987 Green Paper¹ and based on extensive consultation and a broad measure of support from consumers and the industry. The process was given added impetus by the **entry into force of the WTO agreement on basic telecommunications services on 5 February 1998**.

Telecommunications are at the heart of the **Information Society**, which promises extensive opportunities for European business and a significant contribution to improved living standards for the European citizen. The opening of EU telecommunications markets, **with a current value of 141 billion ECU and growing annually at 8.2%**, is clearly of the greatest importance in terms both of overall growth and employment within the European economy and of increased international trade.

The Community telecommunications regulatory package aims at market opening based on the combined use of **liberalisation** measures to break down monopolies; **harmonisation** measures providing common rules and procedures in the markets opened to competition; the establishment of **national regulatory authorities**; and the active use of **competition rules** to ensure fair competitive behaviour.

Since the liberalisation process began, there have **been continuous improvements in levels and quality of services, with corresponding falls in prices**. Despite significant tariff rebalancing in some Member States in recent years, prices have in overall terms declined in some countries of the Union by up to 40 % since 1990. Liberalisation is also the driver of, and driven by, an unprecedented take-up of new services and technologies. Europe has already seen enormous growth in three areas: **mobile communications**, with more than 45 million users throughout the Union today; the use of **fax**, which has grown dramatically during the nineties; and now the **Internet**, potentially the single most important development in telecommunications for decades and stimulated in particular by the rapidly increasing penetration rate of **personal computers** in the EU market.

In expectation of full liberalisation on 1 January 1998, new players, licensed or authorised under procedures established pursuant to the Community directives, have undertaken **large-scale investment** in terms of finance and human resources in most of the Member States. **A large number of providers of voice telephony** are already

¹ Green Paper on the development of the Common Market for telecommunications services and equipment, COM(87) 290

operating in the market in competition with the former monopolies. In addition, **many hundreds of players are offering data and Internet services.**

Given the importance of this process, the Commission has placed **the highest priority on the full implementation of the telecommunications regulatory package by all Member States.**

The Commission's **broad assessment of implementation, as at January 1998**, is that:

- the **transposition measures** laid down in the regulatory package **are very largely in place in most Member States**;
- **emphasis** will now need to be put on **effective application** of the national rules to ensure market entry in all market sectors (in the already-liberalised sectors in the derogation countries); and
- **economic indicators** will need to be gathered **to measure the market effects** of the new environment.

This Communication builds on two previous Communications adopted on 29 May and 8 October 1997², in which the Commission reported to the Council and European Parliament on **progress by Member States in preparing for the 1 January 1998 deadline**, and set out its approach to carrying forward the implementation exercise after full liberalisation.

The Communication is based on:

- I. the findings which have already resulted in the Commission having to take out **infringement proceedings** in respect of failure to communicate national measures or deficiencies found in transposing the directives under the regulatory package or in applying the national measures concerned. There are currently thirty-five proceedings under way³; it is likely that a number of these will be closed as a result of the measures communicated recently. The Commission intends to open a fresh round of infringement proceedings before the end of March on the basis of the information gathered during this exercise;
- II. a round of intensive bilateral meetings with the Member States, begun on 11 December 1997, the purpose of which was
 - to examine the state of progress in transposition and the conformity of the measures adopted with the Community package, and
 - to review the national authorisation schemes implemented;
- III. a questionnaire on the state of the national telecommunications markets forwarded to the national regulators.

² COM(97) 236; COM(97) 504

³ 12 concern the liberalisation and 23 the harmonisation directives

2. Transposition

2.1 Principle

The Commission, in line with the case law of the Court of Justice, distinguishes between the process of **transposition** of the directives and **the effective application of the transposed rules**. Transposition means the incorporation into national law of the obligations set out in the directives concerned in order to achieve the objectives pursued. The Court has consistently stated ⁴ in this regard that each Member State must implement directives in a manner which fully meets the requirement of legal certainty and must consequently transpose their terms into national law as binding provisions; the transposition of a directive into domestic law does not necessarily require that its provisions be incorporated formally and verbatim in express, specific legislation; a general legal context may, depending on the content of the directive, be adequate for the purpose, provided that it does indeed guarantee the full application of the directive in a sufficiently clear and precise manner. The Commission's view as far as the current exercise is concerned is that **only correct transposition provides full certainty to market players, particularly new entrants, as to their substantive rights and their rights of recourse to the regulator**.

The obligations set out in the directives impinge on **different areas of the law in different Member States**; although most chose to adopt a framework telecommunications law with accompanying secondary provisions, each has also had to rely to a greater or lesser extent on other branches of the law such as those relating to administrative procedure, legal remedies, contract, planning and local government, consumer protection, and, in certain cases, the national constitution. In many cases also, the directives deliberately offer options which the Member States are free to act on.

National transposition measures must of course incorporate correctly the objectives of the directives, that is, they must be in conformity with them. In some instances, Member States have introduced **regulation which goes beyond that provided for**. The Commission will examine such regulation and, where it creates barriers to the realisation of the Single Market and accordingly contradicts the objectives of the directive concerned, will take action on the basis that it constitutes incorrect transposition.

Full transposition in conformity with the directives is, however, not necessarily enough to ensure that the objectives in view are actually achieved. This requires **the effective application** of the measures in question; this is considered in section 3.

2.2 Assessment of transposition

The status and general level of transposition of the directives is as follows:

a) Liberalisation directives

The liberalisation directives, which removed exclusive rights and most special rights in the telecommunications services and equipment markets, were adopted between May

⁴ See, for example, judgement of 2 December 1986, Case 239/85, ECR 1986, pp 3645-3661; judgement of 9 April 1987, Case 363/85, ECR 1987 p 1740-1745

1988 and March 1996. The last deadline for notification under the liberalisation directives was 1 July 1997. In November 1997, the Commission initiated infringement procedures against those Member States which had not notified the relevant transposition measures. Several Member States (Belgium, Greece, Ireland, Luxembourg, Portugal) have still not notified specific provisions, despite the fact that they are not, or are no longer, covered by derogations. However, even if not fully transposed, clear and unconditional provisions of these Directives have direct effect, and certain of the Member States concerned (Belgium, Ireland) have granted provisional authorisations based on this direct effect of Community law. In order to understand the situation in the various Member States it is therefore important to look at the same time both at transposition and application. A more detailed assessment is set out in Annex I.

b) Harmonisation directives

Two major directives, on interconnection and licensing, were adopted during 1997. In addition, the ONP Framework and Leased Lines Directives were amended. The Terminals Directive, as supplemented as regards earth satellite terminal equipment, is in the process both of consolidation and fundamental revision. The directives on frequencies have been in force for a number of years, and it is not envisaged to amend them. For all of these directives, the **verification of transposition was carried out on the basis of those articles laying down the essential principles which the respective directives are designed to achieve**. As regards the Voice Telephony Directive, which will be amended by a directive on which conciliation was concluded on 10 December 1997, **the verification concentrated in particular on those articles setting out principles which are carried over into the new directive**.

The Commission's broad assessment of the state of transposition of the harmonisation directives is as follows:

The level of transposition is generally **very good**, bearing in mind the fact that the **Licensing and Interconnection Directives in particular were required to be transposed for 31 December 1997**. Where legislative delays have occurred, the drafts forwarded to the Commission show in the majority of cases that there will be **substantial transposition once they are adopted**. There are few cases giving rise to major concern arising from non-conformity of transposed measures with the directives.

Framework Directive: Provisions on national regulatory authorities have been adopted in all the Member States.

Leased lines: Of the four findings of partial transposition, three relate to *non-conformity with various specific principles* (Greece, Luxembourg, Portugal), while one, the result of *delay in bringing forward the necessary legislation* (Belgium), should be made good by the adoption of two forthcoming decrees.

Voice telephony: Only one Member State has not notified measures (Greece). Of the four cases of partial transposition, two arise from *non-conformity with various specific principles* (Spain, Portugal), one (Luxembourg) from *legislative delays* coupled with *concern over specific principles*, and one, the result of *delay in bringing forward legislation* (Belgium), should be remedied by the adoption of a forthcoming decree.

Licensing: Three cases of non-transposition are the result of *legislative delays* (Greece, although a derogation for certain principles has been requested; Spain, where the forthcoming Act should transpose the main provisions; and Ireland, where the current draft Regulations provide for substantial transposition). Three of the five cases of partial transposition are also the result of *delay in bringing forward legislation* (Belgium, where draft secondary legislation is at an advanced stage; Luxembourg, where secondary legislation remains to be adopted; and The Netherlands, where substantial transposition should be achieved by the forthcoming Act). There is concern in one country (France) over a *specific licence condition* coupled with *delay in introducing legislation on procedures*, although secondary legislation is in preparation to remedy the latter, and in another (Italy) concerning *specific licence conditions*. In one country (Austria) there is concern over certain *procedural aspects*.

Interconnection: The two cases of non-transposition are the result of *legislative delays* (Greece, where secondary legislation is under way; and Portugal, where secondary legislation is due to be adopted shortly). Four cases of partial transposition are the result of *delays in adopting legislation* (Spain, where the forthcoming Act should transpose the main provisions; Italy, where amendment of the framework is under consideration and secondary legislation is at an advanced stage; The Netherlands; where the forthcoming Act should bring substantial transposition; and Sweden, where the forthcoming amendment of the Act should bring substantial transposition). Two cases of partial transposition are the result of *legislative delays* coupled with concern over *specific principles* in two Member States (Belgium, where amendments to the Law and secondary legislation are under consideration; and Luxembourg, where secondary legislation remains to be adopted). In one (France) there is concern over *specific principles*.

Terminals: The directive is substantially transposed in all Member States.

Satellite terminals: The three cases of non-transposition are the result of *legislative delays* (Belgium, where a decree is at an advanced stage, Greece, where a presidential decree is under draft; and Ireland, where draft regulations are in preparation).

Frequencies: The directives are substantially transposed in all Member States.

A more detailed assessment is set out in Annex II.

The Commission draws attention to the fact that certain Member States had not fulfilled by the due date the obligation under the Interconnection Directive to notify the manner in which certain information is to be published and the names of organisations with significant market power under the Directive. The Commission is required to publish this information in the Official Journal of the European Communities.

The focus of future communications will shift away from transposition towards effective application and fuller reporting of the opening of national markets, on the basis of a wider range of indicators and more extensive data from the national regulatory authorities, as indicated below.

3. Effective application

3.1 Principle

The major task of the Commission following the formal transposition of the liberalisation and harmonisation directives is to **ensure the effective application of the national rules adopted pursuant to the directives in the package.**

a) Liberalisation directives

In line with the aim of the liberalisation directives, nearly all Member States have effectively authorised new market entrants in the various telecommunications markets. In assessing whether the Member States have effectively implemented this objective, it is necessary to look into a number of concrete indicators of compliance, given that these measures have been transposed in different ways in each Member State. For example, licensing conditions vary widely from Member State to Member State, and will affect the burden and the time necessary to enter the market.

b) Harmonisation directives

The deadline for transposition of the two most important harmonisation directives, Licensing and Interconnection, expired on 31 December 1997, as did that for the amendment to the Framework and Leased Lines Directives. Moreover, the new Voice Telephony (Adaptation) Directive has had an impact on the transposition of the Voice Telephony Directive for which the deadline for transposition was 31 December 1996. In these circumstances, a systematic verification of the correct and effective application of the national measures adopted pursuant to these directives and reported on in this Communication will be carried out in the light of their implementation in the coming months.

3.2 Assessment of effective application

In the light of the above, it is useful, in assessing effective application, to examine on the one hand the liberalisation process and on the other the accompanying regulatory framework.

Liberalisation

In the wake of the implementation of full competition on 1 January 1998 in the ten Member States without a derogation, all but one of the ten have granted authorisations to new market players for the provision of voice telephony and public telecommunications networks. This was the last step of phased liberalisation initiated with the adoption of Directive 90/388/EEC on 28 June 1990.

This Directive liberalised the markets for **voice and data services**, i.e. all services **other than voice telephony**, telex, provision of directories, mobile and satellite services. These services are now fully open to competition in the Community. However, in two out of fifteen Member States, certain restrictions continue to be applied on the provision of "call-back" services (Portugal and Greece). The Commission will address these remaining restrictions as a priority.

The next phase concerned the liberalisation of **satellite services** in 1994, under Directive 94/46/EC. The relevant services are also widely open. Four Member States (France, Germany, Netherlands and UK) and Switzerland have entered into an agreement to apply a one-stop shopping procedure for the granting of VSAT⁵ and SNG⁶ authorisations. However a small number of Member States are still completing the regulatory framework necessary in order to allow for the authorisation and operation of satellite services. Two Member States (Ireland and Luxembourg) have already adopted some legal provisions, but must still set out the authorisation procedures, including determination of level of fees. One Member State (Greece) has notified a draft licensing procedure, which should soon be adopted. Furthermore the situation remains unclear in a number of Member States with regard to the measures taken to allow by-passing of the national signatory of international satellite organisations such as Intelsat or Eutelsat.

In order to give full effect to the liberalisation of services other than voice telephony, Commission Directive 95/51/EC required Member States to lift restrictions on the use of **cable television networks** to provide such services, including for example Internet access. To date, all but two Member States have taken the necessary measures. This Directive has already had dramatic effects in Member States such as the Netherlands and Belgium where cable networks are used for the commercial provision of telecommunications services. One Member State (Greece) is drafting legislation to repeal the exclusive rights recently granted to the incumbent operator for the provision of CA-TV network infrastructure. In another Member State (Luxembourg), the measures taken do not seem sufficient to give legal certainty to cable operators wanting to provide liberalised services. A factor preventing Directive 95/51/EC from yielding the intended effects is the simultaneous operation of telecommunications and cable television networks by the same undertaking. In December 1997, the Commission therefore adopted the draft of an amendment of Directive 95/51/EC in order to ensure that in certain circumstances Member States impose legal separation of these activities.

Directive 96/19/EC requires in parallel the lifting of restrictions on the use and establishment of other **alternative infrastructure**. Although some Member States were given deferment periods regarding this obligation, these had expired by 1 October 1997. By that date, the Commission found that Portugal, Greece and Luxembourg had not taken the necessary measures to allow new entrants to use or establish alternative infrastructures. Formal proceedings were initiated in November 1997 and will be continued until these measures are in place. Moreover, in Spain, the current operators have challenged the first such authorisation in Court, delaying the effective implementation of this obligation.

The opening of the **mobile and personal communications** market is the aim of Directive 96/2/EC (Mobile Directive). Portugal and Ireland were granted an additional implementation period until 1 January 1999 for the lifting of restrictions on direct interconnection of mobile networks with mobile networks and PSTN in other Member States. **Two Member States** without any deferment period for the lifting of such restrictions (Italy and Greece) have still to implement *in practice* this right of the mobile

⁵ Very Small Aperture Terminal (small earth stations for one- or two-way private communications)

⁶ Satellite News Gathering (using transportable earth stations)

operators. Measures have been adopted by Italy. As for Greece, the Commission has opened an infringement procedure. **Finally, five Member States** (Belgium, Spain, Ireland, Italy and The Netherlands) are still in the process of granting **one or more DCS 1800 licences, which should have been done by 1 January 1998**. The Commission will initiate infringement procedures if DCS 1800 licences are not granted within reasonable periods.

Regulatory framework

Member States have implemented divergent **authorisation procedures for voice telephony and public telecommunications networks** going from light procedures in certain Member States (no authorisation required except to apply for numbers and/or frequencies) to full and more lengthy licensing procedures. However, to date in all but one of the Member States without derogation, new operators have been authorised to provide voice telephony or public telecommunications networks in competition with the incumbent. The number of authorisations granted varies between Member States, which is partly to be explained by the different liberalisation dates and the size and opportunities of each national telecommunications market. As at 15 January 1998, the UK has already granted more than 30 voice telephony licences, whereas Germany has granted 13 national voice telephony licences and 6 national public network infrastructure authorisations. France has issued 4 public network authorisations and 4 voice telephony authorisations, and further applications are still being processed. Amongst the larger Member States, the situation in Italy where no additional operator has been authorised to date gives cause for concern. It should be noted that Spain, which was granted an additional implementation period, has already granted a second nation-wide licence and is in the process of granting a further licence. Of the smaller Member States, Belgium and Austria, which were late in transposing the directives, have nevertheless already granted a number of public infrastructure and voice telephony licences, although in the case of Belgium these are only provisional. In The Netherlands there are at present two national voice telephony licences and two national public infrastructure operators with rights of way, in addition to the incumbent operator. This situation is likely to change with the projected adoption of the new Telecommunications Act in March 1998.

At this initial stage of liberalisation, all but two (Italy and France) of the Member States without additional implementation periods do not consider that the provision of **universal service** by the former monopoly constitutes an unfair burden within the meaning of the Interconnection Directive, and have not yet activated schemes to share the burden of universal service provision. The Commission is therefore examining the justifications provided by these two Member States. Only one of the Member States without an additional implementation period (France) has notified a plan to phase out tariff imbalances and approved the implementation of access deficit charges by its operator for a transitional period. Italy has stated that tariffs are still not balanced, but has not provided a precise timetable. The Commission is monitoring whether other operators are implementing hidden access deficit charges and will, where required, take action.

The incumbent operators of all Member States without derogations have published **standard interconnection terms and conditions**. The extent of services provided as well as the level of charges vary from one operator to another. The Commission has adopted a Recommendation on Interconnection Pricing setting out 'best practice prices'

for interconnection at three different levels. Annex III shows the level of prices in the Member States, together with the percentage deviation from best practice. As at January 1998, respectively five and six Member States were within the recommended price ranges depending on the level of call termination considered. In two Member States (Austria, Italy), the prices proposed by the operator are still subject to approval by the regulator. Member States with derogations must also ensure that a reference interconnection offer is published covering interconnection for already liberalised services (eg mobile and cross-border interconnection).

The Commission's first conclusions on the application of the rules in place in the Member States are as follows:

The state of liberalisation achieved in January 1998 is encouraging. Considerable progress has been made since last September, when the last assessment was made. Although the Commission has already had to deal with a number of informal complaints relating either to transposition measures or their application (such as long delays in granting authorisations, disproportionate burdens imposed, discouraging licensing fees, etc.) or to the behaviour of incumbent operators (interconnection fees leading to anti-competitive price squeezes, non-publication or incomplete publication of a reference interconnection offer, denial of the right to negotiate interconnection, predatory pricing, imposition of unreasonable fees on customers choosing another operator, etc.), there is evidence that the national regulators now established in the Member States are assuming their responsibilities for enforcing the provisions of the framework as laid down in the directives.

In order to ensure a level playing field in the single market, the Commission will pursue its monitoring of the implementation of the regulatory framework at national level, relating inter alia to the licensing process, the level of licence fees, the terms and conditions of interconnection, the implementation of an appropriate cost-accounting system as well as the structure of the incumbents' retail tariffs structure in order to prevent predatory pricing, price squeezes, cross-subsidies, etc. Particular attention will be given to the level of competition in the local loop and to national measures taken to foster competition in this market.

4. Monitoring progress in opening national telecommunications markets

The above assessment is naturally structured around the legislation in question, the focus being on the practical outcome of the measures taken by the Member States to transpose the Community principles laid down. It is also important, however, to observe the real effects of these measures on markets, taking into account that there will be other factors which have a bearing on how they evolve.

Two meetings of the High Level Committee of National Regulators were held during 1997, devoted principally to subjects relating to the **real effects of the new national frameworks**. In particular, the regulators were asked to comment on a series of indicators which subsequently formed the basis of a questionnaire which they were asked to complete with data on the **state of their respective national telecommunications markets**.

The data provided by National Regulatory Authorities is set out in Annex III as a means of

- observing the **openness of the market, inter alia arising from the impact of the liberalisation and harmonisation measures** already transposed into national law;
- **establishing a ‘base line’** by which **progress in opening markets** as from the date of full liberalisation can be judged.

As far as the impact of the Community directives is concerned, the data is presented to take account of the fact that:

- | |
|---|
| <ul style="list-style-type: none">– On the one hand, liberalisation opens markets to competition, the presence of which is indicated by the number of operators, their market shares, the percentage of the national territory/population with a choice of operators, the level of tariffs, and so on.– On the other, the number of operators is influenced by the regulatory framework relating inter alia to the licensing process, the level of licence fees, the terms of interconnection, and so on. |
|---|

This first presentation of data is based on indicators which are relatively narrow, and attempts to mobilise data which the National Regulatory Authorities could reasonably be expected to have available at this early stage in the opening of markets. **It is intended to supplement these in subsequent communications to take account of the evolution of markets.**

It should be clear in this context that Annex III is not to be read as a comparison between Member States whose markets are **not comparable** by virtue of differences for example in the date laid down for full liberalisation.

5. Future reporting

The Commission will continue to monitor closely the status of implementation and the evolution of the telecommunications market in the Community. A further report will be issued in the middle of this year.

As far as the 1999 review of Community telecommunications legislation is concerned, the results of the ongoing monitoring exercise will be used in arriving at proposals for the revision of the package.

ANNEX I

ANNEX I : STATE OF IMPLEMENTATION OF LIBERALISATION DIRECTIVES (15.01.98)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Directive 90/388	✓	✓	✓	•	✓	✓	✓	✓	✓	✓	✓	•	✓	✓	✓
measures to liberalise non public voice	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
measures to liberalise provision of resale of leased lines capacity	✓	✓	✓	⇒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
measures to liberalise v.a.s. (calling card, internet, call back)	✓	✓	✓	•	✓	✓	✓	✓	✓	✓	✓	•	✓	✓	✓
number of authorisations ³	123	n.a.	>1100	95	>100	n.a.	>40	>350		>50	130	84	n.a.	32	n.a.
- level of fees published	n.a.	n.a. ²	Y	Y	Y	n.a.	Y	Y	N	Y	⇒	Y	n.a. ²	Y	n.a.
- an initial fee is to be paid	N	N	Y	Y	Y	N	Y	Y		Y	Y	Y	N	N	N
- an annual fee is to be paid	N	N	Y	Y	Y	N	N	Y		Y	N	Y	N	N	N

Directive 94/46	✓	✓	✓	•	✓	✓	•	✓	•	✓	✓	✓	✓	✓	✓
measures to liberalise satellite services	✓	✓	✓	•	✓	✓	•	✓	•	✓	✓	✓	✓	✓	✓
measures taken to allow bypassing national signatory Intelsat/Eutelsat	Y	N	Y	N	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
maximum legal duration of authorisation procedure :		n.a. ¹		O			O						n.a. ¹		
- VSAT	4w		6w		4m	6w		3m		6w	6m	6w			6w
- SNG	4w		2w		4m	2w		3m		2w	6m	6w			2w
- others	4w		6w		4m	4m				3m	6m	6w			
fees (excluding frequencies) :															
- published	Y	n.a.	Y	N	N/Y	Y	N	Y	N	Y	⇒	Y	n.a.	Y	Y
- an initial fee to be paid	Y	N	N	Y	Y	Y	Y	Y		Y	Y	Y	N	Y	Y
- an annual fee is to be paid	Y	N	Y	Y	Y	Y	Y	Y		N	N	Y	N	Y	Y
number of authorisations granted ³ :	335		50	1	11							7	n.a.		
- VSAT	177	13				41	0	46	0	30	8				17
- SNG	158	129				40	2	77	0	40					74
- others	0	13	3				0		2						90

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Directive 95/51	✓	✓	✓	O	✓	✓	✓	✓	•	✓	✓	✓	✓	✓	✓
measures to liberalise provision of telecom services using Cable TV networks	✓	✓	✓	⇒	✓	✓	✓	✓	•	✓	✓	✓	✓	✓	✓
introduction of															
- accounting separation	⇒	Y	Y	N	-	Y	Y	Y	n.a.	n.a.	Y	Y	Y	N	Y
- structural separation	N	N	Y	N	Y	N	-	N	Y	Y	Y	N	N	N	N
nb of authorisations granted ¹ :	3	n.a.		O	24		0	0	0	>125	10	0	200		141

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Directive 96/2	✓	✓	✓	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
notification of measures to liberalise provision of mobile and personal communication services	✓	✓	✓	⇒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Direct interconnection of mobile networks with mobile and PSTN in other MSs	✓	✓	✓	O	✓	✓	D 1.1.99	✓	✓	✓	✓	D 1.1.99	✓	✓	✓
Measures taken to ensure effective competition :															
- exclusion of GSM operators	Y	N	Y		N	Y	Y	N	N	Y	Y	N	N	N	Y
- mandatory roaming / GSM to DCS 1800 operators	N	Y	Y	N	⇒	N	N	Y	N	Y	Y	N	N	N	N
- others	Y		Y		N		N		N		N	N			N
nb of DCS 1800 licences granted ²	0	4	2	1	0	3	0	0	2	0	1	1	12	4	2

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Directive 96/19	✓	✓	✓	D	D	✓	D	✓	D	✓	✓	D	✓	✓	✓
Measures to liberalise:															
• alternative infrastructure	✓	✓	✓	⇒	✓	✓	✓	✓	•	✓	✓	•	✓	✓	✓
• public infrastructure	✓	✓	✓	D	D	✓	D	✓	D	•	✓	D	✓	✓	✓
				1.1.01	1.1.2.98		1.1.00		1.7.98			1.1.00			
• voice telephony	✓	✓	✓	D	D	✓	D	✓	D	✓	✓	D	✓	✓	✓
				1.1.01	1.1.2.98		1.1.00		1.7.98			1.1.00			
Nb of authorisations granted ³ excluding the incumbent(s)		n.a.													
• public infrastructure ⁴	9	3	64	0	10	18	3	0	0	3	7	0	12	31	173
- national coverage		2	6		1	4				2			6	7	32
- non national coverage		1	58		9	14				1			6	24	141
• voice telephony	3	5	45	D	10	12	D	0	D	7	7	D	32	22	173
- national coverage		4	13		1	4				2			17	13	32
- non national coverage		1	32		9	8				5			15	9	141
Maximum legal duration of procedure :	✓	n.a. ¹	✓	O/D	✓	O	⇒/D	✓	⇒	✓	✓	•	n.a. ¹	✓	✓
• public infrastructure ⁴	4m		6w	O	4m	4m	⇒	4/8m	4m	3m	6w	1m			5,5m
• voice telephony	4m		6w	D	4m	6w	D	4/8m	6w	2m	6w	1m		4m	5,5m
Fees : initial /annual published	✓	✓	✓	D	✓	✓	⇒	⇒	O	✓	⇒	•	✓	✓	✓
• public infrastructure ⁴	Y/Y	n.a	Y/N	D	Y/Y	Y/Y		Y/Y	Y/Y	Y/Y	N/N	•	n.a.	Y/Y	Y/Y
• voice telephony	Y/Y	Y/n.a	Y/N	D	Y/Y	Y/Y		Y/Y	Y/Y	Y/Y	Y/N	D	Y/Y	Y/Y	Y/Y
measures notified to liberalise provision of directories	✓	✓	✓	O	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Availability of numbers by 1.7.97:															
- fixed	✓	✓	✓	D	✓	✓	✓	✓	O	✓	✓	✓	✓	✓	✓
- mobile	✓	✓	✓	•	✓	✓	✓	✓	•	✓	✓	✓	✓	✓	✓
number portability in place	N	N	Y	N	N	Y	N	N	N	N	N	N	Y	N	Y
duct/facility sharing imposed	N/Y	Y/Y	Y/Y	N	Y/Y	N/Y	N	N/Y	N/Y	Y/Y	Y		Y/Y	N	N
Funding mechanism for USO	✓	n.a.	✓	D	⇒	✓	D	⇒	n.a.	⇒	✓	D	n.a.	n.a.	n.a.
- cost to be shared	n.a. until 1.1.00	n.a.	n.a.	D	D	✓	D	⇒	n.a.	n.a.	n.a.	D	n.a.	n.a.	n.a.
				1.1.01	1.1.2.98		1.1.00		n.a.			1.1.00			

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Tariff rebalancing - achieved by 1.1.98 - plans for phasing out - access deficit charge	N N N	Y n.a. N	Y n.a. N	D 1.1.01	D 1.12. 98	N Y Y 1.1.01	D 1.1.00	N N	D 1.7.98	N ⇒	Y n.a. N	D 1.1.00	Y n.a. N	Y n.a. N	Y n.a. N
Cost accounting system suitable for pricing i/c in place	•	✓	✓	O	•	✓	✓	✓	•	⇒	✓	•	✓	✓	✓
Methodology	Y	Y	Y	O	O	Y	Y	Y	O	Y	Y	O	Y	Y	Y ⁵
Reference Interconnection Offer published	✓	✓	✓	O	•	✓	✓	•	O	✓	✓	O	✓	✓	✓
• n. points of IC available:	75		38		50	1000				600	8				
- Local	15			10		48				20					26
- Transit	1					0				2	4				
- International															
• tariffs published:	✓	✓	✓	O	✓	✓	✓	✓ ⁶	O	✓	✓	O	✓	✓	✓
• differentiation between service and infrastructure providers	Y		N		⇒	Y			Y	N	N		N		Y
• advanced services offered	✓		✓		✓	✓				✓	✓				✓

✓ = substantially transposed / available

n.a. = not applicable

• = partially transposed / some provisions in place

Y : Yes

O = not transposed / not available

N : No

⇒ = draft measures notified

D = deferment granted

³ These figures were given by the Member States and do not distinguish between nation/non-national authorisation and the difference in the national licensing schemes.

² No authorisation required. However, applicants need to pay for frequencies and numbers.

¹ No authorisation required. However, applicants need to apply for frequencies and numbers.

⁴ Here "public infrastructure" includes both "alternative infrastructure" and the underlying infrastructure for the provision of voice telephony.

⁵ LRIC method already in place.

⁶ Not yet approved by the NRA.

ANNEX II

ANNEX II

Method of assessment

The Commission has, in arriving at its directive-by-directive assessment of transposition for each Member State, taken account of the key principles laid down in each directive, and limited itself to the following three categories:

- **“Substantially transposed”** means that it is considered that the major provisions and principles of the directive concerned are transposed, and therefore the legislation allows the implementation of the main objectives pursued by the Directives within the territory of the Member States. This is necessary for a proper assessment of the particularly complex rules in force, both at Community and national level, in the telecommunications field. The Commission nonetheless reserves the right to bring infringement proceedings where a subsequent examination shows that proper transposition or implementation is lacking
- **“Partially transposed”** means that it is considered that important principles have not been transposed, or that transposition of important principles is not in conformity with the package. Where draft measures have been examined in the context of this exercise, these are referred to, and a brief assessment of their conformity given. The Commission will bring proceedings where there is substantial delay in adopting the necessary measures;
- **“Not transposed”** means that no transposition measures have been notified to the Commission, or those notified do not transpose the principles of the directive. Draft measures are treated as above. The Commission will bring proceedings for failure to communicate measures, or where there is delay as referred to above.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES (31.1.1998)

	Directive	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	
Harmonisation	Framework 90/387/EEC, as amended by 97/51/EC	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	Leased lines 92/44/EEC, as amended by 97/51/EC	●	☐	☐	●	☐	☐	☐	☐	●	☐	☐	●	☐	☐	☐	
	Voice Telephony 95/62/EEC	●	☐	☐	☐	●	☐	☐	☐	●	☐	☐	●	☐	☐	☐	☐
	Licensing 97/13/EC	●	☐	☐	☐	☐	●	☐	☐	●	●	●	●	☐	☐	☐	☐
	Interconnection 97/33/EC	●	☐	☐	☐	☐	●	●	☐	●	●	●	☐	☐	☐	●	☐
	Terminals 91/263/EEC	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Terminals	Satellite 93/97/EEC	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	GSM 87/372/EEC	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Frequency allocation	ERMES 90/544/EEC	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	DECT 91/287/EEC	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Legend: ☐ Substantially transposed, ● Partially transposed, ☐ Not transposed.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: BELGIUM

- The new regulatory framework for telecommunications was adopted in December 1997 (Law amending the *Loi du 21 Mars 1991 portant réforme de certaines entreprises publiques économiques / Wet betreffende de hervorming van sommige economische overheidsbedrijven*). Secondary legislation has been passed in recent months and drafts are in the process of being adopted to complete the framework.
- **Framework Directive:** The Belgian NRA (*Institut Belge des services postaux et des télécommunications / Belgisch Instituut voor postdiensten en telecommunicatie, IBPT/BIPT*) has been operational for some years. The new Law has enhanced its competences, while leaving licensing powers to the Minister. Given the fact that responsibility both for the State shareholding in the former incumbent operator and for overall management of the regulatory body are vested in one and the same Ministry, the Commission will monitor the effective application of the requirement of structural separation between regulatory functions and activities associated with ownership and control set out by the Directive.
- **Leased lines:** General provisions are set out by the new Law, but substantial transposition will only be achieved by forthcoming secondary legislation. Outstanding issues relate mainly to cost accounting obligations, procedures to allow restrictions to access, and availability of information.
- **Voice telephony:** A number of principles are transposed by the new Law, but substantial transposition will only be achieved by forthcoming secondary legislation. Outstanding issues are cost accounting obligations and regulation on special access.
- **Licensing:** The directive is partially transposed by the new Law, which requires supplementing by secondary legislation. Drafts are in preparation concerning conditions and procedures for general authorisation and individual licences, and in some cases are at an advanced stage. Deficiencies in the Law or in the draft legislation examined by the Commission relate mainly to conditions and procedural aspects.
- **Interconnection:** The directive is partially transposed by the new Law and secondary legislation, with gaps concerning the principle of non discrimination, powers of the NRA concerning dispute resolution, and provisions on cost accounting. In addition, excessive obligations are imposed as regards cost orientation. Secondary legislation is in preparation to fill in some of these gaps, and amendments to the Law are also under consideration.
- **Terminals/ Satellite earth station equipment:** The Directive on terminal equipment was substantially transposed by Royal decree in November 1996. A draft decree concerning satellite earth station equipment is at an advanced stage and its adoption is announced for the first semester of 1998.
- **Frequencies:** The three Directives have been substantially transposed by Royal Decrees adopted in 1991 and 1992.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: DENMARK

- The Telecommunications Law (*Lov om visse forhold på telekommunikationsområdet*) as amended in 1996 and 1997, together with the 1996 Law on the obligation to provide telecommunications services (*Lov om forsyningspligt og visse forbrugerforhold inden for telesektoren*) and other specific laws and executive orders, provide the regulatory framework.
- **Framework Directive:** The independence of the regulatory authority (*Telestyrelsen*) from the former incumbent is established and its operational powers defined by the 1996 Laws.
- **Leased lines:** The directive has been substantially transposed by the Telecommunications Law and a series of laws and executive orders adopted in 1996 and 1997.
- **Voice Telephony:** The 1996 Law on the obligation to provide telecommunications services, together with executive orders adopted in 1996 and 1997, in particular that on interconnection agreements, substantially transpose the provisions of this Directive
- **Licensing:** The directive is substantially transposed and a system of class licences is laid down, whereby authorisations are required only where frequencies are to be used. The NRA lays down detailed rules for radio equipment and the use of frequency bands.
- **Interconnection:** The directive is substantially transposed by the specific legislation adopted in 1996 and 1997 on interconnection agreements.
- **Terminals/ Satellite earth station equipment:** These directives are substantially transposed by the Laws of 1992 respectively on telecommunications terminal equipment and on radiocommunications, a 1995 executive order on satellite earth station equipment, and a 1997 executive order on the construction and use of certain radio stations.
- **Frequencies:** Current national legislation ensuring substantial transposition is the 1997 Law on radiocommunications and assignment of radio frequencies and the 1997 executive order on the construction and use of certain radio stations. *Telestyrelsen* has also published the Danish Frequency Allocation Table.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: GERMANY

- Germany has adopted a telecommunications framework law, the *Telekommunikationsgesetz* (TKG), which entered into force on 1 August 1996. This is supplemented by a series of enabling regulations. In addition, more general provisions under the Constitution and under the law of competition, administrative procedure and contract apply.
- **Framework Directive:** A Regulatory Authority established under the TKG, the functions of which are separate from those of the former incumbent, began operation on 1 January 1998.
- **Leased Lines:** The Directive has been substantially transposed in particular by the TKG and the regulations on consumer protection (*Telekommunikations-Kundenschutzverordnung*), universal service (*Telekommunikations-Universaldienstleistungsverordnung*), and tariffs (*Telekommunikations-Entgeltregulierungsverordnung*).
- **Voice Telephony:** The Directive has been substantially transposed in particular by the TKG and the regulations on consumer protection, network access (*Netzzugangsverordnung*), and tariffs.
- **Licensing:** The Directive has been substantially transposed in particular by the TKG and the regulations on licence fees (*Telekommunikations-Lizenzgebührenverordnung*) and frequency fees (*Frequenzgebührenverordnung, Frequenznutzungsbeitragsverordnung*).
- **Interconnection:** The Directive has been substantially transposed in particular by the TKG and the regulations on network access, data protection, universal service and tariffs.
- **Terminals/ Satellite earth station equipment:** The Directives have been substantially transposed in particular by the TKG and the regulation on approvals (*Telekommunikations-Zulassungsverordnung*).
- **Frequencies:** The Directives on GSM, ERMES and DECT have been substantially transposed by a regulation on frequency allocation (*Frequenzzuteilungsverordnung*).

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: GREECE

- A review of the existing regulatory framework (*the Telecommunications Framework Law n. 2246/94*) has been started and the new Framework Law is expected to be adopted before Summer 1998.
- **Framework Directive:** An independent Regulatory Authority (*EET - National Telecommunications Commission*) was established by the framework law of 1994, becoming operational in the following years.
- **Leased lines:** The Directive has been partially transposed by *Presidential Decree n. 40/96*. Main outstanding issues are NRA powers, tariff principles and cost-accounting. New secondary legislation is being prepared.
- **Voice telephony:** The Greek authorities have not communicated measures transposing this Directive.
- **Licensing:** Greece has requested a deferment for implementation pursuant to Article 24 of the Directive. The remaining provisions of the Directive are not transposed.
- **Interconnection:** The Directive has not been transposed into national law. Concerns relate to the obligation to publish a reference interconnection offer for mobile and cross-border interconnection, and essential obligations concerning tariff principles, cost-accounting and numbering. Secondary legislation is under way.
- **Terminals/ Satellite earth station equipment:** At present there is no transposition of the satellite Directive, although assurances have been given that secondary legislation will be soon adopted by Presidential Decree. In relation to the terminals Directive, this has been substantially transposed by a Presidential Decree adopted in 1995 (*n. 424/95*).
- **Frequencies:** The Directives concerning frequencies in the GSM, DECT and ERMES bands are substantially transposed by a 1994 *Ministerial Decision (n. 58980/8-3-1994)*.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: SPAIN

- The Bill for a *Ley general de Telecomunicaciones* (Telecommunications Act) is now being discussed by the Parliament and is expected to be adopted before Easter. The current framework is based on the Law of 1987, which has been amended several times since 1992, the latest amendments being made by the Decree law (June 1996) and subsequent Act (April 1997) on Telecommunications liberalisation.
- **Framework Directive:** The regulatory functions are divided between the Minister for Development (*Fomento*) and the Commission for the Telecommunications Market (*Comisión del Mercado de las Telecomunicaciones*); the latter has been operational since 3 February 1997. Both are independent from the operators.
- **Leased lines:** This Directive has been substantially transposed by a Royal Decree of 1995, subject to the need to make good minor deficiencies.
- **Voice telephony:** Although transposition was improved by the adoption in December 1997 of the Regulation on voice telephony and bearer services, there are still deficiencies concerning a number of principles, including publication and access to information, compensation to users, special network access, provisions on tariffs, and publicity and elements of the cost accounting system.
- **Licensing:** Transposition of the main provisions of this Directive will be ensured once the new Act on Telecommunications is passed, although complete incorporation will require the adoption of secondary legislation.
- **Interconnection:** The situation is similar to that relating to the Licensing Directive, although some provisions on interconnection are already in place concerning the obligation to provide interconnection, tariff principles and some powers granted to the NRA. The national Numbering Plan was adopted in November 1997.
- **Terminals/ Satellite earth station equipment:** A Royal Decree adopted in July 1996 substantially transposes both Directives.
- **Frequencies:** Substantial transposition of the GSM, ERMES and DECT Directives was ensured by the Frequencies National Framework adopted in July 1996.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: FRANCE

- The regulatory framework is based on the *Loi de réglementation des télécommunications* (Telecommunications Act) of July 1996, together with secondary implementing legislation.
- **Framework Directive:** The regulatory functions are divided between the Minister responsible for Telecommunications and the Telecommunications Regulatory Authority (*Autorité de régulation des télécommunications*); the latter has been operational since 1 January 1997. Both are independent from the operators.
- **Leased lines:** The Directive was substantially transposed by a Decree of 1993, subject to the need to make good minor deficiencies.
- **Voice telephony:** Substantial transposition has been ensured mainly by the latest Act and by France Télécom's "*cahier des charges*" adopted in December 1996.
- **Licensing:** National measures concerning this Directive were laid down in the Act and the subsequent Decree on standard clauses, both adopted in 1996. There are, however, no provisions in place laying down administrative procedures for granting individual licences. Assurances have been given that further secondary legislation will be adopted by May 1998. As to conformity with Community law, the Commission is concerned about the licensing condition requiring financial contribution to research and training in the telecommunications sector.
- **Interconnection:** The provisions of the Act were supplemented by two Decrees on interconnection and universal service financing, which were adopted respectively in March and May 1997. In some cases national provisions impose obligations on all organisations irrespective of their market power. There is also concern in relation to the sufficiency of the NRA's powers. Furthermore, the Commission has concerns in relation to the contribution to universal service in 1997 and whether the burden on the organisation entrusted with the provision of universal service obligations is unfair.
- **Terminals/ Satellite earth station equipment:** Two Decrees adopted in February 1992 and April 1995 transpose substantially both Directives.
- **Frequencies:** Substantial transposition of the GSM, ERMES and DECT Directives was ensured by the Frequencies National Table adopted in December 1996.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: IRELAND

- The regulatory framework is laid down in the Postal and Telecommunications Services Act, 1983, as amended, and the Telecommunications (Miscellaneous Provisions) Act, 1996, and a number of statutory instruments.
- **Framework Directive**: An independent NRA (Director of Telecommunications Regulation) was created in December 1996 under the Telecommunications (Miscellaneous Provisions) Act, and has been operational since July 1997.
- **Leased Lines**: The Directive is substantially transposed through the European Communities (Application of Open Network Provisions to Leased Lines) Regulations. New secondary legislation is being prepared to complete minor aspects of the transposition (draft European Communities (Leased Lines) Regulations).
- **Voice Telephony**: The Directive is substantially transposed through the European Communities (Application of Open Network Provision to Voice Telephony) Regulations, adopted in October 1997.
- **Licensing**: The Directive remains to be transposed on the basis of the adoption of the draft European Communities (Telecommunications Licences) Regulations.
- **Interconnection**: The Directive is substantially transposed through the European Communities (Interconnection in Telecommunications) Regulations, adopted in January 1998.
- **Terminals/ Satellite earth station equipment**: The Terminal Directive is substantially transposed through the European Communities (Telecommunications Terminal Equipment) Regulations. No transposition has been carried out for the Satellite Directive, although draft regulations are in preparation.
- **Frequencies**: The GSM Directive is substantially transposed by the European Communities (Co-ordinated introduction of public pan-European cellular digital land-based mobile communications- GSM) Regulations. TheERMES Directive is substantially transposed by the European Communities (Pan-European land-based public radio paging service - ERMES) Regulations. The DECT Directive is substantially transposed by the European Communities (Digital European Cordless Telecommunications - DECT) Regulations.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: ITALY

- A new regulatory framework has been in place since September 1997 (*Regolamento per l'attuazione di direttive comunitarie nel settore delle telecomunicazioni* - Regulation for the implementation of Community Directives), the object of which is to transpose the main contents of the EC package. In November 1997 a ministerial decree was also adopted setting out licensing procedures (*Disposizioni per il rilascio delle licenze individuali nel settore delle telecomunicazioni*).
- A number of secondary measures are in preparation on licence fees, universal service financing scheme, interconnection agreements (drafts at an advanced stage in some cases).
- **Framework Directive:** An independent regulatory authority was established in 1997 (*Autorità per le Garanzie nelle Comunicazioni*), although it is not yet operational. A President has been appointed. In the meantime, the Ministry is empowered to continue to act as regulator.
- **Leased lines:** Substantial transposition has been achieved by national measures adopted in 1994, supplemented by the new Regulation. Legislative changes are under consideration in order to complete minor aspects of the transposition.
- **Voice telephony:** Transposition of the Directive has been substantially completed by the new Regulation. Minor inconsistencies identified in the transposition measure will be dealt with by forthcoming legislation.
- **Licensing:** National measures concerning this Directive are laid down by the new Regulation, as supplemented by the decree adopted in November 1997. As to conformity with Community law, the Commission has concerns relating to licensing conditions, in particular requiring financial contribution to research and development in the telecommunications sector and a bank bond. A draft decree concerning licence fees is in preparation.
- **Interconnection:** The Directive is partially transposed by the Regulation. The Commission's concerns relate to the lack of implementing measures on universal service contributions, interconnection and numbering and to the fact that the principle of non discrimination is not imposed sufficiently widely. Amendments to the Regulation are being considered to remove inconsistencies, while draft secondary implementing legislation is at an advanced stage.
- **Terminals/ Satellite earth station equipment:** Both Directives were substantially transposed by legislative decree in November 1996.
- **Frequencies:** The Directives have been substantially transposed by three Ministerial Decrees.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: LUXEMBOURG

- The regulatory framework is set out in the 1997 Telecommunications Act (*Loi du 21 mars 1997 sur les télécommunications*). Some secondary legislation has recently been adopted; other drafts are in preparation.
- **Framework Directive:** The regulator, the *Institut Luxembourgeois des Télécommunications* was created through the Act, and became operational in the summer of 1997. Given the fact that responsibility for the State shareholding in the former incumbent and control and supervision of ILT are vested in the same Ministry (the Ministry of Communications), the Commission will monitor the effective application of the requirement of structural separation between regulatory functions and activities associated with ownership and control set out by the Directive.
- **Leased Lines:** The Directive is partially transposed by the Act and secondary legislation recently adopted (*Règlement grand-ducal fixant les conditions du cahier des charges pour l'établissement et l'exploitation de réseaux fixes de télécommunications et de services de téléphonie*, and *Règlement grand-ducal fixant les conditions du cahier des charges pour l'établissement et l'exploitation de réseaux fixes de télécommunications*). Concern exists mainly in relation to cost-orientation and transparency of tariffs, the appropriateness of the accounting system, and lack of certain powers for ILT.
- **Voice telephony:** The Directive is partially transposed by the Act and secondary legislation adopted recently (*Règlement grand-ducal fixant les conditions du cahier des charges pour l'établissement et l'exploitation de réseaux fixes de télécommunications et de services de téléphonie*). Concern exists mainly on cost-orientation and transparency of tariffs, the appropriateness of the accounting system, and lack of certain powers for ILT. Some secondary legislation remains to be adopted.
- **Licensing:** The Directive is partially transposed through the Act and secondary legislation recently adopted. Some secondary legislation remains to be adopted.
- **Interconnection:** The Directive is partially transposed by the Act and secondary legislation adopted recently. Some of the transposing measures appear not to be in conformity with the requirements of the Directive, in particular as regards the powers of the Regulator. Some secondary legislation remains to be adopted.
- **Terminals/ Satellite earth station equipment:** The Directives are substantially transposed through a *Règlement grand-ducal relatif aux équipements terminaux de télécommunications et aux équipements de stations terrestres de communications par satellite, incluant la reconnaissance mutuelle de leur conformité*.
- **Frequencies:** The three Directives are substantially transposed through Ministerial Decisions on allocation of frequency bands and channels for the respective service.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: THE NETHERLANDS

- In 1996 legislation was passed to liberalise voice telephony as from 1 July 1997. A review of the existing regulatory framework (*Wet op telecommunicatievoorzieningen* - Telecommunications Act 1988, as amended several times) was started in 1997: a new Telecommunications Act (*Telecommunicatiewet*), the object of which is to transpose the main contents of the EC package, has been submitted to the Parliament and is expected to be adopted by March.
- Secondary legislation is also in the pipeline, the adoption of which should follow swiftly the entry into force of the new Act.
- **Framework Directive:** An independent Regulatory Authority (*Onafhankelijke post-en telecommunicatie autoriteit*, OPTA) was created in 1997 and is now operational.
- **Leased lines:** The Directive has been substantially transposed by secondary legislation (*Besluit algemene richtlijnen telecommunicatie*). The latter will be replaced by new legislation which is being prepared for the purpose of completing minor aspects of the transposition.
- **Voice telephony:** Transposition is substantially ensured by secondary legislation (*Besluit algemene richtlijnen telecommunicatie*). Implementation of the cost accounting system is expected to be completed by May 1998. Other minor problems will be solved by new legislation.
- **Licensing:** A framework for licensing is in place under the existing Telecommunications Act, as amended in 1996, by which the Directive is only partially transposed. Transposition should be substantially completed by the forthcoming Telecommunications Act, in conjunction with other general regulations (*Algemene wet bestuursrecht*).
- **Interconnection:** Some provisions on interconnection are already in place under the current Telecommunications Act. The Directive should be substantially transposed by the new Telecommunications Act, in conjunction with other general regulations (*Algemene wet bestuursrecht*).
- **Terminals/ Satellite earth station equipment:** National transposition measures for the two Directives were notified in December 1997.
- **Frequencies:** The Directives have been substantially transposed by Ministerial Orders.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: AUSTRIA

- Austria adopted in July 1997 a Telecommunications Law - *Telekommunikationsgesetz* (TKG) which entered into force on 1 August 1997. The Law constitutes a framework which has been supplemented by a number of secondary ordinances, in particular relating to interconnection, tariffs and numbering.
- **Framework Directive:** An independent Regulatory Authority (*Telekom Control*) is established under the Law and began operations on 1 November 1997.
- **Leased lines:** The Directive has been substantially transposed by the Law.
- **Voice telephony:** The Directive has been substantially transposed by the Law and secondary legislation, in particular the 1996 ordinance on tariffs (*Telekom-Tarifgestaltungsverordnung*) and the 1997 ordinance on numbering (*Numerierungsverordnung*).
- **Licensing:** The Directive has been partially transposed into national legislation; concerns remain in relation to certain procedures for the granting of licences.
- **Interconnection:** The Directive is substantially transposed on the basis of the Law and the ordinance on interconnection (*Zusammenschaltungsverordnung*). There are some minor concerns regarding number portability, which will be fully achieved in a few years, and the NRA power.
- **Terminals/ Satellite earth station equipment:** In relation to terminals, the Law and a specific ordinance (*Konformitätsbewertungsverordnung*) substantially transpose the Directive. New secondary legislation is being drafted. Concerning satellite earth station equipment, the Law extends the key provisions of the Terminal Equipment Directive to these systems.
- **Frequencies:** Core frequencies have been reserved for the GSM, ERMES and DECT systems under the *Frequenzwidmungsverordnung*. New frequency plans are being drafted.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: PORTUGAL

- The regulatory framework is set out in the *Lei que define as bases gerais a que obedece o estabelecimento, gestao e exploração de redes de telecomunicações e a prestação de serviços de telecomunicações* (Telecommunications Act) adopted in August 1997, together with secondary legislation transposing Community law.
- **Framework Directive:** The independent Portuguese NRA (*Instituto das Comunicações de Portugal*, ICP) began operation in November 1989.
- **Leased lines:** National measures, laid down mainly in a Decree-law of July 1994, transpose this Directive partially. Main gaps relate to information to be published, NRA powers on refusal, interruption or limitation of supply, tariffs and cost accounting.
- **Voice telephony:** Despite the adoption in September 1997 of the Decree-law on voice telephony, there are still gaps concerning publication of tariffs; verification, publicity and aspects of the cost accounting system; the numbering plan; and NRA powers.
- **Licensing:** This Directive was substantially transposed by a Decree-law of December 1997, subject to the need to make good minor deficiencies.
- **Interconnection:** No legislation aimed at transposing this Directive has been communicated. Assurances have been given that secondary legislation will be soon adopted.
- **Terminals/ Satellite earth station equipment:** Two Decree-laws adopted in June 1993 and August 1996 transpose substantially both Directives.
- **Frequencies:** Substantial transposition of these Directives was carried out in February 1994 by a decision of ICP's Board of Directors.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: FINLAND

- The Telecommunications Act 1987 was revised in 1997 in order to reflect market developments and to adapt Finnish legislation further to EU harmonisation requirements. The new law, the Telecommunications Market Act (*Telemarkkinalaki-Telemarknadslagen*) was adopted on 30 April 1997 and entered into force on 1 June 1997. The Act is supplemented by secondary legislation on specific matters.
- **Framework Directive**: The regulatory functions are divided between the Ministry of Transport and Communications (*Liikenneministeriö-Trafikministeriet*) and the Telecommunications Administration Centre (TAC) (*Telehallintokeskuksen-Teleförvaltningscentralen*). Independence of the regulatory function is enhanced by the revision of the allocation of tasks between the Ministry and the TAC which took place in 1997, and under formal guidelines from the Ministry.
- **Leased Lines**: The Directive is substantially transposed through the Telecommunications Market Act and other primary legislation, and a complex of secondary legislation.
- **Voice Telephony**: The Directive is similarly substantially transposed through the Telecommunications Market Act and other primary legislation, and a complex of secondary legislation.
- **Licensing/Interconnection**: The Directives are substantially transposed through a complex of primary and secondary legislation and the licences issued under the Act. A licence is needed only for constructing mobile networks.
- **Terminals/ Satellite earth station equipment**: The Terminal Directive is substantially transposed through the Telecommunications Act, the Radio Act and a regulation issued by the Telecommunications Administration Centre. The Satellite Directive is substantially transposed through the legislation on terminals, together with a regulation on the conformity assessment and markings of telecommunications terminal equipment and satellite earth station equipment.
- **Frequencies**: The GSM Directive is substantially transposed through the national frequency allocation table, and a decision regarding moving frequencies from NMT to GSM. The ERMES and DECT Directives are substantially transposed through the national frequency allocation table.

OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES: SWEDEN

- The Telecommunications Act 1993 (*Telelagen*) was amended in 1997 to take into account experience of the liberalised environment and new EC harmonisation requirements, and some new secondary legislation was adopted. The amended Act entered into force on 1 July 1997.
- **Framework Directive:** The Swedish telecommunications is supervised by an independent regulatory authority, the Post- and Telecommunications Agency (*Post- och Telestyrelsen*) (PTS). Ownership of the former incumbent, Telia, was in 1997 passed from the Ministry of Communications to the Ministry of Industry, to further mark the independence of the regulatory authority.
- **Leased lines:** The Directive is substantially transposed through a complex of primary and secondary legislation, and licence conditions. Primary legislation is being amended to complete minor aspects of the transposition.
- **Voice telephony:** The Directive is substantially transposed through a complex of primary and secondary legislation, licence conditions, and other measures adopted under the Act.
- **Licensing:** The Directive is substantially transposed through a complex of primary, secondary legislation and licence conditions.
- **Interconnection:** The Directive is partially transposed through a complex of primary, secondary legislation, and licence conditions. Concern relates mainly to the lack of provisions on the publication of the reference interconnection offer and the NRA's powers in relation thereto. Outstanding problems appear to be dealt with by forthcoming legislation and licence conditions.
- **Terminals/ Satellite earth station equipment:** The Directives are substantially transposed by the Telecommunications Terminal Equipment Act 1992, the Telecommunications Terminal Equipment Order, and Regulations issued by the NRA.
- **Frequencies:** The GSM, ERMES and DECT Directives are substantially transposed through a complex of secondary legislation and the national frequency allocation table.

**OVERVIEW OF TRANSPOSITION OF HARMONISATION DIRECTIVES:
UNITED KINGDOM**

- The telecommunications regulatory framework was reformed by the Telecommunications Acts 1981 and 1984.
- Three new Statutory Instruments were issued in December 1997, to bring UK legislation into line with the requirements of the Framework Directive, the Leased Lines Directive, the Licensing Directive and the Interconnection Directive. The Statutory Instruments amended in particular the 1984 Act, the Wireless Telegraphy Act of 1949, and certain licence conditions.
- **Framework Directive:** The regulatory functions are divided between the Department of Trade and Industry (DTI) and the Director General of Telecommunications (DGT), who heads the Office of Telecommunications (OFTEL), which are independent of the operator.
- **Leased lines:** The Telecommunications (Open Network Provision and Leased Lines) Regulations substantially transpose the Directive.
- **Voice telephony:** The Telecommunications (Voice Telephony) Regulations substantially transpose the directive.
- **Licensing:** The Telecommunications (Licensing) Regulations, together with a complex of other measures, substantially transpose the directive, notwithstanding a minor deficiency regarding procedural time-limits.
- **Interconnection:** The Telecommunications (Interconnection) Regulations substantially transpose the directive.
- **Terminals/ Satellite earth station equipment:** The Directives are substantially transposed through the Telecommunications Terminal Equipment Regulations 1992 and the Telecommunications Terminal Equipment (Amendment and Extension) Regulations 1994.
- **Frequencies:** The GSM Directive, the ERMES Directive and the DECT Directive are substantially transposed through the national table of radio frequency allocation.

ANNEX III

NATIONAL TELECOMMUNICATIONS MARKETS

The following tables present a selection of economic indicators providing a picture of the public (fixed and mobile) voice telephony and public network infrastructure markets in the Member States.

The following criteria have been used to identify the number of operators in each of the markets selected:

- ♦ in countries where a licensing or declaration regime is in place, the number of operators is shown according to the number of general authorisations or individual licences granted (including requests for blocks of numbers) or to the numbers of undertakings subject to declaration procedures. In such cases, the figures relate to the *potential competition* in each sub-market, rather than to the current level of competition, since it does not necessarily follow that all operators have actually entered the market;
- ♦ in those countries where no such declaration/licensing system exists, the number of operators reflects the totality of undertakings actually operating in the relevant sub-market.

Explanatory notes

Telecoms services market value: includes revenues for fixed and mobile telephone services, switched data, leased-line and CATV services.

Incumbent: means telecommunications organisations granted special and exclusive rights by Member States (Commission Directive 90/388/EEC of 28 June 1990) or public operator(s) which enjoyed a *de facto* monopoly before liberalisation. In the case of mobile telephony, the word 'incumbent' may refer to the subsidiary of the incumbent in the voice telephony market.

Public (fixed/mobile) voice telephony operators/service providers: operators which manage their own/third party (wire or wireless) telecommunications transmission network to provide (*fixed/mobile*) *voice telephony services* to the public at large.

Public network operator: operators which manage their own (wire or wireless) telecommunication transmission network to provide *telecommunications services* to the public at large (voice and non voice) or to provide *network services*. Network services (i.e. conveyance of calls, messages and signals over a telecommunication network, including any necessary switching) may be *network interconnection services*, which are provided to other network operators to enable calls and associated functions to be passed between interconnected networks, or *basic retail network services* which are provided to other customers such as end users or service providers.

Market shares for fixed/mobile voice telephony are indicated in term, respectively, of retail revenue (or operating income) and subscribers.

Percentage of consumers with choice of operators: percentage of national territory/population covered by two or more network operators/service providers.

Incumbent's voice telephony prices for 3 or 10 minute local/long-distance calls made at peak hours by residential users. Values include value added tax, without taking volume discounts into account.

Incumbent's analogue leased line prices: connection and rental charges (exclusive of value added tax) for ordinary-quality national analogue leased lines (M.1040 CCITT coefficient 1.00). Connection charges are for 2-wire circuits and represent the charge for both ends.

Incumbent's digital leased line prices: connection and rental charges for national high speed (2Mbit/s) leased national lines circuits, exclusive of value added tax.

Average time for granting individual licences: from the date of individual licence application

Long-distance/international carrier selection in place: this includes both call-by-call selection and carrier pre-selection (default carrier determined by the subscribers and call-by-call override selection).

NRA arbitrations: number of NRA interventions to resolve disputes during interconnection agreement negotiations.

Interconnection charges per minute (in Ecu/100) for call termination on fixed network, are based on a 3 minute call duration at peak rate as set out in the Commission Recommendation on Interconnection in a liberalised telecommunications market. Deviation from "best current practice" interconnection charges (identified by the above-mentioned Recommendation) for call termination on fixed network, based on a 3 minute call duration at peak rate:

- local level: between 0,6 and 1,0 Ecu/100 per minute;
- single transit (metropolitan level): between 0,9 and 1,8 Ecu/100;
- double transit (national level/more than 200 km.): between 1,5 and 2,6 Ecu/100.

Positive deviation is from the upper limit of the range.

Exchange rate to ECU at September 1997 is applied (for consistency with the "best current practice").

Sources: National Regulatory Authorities, except when explicitly indicated.

Other sources are:

- *European Economy, Annual Economic Report for 1997*, *European Commission* for per capita GDP at current market prices (PPS (purchasing power standard): theoretical prices expressed in equal standard purchasing power for each Member State)
- *European Information Technology Observatory 1997* for telecommunications services market value/growth

All figures relate to January 1998, except for market shares; "1997 mobile market share", if not explicitly indicated, refers to the third quarter of 1997.

The following exchange rates to ECU are applied (average at January 1998):

B: 40,78	DK: 7,53	D: 1,98	EL: 312	E: 167,32	F: 6,61	IRL: 0.77	I: 1940,65
L: 40,78	NL: 2,23	A: 13,9	P: 202,23	FIN: 5,99	S: 8,72	UK: 0.67	

BELGIUM

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	112,3	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	4080	
per capita telecoms expenditure (1997; ECU)	399	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	9,8 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	9,5	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	46,7	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS <i>(according to the licences granted)</i>		
Public fixed voice telephony	local / long distance/ international ¹	<ul style="list-style-type: none"> • incumbent: Belgacom S.A. (50,1% state-owned) 1997 market share: 100% • alternative operators: 3
Public mobile voice telephony	analogue	incumbent: Belgacom Mobile (75% Belgacom SA)
	GSM 900	<ul style="list-style-type: none"> • incumbent: Belgacom Mobile market share: • 1995: 100% • 1996: 85% • 1997: 70% • alternative operators: 1 (Mobistar) 1997 market share: 30%
	DCS 1800	no licences granted

PUBLIC NETWORK OPERATORS <i>(according to the licences granted)</i>	
local loop/ trunk / crossborder connections ¹	9 licensee operators + Belgacom <i>(3 CATV companies; 3(+Belgacom) fixed voice telephony licensee operators)</i>

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long distance: yes	• international: yes
number portability in place	no	
local/long-distance/ international calls	• territory: 0%	• population: 0%
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900	• territory: approx. 100%	• population: approx. 100%

INCUMBENT'S RETAIL PRICES			
Public fixed voice telephony (ECU/100)			
bi-monthly rental	3311		
local calls	• 3 minutes: 14,8	• 10 minutes: 49,4	
long-distance calls	• 3 minutes: 53,2	• 10 minutes: 178	
National leased-lines (ECU)			
analogue	• connection: 1146	• monthly rental 50 km: 267	• monthly rental 250 km: 944
digital	• connection: 2280	• monthly rental 50 km: 2790	• monthly rental 250 km: 5492

Incumbent's retail prices (cont.)			
International leased-lines (ECU)			
analogue	• connection: 774	• nearest EU: 956	• furthest EU: 1251
digital	• connection: 2281	• nearest EU: 11930	• furthest EU: 24492
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent		• national: 1 month	• international: 1 month

LICENCE FEES (according to the relevant draft legislation ²)	
Public fixed voice telephony licence fees (ECU)	
services	• up-front: 8582 • annual fees: 7356
infrastructure (public network)	• up-front: 12261 • annual fees: 8852
Public mobile telephone services licence fees	
analogue	no fees
GSM 900	• up-front: 220,693 MECU • annual fees: 245000 ECU • annual frequency fees: 24522 ECU per channel
DCS 1800	196,171 MECU
Average time for granting individual licences	120 days
Individual licence applications pending/refused	• pending: 0 • refused: 2 (<i>non valid files</i>)

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		2	
fixed-fixed		2 (<i>some new I/C agreements are being negotiated</i>)	
mobile-mobile		none	
NRA arbitration in place		none	
Access deficit charge to be paid to the incumbent		none	
Universal service contribution in place		none	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ³	local level	1,14	+14,0%
	single transit (<i>metropolitan</i>)	2,15	+19,4%
	double transit (<i>national</i>)	3,02	+16,1%
<i>mobile-fixed</i> networks I/C charges	local level	1,14	+14,0%
	single transit (<i>metropolitan</i>)	2,15	+19,4%
	double transit (<i>national</i>)	3,02	+16,1%
% difference between fixed-fixed and mobile-fixed I/C charges		local level/single/double transit: none	

¹ The licence system (for both services and infrastructures) does not differentiate between local, national and international licences.

² Reproduced by a temporary "Circulaire Ministériel".

³ In local currency (BEF): (1) local level: 0,457 per min.; (2) single transit: 0,86 per min.; (3) double transit: 1,207 per min.

DENMARK

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	115,5	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	2625	
per capita telecoms expenditure (1997; ECU)	498	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	8,6 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1996)	25	
telephone lines per 100 inhabitants (1996)	61,6	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS¹		
Public fixed voice telephony <i>(according to the interconnection agreements)</i>	local ²	<ul style="list-style-type: none"> • incumbent: Tele Danmark (52% state-owned) market share: • 1995: 100% • 1996: 100% • 1997: 95% • alternative operators: 5 (1 CATV) (2 companies are not operating) 1997 market share: 5%
	long distance ³	<ul style="list-style-type: none"> • incumbent: Tele Danmark market share: • 1995: 100% • 1996: 99% • 1997: 94% • alternative operators: 4 (2 companies are not operating) 1997 market share: 6%
	international	<ul style="list-style-type: none"> incumbent: Tele Danmark market share: • 1995: 100% • 1996: 98% • 1997: 90% • alternative operators: 4 (all companies operating) 1997 total alternative operators market share: 10%
Public mobile voice telephony <i>(according to the licences granted)</i>	analogue	incumbent: Tele Danmark Mobile (100% Tele Danmark subsidiary)
	GSM 900	<ul style="list-style-type: none"> • incumbent: Tele Danmark Mobile market share: • 1995: 50% • 1996: 50% • 1997: 50% • alternative operators: 2 Sonofon market share (1997): 50% <i>(Debitel is a service provider not yet operating)</i>
	DCS 1800	3 operators + Tele Danmark Mobile

PUBLIC NETWORK OPERATORS¹ <i>(according to the market situation)</i>	
local loop ⁴	Tele Danmark + 4 operators (1 CATV) (2 companies are not operating)
trunk connections	Tele Danmark + 2 operators
crossborder connections	Tele Danmark + 3 operators

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: yes	• international: yes
number portability in place	no	
local calls	• territory: 100%	• population: 100%
long-distance calls	• territory: 100%	• population: 100%
international calls	• territory: 100%	• population: 100%
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900	• territory: 100%	• population: 100%

INCUMBENT'S RETAIL PRICES		
Public fixed voice telephony⁵ (ECU/100)		
bi-monthly rental	2297	
local calls	• 3 minutes: 15,1	• 10 minutes: 46,6
long-distance calls	• 3 minutes: 23,5	• 10 minutes: 74,6
National leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 690	• monthly rental 50 km: 175 • monthly rental 250 km: 293
digital (2Mbit/s)	• connection: 4143	• monthly rental 50 km: 1940 • monthly rental 250 km: 3123
International leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 863	• nearest EU: 1726 • furthest EU: 5809
digital (2Mbit/s)	• connection: 5178	• nearest EU: 30540 • furthest EU: 88299
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent⁶	• national: 28 days	• international: 90 days

LICENCE FEES	
Public fixed voice telephony licence fees (ECU)	
services/infrastructure (public network)	up-front/annual fees: none
annual numbering fees	0,23 ECU per 8 digit number + code fee (unknown)
Public mobile telephone services licence fees (ECU)	
analogue	not available
GSM 900	• annual fees: 752 per duplex channel
DCS 1800	• annual fees: 488 per duplex channel
annual numbering fees (GSM900 and DCS1800)	0,23 ECU per 8 digit number + code fee (unknown)
Average time for granting individual licences	0 days
Individual licence applications pending/refused	• pending: none • refused: none

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		3	
fixed-fixed		9	
mobile-mobile		2	
NRA arbitration		3	
Access deficit charge to be paid to the incumbent		none	
Universal service contribution in place		none	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C ⁷ charges	local level	0,98	none
	single transit (<i>metropolitan</i>)	1,82	+1,1%
	double transit (<i>national</i>)	2,22	none
<i>mobile-fixed</i> networks I/C charges	local level	0,98	none
	single transit (<i>metropolitan</i>)	1,82	+1,1%
	double transit (<i>national</i>)	2,22	none
% difference between fixed-fixed and mobile-fixed I/C charges		local level/single/double transit: none	

¹ Providers of (fixed) telecommunications networks and services are not required to obtain individual licences, and do not need to notify or await any authorisation from the NRA before launching operations. Public voice telephony operators must apply to the NRA for number allocation; once it is obtained, they can provide local/long distance and international voice telephony services. For the time being, about 20 operators have been awarded numbers, but only 5 have an interconnection agreement in place (and 2 of them offer only international voice telephony). A separate licence is required for establishing and operating public mobile communications networks.

² Long distance voice service operators allowed to provide local voice services are included.

³ International voice service operators allowed to provide long distance voice services are included.

⁴ Trunk operators allowed to provide local loop are included

⁵ Tariffs are calculated as an average of the various local tariffs.

⁶ 1995 average.

⁷ In local currency (DKK/100): (1) local level: 7,3 per min.; (2) single transit: 13,6 per min.; (3) double transit: 16,6 per min.

GERMANY

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	108,8	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	36502	
per capita telecoms expenditure (1997; ECU)	445	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	5,9 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	9,9	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	55,1	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS <i>(according to the licences granted)</i>		
Public fixed voice telephony	local ¹	<ul style="list-style-type: none"> • incumbent: Deutsche Telekom AG (74% state-owned) 1997 market share: 100% • alternative operators: 43
	long distance	<ul style="list-style-type: none"> • incumbent: Deutsche Telekom 1997 market share: 100% • alternative operators: 13
	international	<ul style="list-style-type: none"> incumbent: Deutsche Telekom 1997 market share: 100% • alternative operators: 13
Public mobile voice telephony	analogue	• incumbent: T-Mobil (100% Deutsche Telekom subsidiary)
	GSM 900	<ul style="list-style-type: none"> • incumbent: T-Mobil market share² • 1995: 48% • 1996: 50% • 1997: 52% • alternative operators: 1 (Mannesmann Mobilfunk) 1997 market share²: 48%
	DCS 1800	<ul style="list-style-type: none"> 2 (E-Plus Mobilfunk and E2 Mobilfunk) E-Plus Mobilfunk 1997 market share: 100%

PUBLIC NETWORK OPERATORS <i>(according to the licences granted)</i>	
local loop ³	Deutsche Telekom + 57 network operators (23 (+D.T.) of which also have local voice licences)
trunk connections	Deutsche Telekom + 6 network operators (4 (+D.T.) of which also have long distance voice licences)
crossborder connections	Deutsche Telekom + 6 network operators

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: yes	• international: yes
number portability in place	yes	
local long-distance/international	• territory: not available	• population: not available
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900/DCS 1800	• territory: approx. 100%	• population: approx. 100%

INCUMBENT'S RETAIL PRICES		
Public fixed voice telephony (ECU/100)		
bi-monthly rental	2488	
local calls	• 3 minutes: 12,1	• 10 minutes: 42,5
long-distance calls	• 3 minutes: 91	• 10 minutes: 303
National leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 445	• monthly rental 50 km: 369
		• monthly rental 250 km: 546
digital (2Mbit/s)	• connection: 4047	• monthly rental 50 km: 2590
		• monthly rental 250 km: 3991
International leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 506	• nearest EU: 1260
		• furthest EU: 1497
digital (2Mbit/s)	• connection: 1451	• nearest EU: 16066
		• furthest EU: 20194
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national analogue: 3 months	• international: not available
	• national digital: 6 months	

LICENCE FEES		
Public fixed voice telephony licence fees (ECU)		
services up front fees	• local: 1012	• national: 1517600
infrastructure (public network) up front fees	• local: 1012	• national: 5362093
Public mobile telephone services licence fees (ECU)		
analogue/GSM 900/ DCS 1800 up-front fees	• 7588	• national: 2530000
Average time for granting individual licences	not available	
Individual licence applications pending/refused	• pending: not available	• refused: not available

PUBLIC NETWORK INTERCONNECTION				
Interconnection agreements				
fixed-mobile		3		
fixed-fixed		22		
mobile-mobile		not available		
NRA arbitration		4		
Access deficit charge to be paid to the incumbent		none		
Universal service contribution		none		
Interconnection charges		ECU/100 per min.	deviation from "best current practice"	
<i>fixed-fixed</i> networks I/C charges ⁴	local level		1,00	none
	single transit	regio50	1,71	none
		regio200	2,16	+20%
	double transit (<i>national</i>)		2,61	+0,4%
<i>mobile-fixed</i> networks I/C charges		local level/ single/double transit		not available

¹ Long distance voice service operators that provide local voice services are included.

² Source: *Mobile Communications guide to west European cellular subscribers*, Nov. 1997 and Sept. 1996.

³ Trunk operators that provide local loop are included.

⁴ In local currency (DM/100): (1) City: 1,97 per min.; (2) Regio50: 3,36 per min.; (3) Regio200: 4,25 per min.; (4) National: 5,14 per min.

GREECE

DEROGATIONS GRANTED FOR FULL LIBERALISATION

- | | |
|--|-----------------------------------|
| • public fixed voice telephony: 1.1.2001 | • public infrastructure: 1.1.2001 |
|--|-----------------------------------|

TELECOMMUNICATIONS MARKET

per capita 1997 GDP at current market prices (PPS)	64,6	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	2243	
per capita telecoms expenditure (1997; ECU)	212	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	8,8 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	7,3	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	57	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS

(according to the licences granted)

Public fixed voice telephony	local/ long distance/ international	<ul style="list-style-type: none"> • incumbent: OTE (82% state-owned) 1997 market share: 100% • alternative operators: 0 <i>(derogation granted)</i>
Public mobile voice telephony	analogue	no licences granted
	GSM 900	<ul style="list-style-type: none"> • incumbent: none • alternative operators: 2 <ul style="list-style-type: none"> ◊ Panafon 1997 market share: 57% ◊ Telestet 1997 market share: 43%
	DCS 1800	Cosmote <i>(70% OTE)</i>

PUBLIC NETWORK OPERATORS

local loop/ trunk/ crossborder connections	OTE <i>(derogation granted)</i>
--	---------------------------------

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION

Public fixed voice telephony *(derogation granted)*

carrier selection in place	• long-distance: no	• international: no
number portability in place	no	
local/long distance/international calls	territory/population: 0%	

Public mobile voice telephony

analogue	no licences	
GSM 900	• territory: approx. 70% of road network	• population: approx. 90%

INCUMBENT'S RETAIL PRICES	
Public fixed voice telephony (ECU/100)	
bi-monthly rental	657
local calls	• 3 minutes: 4,17 • 10 minutes: 4,17
long-distance calls	• 3 minutes: not available • 10 minutes: not available
National leased-lines (ECU)	
analogue (3,1 kHz)	• connection: 577 • monthly rental 50 km: 351 • monthly rental 250 km: 633
digital (2Mbit/s)	• connection: 2385 • monthly rental 50 km: 3367 • monthly rental 250 km: 5993
International leased-lines (ECU)	
analogue (3,1 kHz)	• connection: 641 • nearest EU: 1474 • furthest EU: 1474
digital (2Mbit/s)	• connection: 1122 • nearest EU: 28846 • furthest EU: 28846
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• analogue (national/ international): 2-3 months • digital (national/international): 10 months

LICENCE FEES	
Public fixed voice telephony licence fees (ECU)	
services/ infrastructure (public network)	annual OTE fees: [3,205 MECU + 0,025%(annual turnover-1,602 MECU)]
Public mobile telephone services licence fees (ECU)	
analogue	no licences granted
GSM 900	• up-front fees: 116 MECU • annual fees: [1,603 MECU + 0,02%(annual turnover-320510 ECU)]
DCS 1800	• up-front: 45,8 MECU • annual fees ¹ : 335220
Average time for granting individual licences	6 months
Individual licence applications pending/refused	• pending: none • refused: none

PUBLIC NETWORK INTERCONNECTION	
Interconnection agreements	
fixed-mobile	2 (<i>under negotiation</i>)
fixed-fixed	0
mobile-mobile	1
NRA arbitration	1
Access deficit charge to be paid to the incumbent	not yet decided
Universal service contribution in place	not yet decided
Interconnection charges	
<i>fixed-fixed</i> networks I/C charges	not yet decided
<i>mobile-fixed</i> networks I/C charges	under negotiation

¹ Figure for 1996 subject to annual revision.

SPAIN

DEROGATIONS GRANTED FOR FULL LIBERALISATION

- | | |
|--|---|
| • public infrastructure for voice telephony: 1.12.1998 | • public fixed voice telephony: 1.12.1998 |
|--|---|

TELECOMMUNICATIONS MARKET

per capita 1997 GDP at current market prices (PPS)	76,9	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	10585	
per capita telecoms expenditure (1997; ECU)	269	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	8,6 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	11	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	40,75	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS

(according to the licences granted)

Public fixed voice telephony	local/regional ¹	<ul style="list-style-type: none"> • incumbent: Telefónica de España S.A. (0.1% state-owned) market share (1997): 100% • alternative operators: 10 (<i>Retevisión + 9 CATV operators</i>) <i>(companies not yet operating)</i>
	long distance/international	<ul style="list-style-type: none"> • incumbent: Telefónica de España S.A. 1997 market share: 100% • alternative operators: 10 (<i>Retevisión + 9 CATV operators</i>) <i>(CATV operators, not yet operating)</i>
Public mobile voice telephony	analogue	incumbent: Telefónica Móviles (100% Telefónica de España subsidiary)
	GSM 900	<ul style="list-style-type: none"> • incumbent: Telefónica Móviles market share: •1995: 100% •1996: 61% •1997: 64% • alternative operators: 1 (<i>Airtel</i>) 1997 market share: 36%
	DCS 1800	no licences granted

PUBLIC NETWORK OPERATORS

(according to the licences granted)

local loop	Telefónica de España + 9 CATV operators + Retevisión <i>(alternative operators not yet operating)</i>
trunk/ crossborder connections	Telefónica de España + 9 CATV operators + Retevisión <i>(CATV operators are not yet operating)</i>

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: yes	• international: yes
number portability in place	no	
local calls/ long-distance/ international calls	territory/population: major Spanish cities	
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900	• territory: 65%	• population: 93%

INCUMBENT'S RETAIL PRICES		
Public fixed voice telephony (ECU/100)		
bi-monthly rental	1722	
local calls ²	• 3 minutes: 7,9	• 10 minutes: 19,8
long-distance calls	• 3 minutes: 102,7	• 10 minutes: 308,2
National leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 659	• monthly rental 50 km: 471 • monthly rental 250 km: 794
digital (2Mbit/s)	• connection: 6574	• monthly rental 50 km: 3852 • monthly rental 250 km: 7765
International leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 448	• nearest EU: 867 • furthest EU: 1256
digital (2Mbit/s)	• connection: 2988	• nearest EU: 21291 • furthest EU: 27079
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national: 15 days	• international: 40 days

LICENCE FEES		
Public fixed voice telephony licence fees		
services/ infrastructure (public network)	• up-front fees: not available • annual fees: 1/∞ of annual turnover	
Public mobile telephone services licence fees (ECU)		
analogue	• annual frequencies fees: 8,307 MECU	• annual fees: 1/∞ of annual turnover
GSM 900	• annual frequencies fees: 2,636 MECU	• annual fees: 1/∞ of annual turnover
Average time for granting individual licences	2,5 months	
Number of individual licence applications pending/refused	• pending: 5 (satellite)	• refused: none

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		2 (under negotiation)	
fixed-fixed		1	
mobile-mobile		1	
NRA arbitration		none	
Access deficit charge to be paid to the incumbent		not yet decided	
Universal service contribution in place		not yet decided	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ⁴	local level ³	1,51	+51%
	single transit (<i>metropolitan</i>)	1,51	none
	double transit (<i>interprovinc.</i>)	4,22	+62%
<i>mobile-fixed</i> networks I/C charges ⁵	local level	not available	-
	single transit (<i>metropolitan</i>)	not available	-
	double transit (<i>interprovinc.</i>)	13,2	+408%
% difference between fixed-fixed and mobile-fixed I/C charges			double transit: +213%

¹ Long distance voice service operators allowed to provide local voice services are included.

² Interprovincial calls. Lower tariffs are available for provincial calls.

³ The lowest I/C charge covers interconnection at a local or a tandem exchange. Thus the "local" rate is the same as the "single transit" rate.

⁴ Reference interconnection offer is not yet approved by the NRA; maximum I/C tariffs are established by "Orden del Ministerio de Fomento" of 18 March 1997. No difference between local level and single transit: both correspond to the denomination of "metropolitan" interconnection charges. I/C charges in local currency (Pts): (1) local level: not provided; (2) metropolitan: 2,5 per min.; (3) provincial: 4,25 per min.; (4) interprovincial: 7 per min. Until full liberalisation on 1 December 1998, this offer is only valid for a limited number of authorised operators.

⁵ Tariffs are being negotiated. In local currency (Pts): (1) local level: not provided; (2) metropolitan: not provided.; (3) provincial: 9,5 per min.; (4) interprovincial: 22 per min.

FRANCE

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	105,9	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	24093	
per capita telecoms expenditure (1997; ECU)	411	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	7,4 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	10,1	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	57,2	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS <i>(according to the licences granted)</i>		
Public fixed voice telephony	local ¹	<ul style="list-style-type: none"> • incumbent: France Telecom (75% state-owned) 1997 market share: 100% • alternative operators: 12
	long distance	<ul style="list-style-type: none"> • incumbent: France Telecom 1997 market share: 100% • alternative operators: 4
	international ¹	<ul style="list-style-type: none"> • incumbent: France Telecom market share: • 1996: 100% • 1997: not available • alternative operators: 4
Public mobile voice telephony	analogue	<ul style="list-style-type: none"> • incumbent: France Telecom Mobile (100% France Telecom subsidiary) 1997 market share: 36% • alternative operators: 1 (Société Française de Radiocommunications (SFR)) 1997 market share: 64%
	GSM 900	<ul style="list-style-type: none"> • incumbent: France Telecom Mobile (FTM) • alternative operators: ◊ national: 1 (SFR) ◊ local: 2 (FTM and SRR)
	DCS 1800	<ul style="list-style-type: none"> • national: 1 licence (Bouygues Telecom) • local: 2 licences (FTM and SFR)
	digital mobile market share (GSM900+DCS1800)	<ul style="list-style-type: none"> • France Telecom Mobile: 53% • SFR: 38% • Bouygues: 9%

PUBLIC NETWORK OPERATORS <i>(according to the licences granted)</i>	
local loop ²	France Telecom +14 (12 of which also have voice telephony licences)
trunk connections	France Telecom + 5 (4 of which also have voice telephony licences)
crossborder connections ²	France Telecom +6 (4 of which also have voice telephony licences)

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: yes	• international: yes
number portability in place	yes	
local calls/ long-distance	• territory: 0%	• households: 0%
international calls	• territory: not available	• households: not available
Public mobile voice telephony		
analogue/ GSM 900	• territory: 85%	• population: 98%
DCS 1800	• territory: 47%	• population: 82%

INCUMBENT'S RETAIL PRICES		
Public fixed voice telephony (ECU/100)		
bi-monthly rental	2056	
local calls	• 3 minutes: 11,2	• 10 minutes: 25,7
long-distance calls	• 3 minutes: 51,7	• 10 minutes: 172,4
National leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 605	• monthly rental ³ 50 km: 485
		• monthly rental 250 km: 697
digital (2Mbit/s)	• connection: 9072	• monthly rental 50 km: 2283
		• monthly rental 250 km: 4702
International leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 340	• nearest EU: 624
		• furthest EU: 760
digital (2Mbit/s)	• connection: 3629	• nearest EU: 11914
		• furthest EU: 14138
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national: not available	• international: 3 months

LICENCE FEES			
Public fixed/mobile voice telephony licence fees (ECU)			
services (annual fees)	oper. with significant market power	• local: 30241	• national: 453618
	other operators	• local: 15120	• national: 226810
infrastructure (annual fees)	oper. with significant market power	• local: 30241	• national: 1,068 MECU
	other operators	• local: 15120	• national: 529221
administrative fees	fixed telephony	services	• local: 7560
		infrastructure	• local: 7560
	mobile telephony	services	• local: not available
		infrastructure	• local: 15121
Average time for granting individual licences		• pending: 24	• refused: not available
Individual licence applications pending/refused		• not available	• not available

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile/ fixed-fixed/mobile-mobile		not available	
NRA arbitration		not available	
Access deficit charge to be paid to the incumbent + universal service contribution in place		<ul style="list-style-type: none"> • 0,27 ECU/100 per min. for fixed operators • 0.15 ECU/100 per min. for mobile operators 	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ⁴	local level	0,71	none
	single transit (<i>metropolitan</i>)	1,73	none
	double transit (<i>national</i>)	2,55	none
<i>mobile-fixed</i> networks I/C charges ⁵	local level/single/double	0,71	none
	transit (<i>metropolitan</i>)	1,73	none
	transit (<i>national</i>)	2,55	none
% difference between fixed-fixed and mobile-fixed I/C charges			local /single/ double transit: none

¹ Long distance voice service operators allowed to provide local/international voice services are included.

² Four trunk operators allowed to provide local loop are included.

³ Tariffs for 250 km distance from the border.

⁴ In local currency (FF/100): (1) local level: 4,69 per min.; (2) single transit: 11,40 per min.; (3) double transit (>200km): 16,77 per min.

⁵ Source: *Reference interconnection catalogue, France Telecom, 1997.*

IRELAND

DEROGATIONS GRANTED FOR FULL LIBERALISATION

- | | |
|---|--|
| • public infrastructure for voice telephony: 1.1.2000 | • public fixed voice telephony: 1.1.2000 |
|---|--|

TELECOMMUNICATIONS MARKET

per capita 1997 GDP at current market prices (PPS)	103,9	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	1585	
per capita telecoms expenditure (1997; ECU)	438	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	9,5 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	11,3	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	38,4	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS

Public fixed voice telephony	local/ long distance/ international	<ul style="list-style-type: none"> • incumbent: Telecom Eireann (80% state-owned) market share: 1997: 100% • alternative operators: none <i>(derogation granted)</i>
Public mobile voice telephony	analogue	incumbent: Eircell <i>(100% Telecom Eireann subsidiary)</i>
	GSM 900	<ul style="list-style-type: none"> • incumbent: Eircell market share: •1996: 100% •1997¹: 72% • alternative operators: 1 (Esat Digifone) 1997 market share¹ 28%
	DCS 1800	no licences granted

PUBLIC NETWORK OPERATORS

local loop/ trunk/ crossborder connections	Telecom Eireann <i>(derogation granted)</i>
---	---

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION

Public fixed voice telephony <i>(derogation granted)</i>		
carrier selection in place	• long-distance: no	• international: no
number portability in place	no	
local/long distance/international calls	territory/population: 0%	
Public mobile voice telephony		
analogue	0%	
GSM 900	• territory: approx. 100%	• population: approx. 100%

INCUMBENT'S RETAIL PRICES

Public fixed voice telephony (ECU/100)		
bi-monthly rental	2916	
local calls	• 3 minutes: 14,9	• 10 minutes: 45,7
long-distance calls	• 3 minutes: 58,2	• 10 minutes: 194

Incumbent's retail prices (cont.)			
National leased-lines (ECU)			
analogue (3,1 kHz)	• connection: 389	• monthly rental 50 km: 427	• monthly rental 250 km: 772
digital (2Mbit/s)	• connection: 6480	• monthly rental 50 km: 3200	• monthly rental 250 km: 5965
International leased-lines (ECU)			
analogue (3,1 kHz)	• connection: 389	• nearest EU: 1685	• furthest EU: 2916
digital (2Mbit/s)	• connection: 6480	• nearest EU: 23976	• furthest EU: 28512
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent		• national: not available	• international: not available

LICENCE FEES	
Public fixed voice telephony licence fees	
services/ infrastructure (public network)	not yet decided
Public mobile telephone services licence fees (ECU)	
analogue	no fees
GSM 900	• annual spectrum fees ² : ◊ first two years: 12961 ◊ after the second year: 25920
DCS 1800	• up front: 1,944 MECU • annual spectrum fees ² : 25920 (after the second year) • spectrum access charge (up-front): the applicants are free to offer any figure up to and including an amount of 12,96 MECU
Average time for granting individual licences	not available
Individual licence applications pending/refused	• pending: not available • refused: not available

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		2	
fixed-fixed		none	
mobile-mobile		none (1 I/C agreement is being negotiated)	
NRA arbitration		none	
Access deficit charge to be paid to the incumbent		not yet decided	
Universal service contribution in place		not yet decided	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ³	local level	7	+600%
	single transit (<i>metropolitan</i>)	13,3	+638%
	double transit (<i>national</i>)	16,6	+537%
<i>mobile-fixed</i> networks I/C charges	local level	7	+600%
	single transit (<i>metropolitan</i>)	13,3	+638%
	double transit (<i>national</i>)	16,6	+537%
% difference between fixed-fixed and mobile-fixed I/C charges			local level/single/double transit: none

¹ Source: *Mobile Communications guide to west European cellular subscribers*, Nov. 1997.

² Per paired 200kHz channel

³ Charges for cross-border call termination. Tariffs proposed by the operator, but not yet approved by the national regulatory authority. In local currency (IR£/100): (1) local level: 5,22 per min.; (2) single transit: 9,84 per min.; (3) double transit: 12,27 per min.

ITALY

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	103,2	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	18884	
per capita telecoms expenditure (1997; ECU)	329	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	7,1 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	16,2	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	42,68	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS <i>(according to the licences granted)</i>		
Public fixed voice telephony	local/ long distance/ international	<ul style="list-style-type: none"> • incumbent: Telecom Italia (9,45% state-owned) 1997 market share: 100% • alternative operators: 0 <i>(no licences granted)</i>
	analogue	incumbent: Telecom Italia Mobile <i>(60,34% Telecom Italia)</i>
Public mobile voice telephony	GSM 900	<ul style="list-style-type: none"> • incumbent: Telecom Italia Mobile market share: • 1995: 90% • 1996: 74% • 1997: 71% • alternative operators: 1 (Omnitel P.I.) 1997 market share: 29%
	DCS 1800	no licences granted

PUBLIC NETWORK OPERATORS <i>(according to the licences granted)</i>	
local loop/trunk/ crossborder connections	Telecom Italia + 0 alternative operators <i>(no licences granted)</i>

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
local/long distance/international	• territory: 0%	• population: 0%
carrier selection in place	• national: no	• international: no
number portability in place	no	
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900	• territory: 72%	• population: 96%

INCUMBENT'S RETAIL PRICES	
Public fixed voice telephony (ECU/100)	
bi-monthly rental	1892
local calls	• 3 minutes: 7,8 • 10 minutes: 23,6
long-distance calls	• 3 minutes: 70,7 • 10 minutes: 217,3
National leased-lines (ECU)	
analogue (3,1 kHz)	• connection: 104 • monthly rental 50 km: 475 • monthly rental 250 km: 667
digital (2Mbit/s)	• connection: 309 • monthly rental 50 km: 7224 • monthly rental 250 km: 11295
International leased-lines (ECU)	
analogue (3,1 kHz)	• connection: 104 • nearest EU: 1594 • furthest EU: 1867
digital (2Mbit/s)	• connection: 309 • nearest EU: 32441 • furthest EU: 36797
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national: 89% in 20 days or within the terms accorded with the clients • international: not available

LICENCE FEES <i>(according to the draft legislation)</i>				
Public fixed voice telephony licence fees (ECU)				
		local	regional	national
services	up-front	10306	20612	51530
	annual	10306	25766	61835
infrastructure (public network)	up-front	10306	20612	61835
	annual	25766	51530	103058
services + infrastructure	up-front	15459	25766	56682
	annual	10306	25766	61835
numbering fees		• subscriber's number: 0,01ECU/sub. • operator's prefix ¹ : from 103058 to 25766		
Public mobile telephone services licence fees (ECU)				
analogue	annual fees: 3,5% of annual turnover			
GSM 900	• up-front: not available		• annual fees: 3,5% of annual turnover	
DCS 1800	same fees as for fixed voice telephony, unless differently stated in the bidding procedures			
Average time for granting individual licences			not available	
Individual licence applications pending/refused			• pending: 5 • refused: none	

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		2	
fixed-fixed		0	
mobile-mobile		1	
NRA arbitration		2	
Access deficit charge to be paid to the incumbent		not yet decided	
Universal service contribution in place		not yet decided	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ³	local level ²	1,54	+54%
	single transit (<i>metropolitan</i>)	2,52	+40%
	double transit (<i>national</i>)	not provided	-
<i>mobile-fixed</i> networks I/C charges ⁴	local level	4,12	+312%
	single transit (<i>metropolitan</i>)	4,12	+129%
	double transit (<i>national</i>)	4,12	+58%
% difference between fixed-fixed and mobile-fixed I/C charges		<ul style="list-style-type: none"> • local level: +167% • single transit: +63% 	

¹ Depending on the type of access code.

² Available only from 1.9.1998

³ Source: *Reference Interconnection Offer, Telecom Italia, 1997*. Latest tariffs proposed by the operator, but not yet approved by the national regulatory authority. In local currency (LIT): (1) local level (only from 1.9.1998): 29,6 per min.; (2) single transit: 48,4 per min.; (3) double transit: not provided.

⁴ In local currency (LIT): local/single/double transit: 80 per min.

LUXEMBOURG

DEROGATIONS GRANTED FOR FULL LIBERALISATION

- | | |
|---|--|
| • public infrastructure for voice telephony: 1.7.1998 | • public fixed voice telephony: 1.7.1998 |
|---|--|

TELECOMMUNICATIONS MARKET

per capita 1997 GDP at current market prices (PPS)	163,5	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	211	
per capita telecoms expenditure (1997; ECU)	505	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	9,9 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	15,1	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	58,3	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS

Public fixed voice telephony	local/ long distance ^{1/} / international	<ul style="list-style-type: none"> • incumbent: Luxembourg P&T (100% state-owned) 1997 market share: 100% • alternative operators: none (<i>derogation granted</i>)
Public mobile voice telephony	analogue	none (<i>service no longer provided by P&T</i>)
	GSM 900	<ul style="list-style-type: none"> • incumbent: Luxembourg P&T 1997 market share: 100% • alternative operators: 1 (Millicon)
	DCS 1800	Luxembourg P&T+ Millicon

PUBLIC NETWORK OPERATORS

local loop/trunk/ crossborder connections	Luxembourg P&T (<i>derogation granted</i>)
--	--

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION

Public fixed voice telephony	
carrier selection in place	no
number portability in place	no
local/long distance/international calls	territory/population: 0%
Public mobile voice telephony	
analogue	service no longer provided (by P&T)
GSM 900/DCS 1800	territory/population: 0% (<i>alternative operator not yet operating</i>)

INCUMBENT'S RETAIL PRICES	
Public fixed voice telephony (ECU/100)	
bi-monthly rental	2707
local/long distance calls	• 3 minutes: 12,3 • 10 minutes: 36,9
National leased-lines (ECU)	
analogue (3,1 kHz)	• connection: 123 • monthly rental 50 km: 184 • monthly rental 250 km: 184
digital (2Mbit/s)	• connection: 2943 • monthly rental 50 km: 5100 • monthly rental 250 km: 5100
International leased-lines (ECU)	
analogue (3,1 kHz)	• connection: 123 • nearest EU: 294 • furthest EU: 846
digital (2Mbit/s)	• connection: 2943 • nearest EU: 9809 • furthest EU: 24521
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national: 10 (for analogue) 20 (for digital) working days • international: 20 (analogue/digital) working days

LICENCE FEES	
Public fixed voice telephony licence fees	
services/infrastructure	not yet decided
Public mobile telephone services licence fees (ECU).	
GSM 900/ DCS 1800	• up-front: 1,839 MECU • annual fees: 735644 • annual spectrum usage: 12261 per channel
Average time for granting individual licences	not available
Individual licence applications pending/refused	• pending: none • refused: none

PUBLIC NETWORK INTERCONNECTION	
Interconnection agreements	
fixed-mobile/ fixed-fixed/ mobile-mobile	0 (<i>1 I/C agreement is being negotiated</i>)
NRA arbitration	not available
Access deficit charge to be paid to the incumbent	not yet decided
Universal service contribution in place	not yet decided
Interconnection charges	
<i>fixed-fixed/ mobile -fixed networks I/C charges</i>	under negotiation

¹ Luxembourg does not have a local network.

THE NETHERLANDS

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	104,9	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	7089	
per capita telecoms expenditure (1997; ECU)	454	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	6,7 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	9,9	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	52,3	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS <i>(according to the licences granted)</i>		
Public fixed voice telephony	local ¹	<ul style="list-style-type: none"> • incumbent: PTT Telecom (KPN) (44% state-owned) 1997 market share: 100% • alternative operators: 3 <i>(not yet operating)</i> + 125 CATV <i>(5 of which have I/C agreements in place)</i>
	long distance	<ul style="list-style-type: none"> • incumbent: PTT Telecom 1997 market share: 100% • alternative operators: 2
	international	<ul style="list-style-type: none"> • incumbent: PTT Telecom market share: •1996:100% •1997: <100% • alternative operators: 2
Public mobile voice telephony	analogue	incumbent: PTT Telecom
	GSM 900	<ul style="list-style-type: none"> • incumbent: PTT Telecom 1997 market share: 60% • alternative operators: 1 (Libertel) 1997 market share: 40%
	DCS 1800	no licences granted

PUBLIC NETWORK OPERATORS <i>(according to the licences granted)</i>	
local loop ²	PTT Telecom + 3 + 125 CATV <i>(5 of which have I/C agreements in place)</i> <i>(all the network operators have been granted voice telephony licences)</i>
trunk/ crossborder connections	PTT Telecom + 2 <i>(voice telephony licensee operators)</i>

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: yes	• international: yes
number portability in place	no	
local/long-distance/international calls	• territory: not available	• population: not available
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900	• territory: approx. 100%	• population: approx. 100%

INCUMBENT'S RETAIL PRICES			
Public fixed voice telephony (ECU/100)			
bi-monthly rental	2442		
local calls	• 3 minutes: 13,2	• 10 minutes: 33,7	
long-distance calls	• 3 minutes: 31,4	• 10 minutes: 94,3	
National leased-lines (ECU)			
analogue (3,1 kHz)	• connection: 105	• monthly rental 50 km: 125	• monthly rental 250 km: 283
digital (2Mbit/s)	• connection: 2244	• monthly rental 50 km: 2199	• monthly rental 250 km: 3775
International leased-lines (ECU)			
analogue (3,1 kHz)	• connection: 105	• nearest EU: 507	• furthest EU: 664
digital (2Mbit/s)	• connection: 2244	• nearest EU: 9170	• furthest EU: 11895
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent		• national: within 3 months	• international: within 3 months

LICENCE FEES			
Public fixed voice telephony licence fees (ECU)			
services		• up-front: 135	• annual fees: 281
infrastructure (public network)	local/regional	• up-front: 90	• annual fees: 224
	long distance	• up-front: 0	• annual fees: 112212
Public mobile telephone services licence fees (ECU)			
analogue		annual fees: 10100	
GSM 900/DCS 1800		annual fees: 112212	
Average time for granting individual licences		less than 6 weeks (90%)	
Individual licence applications pending/refused		• pending: approx. 30	• refused: not available

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		3	
fixed-fixed		8 (19 I/C agreements in negotiation)	
mobile-mobile		not available	
NRA arbitration		2	
Access deficit charge to be paid to the incumbent		not yet decided	
Universal service contribution in place		not yet decided	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges	local level	0,95	none
	single transit (<i>metropolitan</i>)	1,27	none
	double transit (<i>national</i>)	1,63	none
<i>mobile-fixed</i> networks I/C charges	local/ single/ double transit	not available	-

¹ Long distance voice service operators allowed to provide local voice services are included.

² Trunk operators allowed to provide local loop are included.

AUSTRIA

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	110,4	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	3190	
per capita telecoms expenditure (1997; ECU)	393	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	9,5 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	14,3	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	48,5	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS <i>(according to the licences granted)</i>		
Public fixed voice telephony	local ¹	<ul style="list-style-type: none"> • incumbent: Post und Telekom Austria (PTA) AG (100% state-owned) 1997 market share: 100% • alternative operators: 7 <i>(not yet operating)</i>
	long distance/ international	<ul style="list-style-type: none"> incumbent: Post und Telekom Austria (PTA) AG 1997 market share: 100% • alternative operators: 5 <i>(not yet operating)</i>
Public mobile voice telephony	analogue	incumbent: MobilKom Austria (75% PTA)
	GSM 900	<ul style="list-style-type: none"> • incumbent: MobilKom Austria market share: •1995: 100% •1996: 96,8% •1997: 75% • alternative operators: 1 (Max.Mobil) 1997 market share: 25%
	DCS 1800	1 (Connect Austria, not yet operating)

PUBLIC NETWORK OPERATORS <i>(according to the licences granted)</i>	
local loop ²	PTA+ 7 licensee operators <i>(not yet operating)</i> <i>(5 operators are 100% publicly-owned utilities companies. 1 operator has been granted only voice telephony licence. 1 operator has been granted only infrastructure licence)</i>
trunk/crossborder connections	PTA + 4 licensee operators

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: no	• international: no
number portability in place	no	
local/ long-distance/ international calls	territory/ population : 0%	
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900	• territory: approx. 30%	• population: 90%

INCUMBENT'S RETAIL PRICES		
Public fixed voice telephony³ (ECU/100)		
bi-monthly rental	6938	
local calls	• 3 minutes: 25	• 10 minutes: 83
long-distance calls	• 3 minutes: 96	• 10 minutes: 321
National leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 108	• monthly rental 50 km: 327 • monthly rental 250 km: 578
digital (2Mbit/s)	• connection: 1438	• monthly rental 50 km: 3055 • monthly rental 250 km: 5572
International leased-lines (ECU)		
analogue (3,1 kHz)	• connection: 108	• nearest EU: 899 • furthest EU: 1677
digital (2Mbit/s)	• connection: 1438	• nearest EU: 11383 • furthest EU: 19770
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national: 3 to 4 months	• international: not available

LICENCE FEES		
Public fixed voice telephony licence fees⁴ (ECU)		
services/ infrastructure (public network)	• up-front: 5033	• annual fees: 0 • numbering fees: not yet decided
Public mobile telephone services licence fees⁴		
analogue	• up-front: 5033 ECU	• annual fees per channel: 71,8 ECU
GSM 900	• up-front: 287,570 MECU	• annual fees per channel: 575 ECU
	• numbering fees: not yet decided	
DCS 1800	• up-front: 194,110 MECU	• annual fees per channel: 575 ECU
Average time for granting individual licences	4 weeks	
Individual licence applications pending/refused	• pending: 5	• refused: none

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		2 (2 new I/C agreements are being negotiated)	
fixed-fixed		0 (3 new I/C agreements are being negotiated)	
mobile-mobile		not available	
NRA arbitration		1	
Access deficit charge to be paid to the incumbent		not yet decided	
Universal service contribution in place		none ⁵	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks	local level ⁶	3,26	+226%
	single transit (<i>metropolitan</i>)	3,26	+81,0%
I/C charges ⁷	double transit (<i>national</i>)	3,99	+53,5%
<i>mobile-fixed</i> networks I/C	local level ⁶	07	+710%
	single transit (<i>metropolitan</i>)	8,1	+350%
charges ⁸	double transit (<i>national</i>)	10,02	+288%
% difference between fixed-fixed and mobile-fixed I/C charges		<ul style="list-style-type: none"> • local level/single transit: +147% • double transit: +151% 	

¹ Long distance voice service operators allowed to provide local voice services are included.

² Trunk operators allowed to provide local loop are included.

³ Tariffs for "standard" package. Lower tariffs are available for "minimum" package.

⁴ All the licensee operators have to contribute to the operational cost of the NRA (proportionally to their annual turnover and to the total turnover of the national telecommunications market). The amount is not yet decided.

⁵ Unless PTA's market share falls under 80%, it cannot claim financial service funding.

⁶ There are no offer for I/C points at local level. The lowest I/C charge covers interconnection at a local or a tandem exchange. Thus the "local" rate is the same as the "single transit" rate.

⁷ Proposed tariffs, not yet approved by the NRA and still under negotiation. In local currency (ATS): (1) local level: not provided; (2) single transit: 0,45 per min.; (3) double transit: 0,55 per min.

⁸ In local currency (ATS): (1) local level: not provided; (2) single transit: 1,12 per min.; (3) double transit: 1,39 per min.

PORTUGAL

DEROGATIONS GRANTED FOR FULL LIBERALISATION

- | | |
|---|--|
| • public infrastructure for voice telephony: 1.1.2000 | • public fixed voice telephony: 1.1.2000 |
|---|--|

TELECOMMUNICATIONS MARKET

per capita 1997 GDP at current market prices (PPS)	69,4	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	2550	
per capita telecoms expenditure (1997; ECU)	258	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	11,1 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	11,5	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	37,14	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS

Public fixed voice telephony	local/ long distance/ international	<ul style="list-style-type: none"> • incumbent: Portugal Telecom (25% state-owned) 1997 market share: 100% • alternative operators: 0 (<i>derogation</i>)
Public mobile voice telephony	analogue	incumbent: Telecomunicações Móveis Nacionais (TMN) <i>(100% Portugal Telecom subsidiary)</i>
	GSM 900	<ul style="list-style-type: none"> • incumbent: TMN market share¹: • 1995: 47% • 1996: 45% • 1997: 50% • alternative operators: 2 Telecel 1997 market share¹: 50% <li style="padding-left: 100px;"><i>(one licensee company not yet operating)</i>
	DCS 1800	1 (<i>company not yet operating</i>)

PUBLIC NETWORK OPERATORS

local loop/trunk/ crossborder connections	Portugal Telecom (<i>derogation granted</i>)
---	--

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION

Public fixed voice telephony (<i>derogation granted</i>)	
carrier selection in place	no
number portability in place	no
local/long distance/international calls	territory/population: 0%
Public mobile voice telephony	
analogue	• territory: 0% • population: 0%
GSM 900	• territory: approx. 90% • population: approx. 99%

INCUMBENT'S RETAIL PRICES

Public fixed voice telephony (ECU/100)	
bi-monthly rental	2136
local calls	• 3 minutes: 6,7 • 10 minutes: 26,7
long-distance calls ²	• 3 minutes: 100 • 10 minutes: 320,4

Incumbent's retail prices (cont.)			
National leased-lines (ECU)			
analogue (3,1 kHz)	• connection ³ :208	• monthly rental 50 km: 330	• monthly rental 250 km: 1063
digital (2Mbit/s)	• connection ³ : 4945	• monthly rental 50 km: 4500	• monthly rental 250 km: 13648
International leased-lines (ECU)			
analogue (3,1 kHz)	• connection: 183	• nearest EU: 1623	• furthest EU: 2363
digital (2Mbit/s)	• connection: 3653	• nearest EU: 23332	• furthest EU: 35177
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent		• national/international: from 4 to 7 days	

LICENCE FEES	
Public voice telephony licence fees	
services/ infrastructure (public network)	not yet decided
Public mobile telephone services licence fees (ECU)	
analogue	no specific fees in addition to GSM 900 fees (for TMN)
GSM 900/DCS 1800	• up-front: 4945 • renewal fees: 2472 • annual fees: 24724
Average time for granting individual licences	43 working days
Individual licence applications pending/refused	• pending: 3 • refused: none

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		1 (1 I/C agreement is being negotiated)	
fixed-fixed		1 (1 I/C agreement is being negotiated)	
mobile-mobile		not avail.	
NRA arbitrations		1	
Access deficit charge to be paid to the incumbent		included in the overall charges	
Universal service contribution in place		included in the overall charges	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ⁴	local level	1,25	+25%
	single transit (<i>metropolitan</i>)	2,5	+39%
	double transit (<i>national</i>)	18,75	+621%
<i>mobile-fixed</i> networks I/C charges ⁵	local level	1,25	+25%
	single transit (<i>metropolitan</i>)	2,5	+39%
	double transit (<i>national</i>)	18,75	+621%
% difference between fixed-fixed and mobile-fixed I/C charges		• local level/single/double transit: none	

¹ Source: *Mobile Communications guide to west European cellular subscribers*, Nov. 1997 and Sept. 1996.

² Tariffs for interurban 2nd grade call. Lower tariffs are available for regional 1st grade call, urban areas of Lisbon and Oporto.

³ National circuit connecting different groups of networks.

⁴ Charges for cross-border call termination not yet approved by the NRA. In local currency (PTE): (1) local level: 6,99 per min.; (2) single transit: 15 per min. (regional 1st grade call, urban areas of Lisbon and Oporto); (3) double transit: 107,15 per min. (interurban 2nd grade call). Values referring to 1997 and are still undergoing discussion for 1998.

⁵ In local currency (PTE): double transit: 112,5 per min. (interurban 2nd grade call). Values referring to 1997 and still undergoing discussion for 1998.

FINLAND

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	94,2	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	1795	
per capita telecoms expenditure (1997; ECU)	350	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	6,9 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1997)	40	<i>(EU average: 13)</i>
telephone lines per 100 inhabitants (1996)	52,8	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS ¹		
Public fixed voice telephony <i>(according to the notifications)</i>	local ²	<ul style="list-style-type: none"> • incumbents³: <ul style="list-style-type: none"> ◊ 46 local incumbents (Finnet Group) (100% private owned) market share: • 1995: 78% • 1996: 68% • 1997: not avail. ◊ Telecom Finland (100% state-owned) market share: • 1995: 32% • 1996: 32% • 1997: not avail. • alternative operators: 15 <i>(almost all companies are operating)</i> 1996 market share: approx. 0%
	long distance	<ul style="list-style-type: none"> • incumbent: Telecom Finland market share: • 1995: 41% • 1996: 42% • 1997: not avail. • alternative operators: 17 <i>(almost all companies are operating)</i> 1996 total alternative operators market share: 58% <i>(Finnet subsidiary: 55%; Telia Finland: 4,7%)</i>
	international	<ul style="list-style-type: none"> • incumbent: Telecom Finland market share: • 1995: 75% • 1996: 69% • 1997: not avail. • alternative operators: 15 1996 total alternative operators market share: 31% <i>(Finnet subsidiary: 24%; Telia Finland: 9%)</i>
Public mobile voice telephony <i>(according to the licences granted)</i>	analogue	incumbent: Telecom Finland
	GSM 900	<ul style="list-style-type: none"> • incumbent: Telecom Finland market share: • 1995: 67% • 1996: 68% • 1997: 66% • alternative operators: 1 (Finnet subsidiary) 1997 market share: 34%
	DCS 1800	25 licences granted <i>(only 2 companies are yet operating)</i>

PUBLIC NETWORK OPERATORS <i>(according to the notifications¹)</i>	
local loop ⁴	Telecom Finland + Finnet Group (46 operators) + 5 other operators <i>(almost all companies are operating)</i>
trunk connections	Telecom Finland + 2 Finnet subsidiaries + 4 other operators <i>(almost all companies are operating)</i>
crossborder connections ⁵	Telecom Finland + 1 Finnet subsidiary + 7 other operators <i>(almost all companies are operating)</i>

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: yes (<i>since 1994</i>)	• international: yes (<i>since 1994</i>)
number portability in place	in some areas since June 1997	
local calls	• territory: 100%	• population: 100%
long-distance calls	• territory: 100%	• population: 100%
international calls	• territory: 100%	• population: 100%
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900	• territory: 100%	• population: 100%
DCS 1800	• territory: Helsinki area	• population: approx. 10%

INCUMBENT'S RETAIL PRICES (<i>Telecom Finland</i>)			
Public fixed voice telephony (ECU/100)			
bi-monthly rental	2438		
local calls	• 3 minutes: 11,8	• 10 minutes: 20,7	
long-distance calls	• 3 minutes: 18,5	• 10 minutes: 61,8	
National leased-lines (ECU)			
analogue (<i>3,1 kHz</i>)	• connection: 768	• monthly rental 50 km: 174	• monthly rental 250 km: 524
digital (<i>2Mbit/s</i>)	• connection: 4174	• monthly rental 50 km: 870	• monthly rental 250 km: 2497
International leased-lines (ECU)			
analogue (<i>3,1 kHz</i>)	• connection: 668	• nearest EU: 523	• furthest EU: 1370
digital (<i>2Mbit/s</i>)	• connection: 2588	• nearest EU: 8314	• furthest EU: 23433
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national: not available		• international: 6 weeks

LICENCE FEES	
Public fixed voice telephony licence fees (ECU)	
services	<ul style="list-style-type: none"> • up-front/annual/renewal: none • numbering fees: <ul style="list-style-type: none"> ◊ for subscriber number⁶: 0,4 ECU/sub. ◊ for operator's prefix: from 3673 to 91827
infrastructure (public network)	none
Public mobile telephone services licence fees (ECU)	
analogue/ GSM 900	• up-front fees: none • annual spectrum fees ⁷ : 1262 (per frequency band/25kHz)
DCS 1800	• up-front fees: none • annual spectrum fees ⁷ : 947 (per frequency band/25kHz)
Average time for granting individual licences	about 3 months
Individual licence applications pending/refused	• pending: none • refused: none

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		2	
fixed-fixed		approx. 70	
mobile-mobile		1	
NRA arbitration		4/5 times during the negotiation (<i>not for the final agreement</i>)	
Access deficit charge to be paid to the incumbent		none	
Universal service contribution in place		none	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ⁹	local level ⁸	1,81	+ 0,81%
	single transit (<i>metropolitan</i>)	1,81	+ 0,5%
	double transit (<i>national</i>)	4,20	+ 61,5%
<i>mobile-fixed</i> networks I/C charges	local level ⁸	1,81	+ 0,81%
	single transit (<i>metropolitan</i>)	1,81	+0,5%
	double transit (<i>national</i>)	4,20	+ 61,5%
% difference between fixed-fixed and mobile-fixed I/C charges		local level/single/double transit: none	

¹ According to the national licence regime, a notification is requested for providing fixed voice telephony services or network services in a public telecommunications network. Only the provision of telecommunications network services in a public mobile wireless network is subject to an individual licensing requirement. The national licence/notification regime does not make any distinction between local/long distance and international.

² Some long distance voice service operators allowed to provide local voice services are included.

³ Finnet group consists of 46 regional privately owned telephone company and their subsidiary and affiliated companies. The great part of them are limited companies or cooperatives, but there are also some economic associations and organisations owned by cities. Until 1994 each local telephony company had a well-defined although limited monopoly within its geographical region and Telecom Finland functions were to interconnect the local telephone companies, in order to provide long-distance and international services, and to provide local telephony (where there were no other local telephone companies).

⁴ Three trunk operators allowed to provide local loop are included.

⁵ Six trunk/local loop operators allowed to provide crossborder connections are included.

⁶ Depending on the type of access code.

⁷ For 6th billing year or later and for national spectrum usage. Lower annual spectrum usage fees are requested for the first 5 years of activity and for restricted right of use area.

⁸ The lowest I/C charge covers interconnection at local or a single exchange. Thus the "local " rate is the same as the "single transit".

⁹ In local currency (FIM/100): (1) local level: 10,7 per min.; (2) single transit:10,7 per min.; (3) double transit: 24,7 per min.

SWEDEN

TELECOMMUNICATIONS MARKET		
per capita 1997 GDP at current market prices (PPS)	97,3	<i>(EU:100)</i>
telecoms services market value (1997; MECU)	4667	
per capita telecoms expenditure (1997; ECU)	523	<i>(EU average: 376)</i>
telecoms services market value growth 1998/97	7,4 %	<i>(EU average: 8,2)</i>
cellular mobile subscribers per 100 inhabitants (1996)	28	
telephone lines per 100 inhabitants (1996)	70,1	

PUBLIC VOICE TELEPHONY OPERATORS/SERVICE PROVIDERS ¹		
Public fixed voice telephony <i>(according to the notifications or licences granted)</i>	local ²	<ul style="list-style-type: none"> • incumbent: Telia (100% state-owned) market share: • 1995: 100% • 1996: 98% • 1997: not avail. • alternative operators: 13 licences + 9 notifications 1996 total alternative operators³ market share: 2%
	long distance	<ul style="list-style-type: none"> • incumbent: Telia market share: • 1995: 94% • 1996: 88% • 1997: not avail. • alternative operators: 13 licences + 9 notifications 1996 total alternative operators market share: 12% <i>(Tele2: 11%)</i>
	international ²	<ul style="list-style-type: none"> • incumbent: Telia market share: • 1995: 76% • 1996: 73% • 1997: not avail. • alternative operators: 13 licences + 9 notifications 1996 total alternative operators market share: 27% <i>(Tele2: 22%)</i>
Public mobile voice telephony <i>(according to the licences granted)</i>	analogue	incumbent: Telia Mobitel <i>(100% Telia's subsidiary)</i>
	GSM 900	<ul style="list-style-type: none"> • incumbent: Telia market share • 1995: 46% • 1996: 52% • 1997: not avail. • alternative operators: 2 licences 1996 market share: ◊ Comviq: 30% ◊ Europlatan 17%
	DCS 1800	4 <i>(only 1 company operating)</i>

PUBLIC NETWORK OPERATORS ¹	
local loop/ trunk/ crossborder connections <i>(according to the notifications or licences granted)</i>	7 licensee operators + 24 notifications + Telia <i>(5 licensee operators (+Telia) and 5 notified operators also offer voice telephony services)</i>

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: yes	• international: yes
number portability in place	no	
local calls	• territory: approx. 0%	• population: approx. 0%
long-distance calls	• territory: 100%	• population: 100%
international calls	• territory: 100%	• population: 100%
Public mobile voice telephony		
analogue	• territory: 0%	• population: 0%
GSM 900	• territory: not available	• population: not available

INCUMBENT'S RETAIL PRICES		
Public fixed voice telephony (ECU/100)		
bi-monthly rental	2410	
local calls	• 3 minutes: 8,7 • 10 minutes: 27,5	
long-distance calls	• 3 minutes: 21,8 • 10 minutes: 61,9	
National leased-lines⁴ (ECU)		
analogue (3,1 kHz)	• connection: 1860	• monthly rental 50 km: 82 • monthly rental 250 km: 504
digital (2Mbit/s)	• connection: 8136	• monthly rental 50 km: 1220 • monthly rental 250 km: 4446
International leased-lines⁴ (ECU)		
analogue (3,1 kHz)	• connection: 581	• nearest EU: 416 • furthest EU: 1835
digital (2Mbit/s)	• connection: 581	• nearest EU: 4943 • furthest EU: 21342
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national: 6 weeks	• international: not available

LICENCE FEES		
Public fixed voice telephony licence fees (ECU)		
services/ infrastructure (public network)	• licences fees: up-front: 11470	annual fees: 0,9‰ of turnover ⁵
	• notifications: up-front: none	annual fees ⁶ : 115 or 573
Public mobile telephone services licence fees (ECU)		
analogue/ GSM 900/ DCS 1800	• up-front: 11470	• annual fees: 0,9‰ of turnover ⁵
	• annual spectrum fees: 17,21/base station	
Average time for granting individual licences	not available	
Individual licence applications pending/refused	• pending: 1	• refused: none ⁷

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements			
fixed-mobile		15	
fixed-fixed		20	
mobile-mobile		not available	
NRA arbitration		5	
Access deficit charge to be paid to the incumbent		none	
Universal service contribution in place		none	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ⁸	local level	1,14	+14%
	single transit (<i>metropolitan</i>)	1,75	none
	double transit (<i>national</i>)	2,38	none
<i>mobile-fixed</i> networks I/C charges	local level	1,14	+14%
	single transit (<i>metropolitan</i>)	1,75	none
	double transit (<i>national</i>)	2,38	none
% difference between fixed-fixed and mobile-fixed I/C charges		local level/single/double transit: none	

¹ According to the national regime, a notification is requested for providing (within a publicly available telecommunications network): fixed telephony, mobile services, network capacity (including leased lines), or any other telecommunications service which requires allocation of capacity from numbering plan for telephony. An individual licence is requested for providing fixed telephony, mobile services, network capacity (including leased lines) if the activity is considered to be of a "considerable scope" ("for maintaining efficient telecommunications and competition in the Swedish market") with regard to the area covered, the number of users, or other comparable factors. The national licence/notification regime does not make any distinction between local/long distance and international.

² Long distance voice service operators allowed to provide local/international voice services are included.

³ The main operators are Tele2, TeleNordia and Europolitan.

⁴ Source: *Tarifika 1997*.

⁵ With a minimum of 5735 ECU.

⁶ Depending if total turnover is over or under 344000 ECU.

⁷ Two licences recalled at companies request.

⁸ In local currency (SEK/100): (1) local level: 9,6 per min.; (2) single transit: 14,9 per min.; (3) double transit: 40,6 per min.

PUBLIC NETWORK OPERATORS (according to the licences granted)	
local loop ⁵	172 licences + BT (included 140 cable franchise licences which are divided between 8 company operating)
trunk connections	32 licences + BT (companies operating: BT+9)
crossborder connections ³	63 licences + BT (companies operating: BT+about 10)

% OF CONSUMERS WITH CHOICE OF OPERATORS/CARRIER SELECTION		
Public fixed voice telephony		
carrier selection in place	• long-distance: yes	• international: yes
number portability in place	yes	
local calls	• territory: not available	• households ⁶ : 46%
long-distance/international calls	• territory: 100%	• households: 100%
Public mobile voice telephony		
analogue/ GSM 900	• territory: not available	• population: 98%
DCS 1800	• territory: not available	• population: more than 90%

INCUMBENT'S RETAIL PRICES			
Public fixed voice telephony (ECU/100)			
bi-monthly rental	2663		
local calls	• 3 minutes: 18	• 10 minutes: 60	
long-distance calls	• 3 minutes: 36	• 10 minutes: 118,6	
National leased-lines (ECU)			
analogue (3,1 kHz)	• connection: 1801	• monthly rental 50 km: 334	• monthly rental 250 km: 650
digital (2Mbit/s)	• connection: 13855	• monthly rental 50 km: 1984	• monthly rental 250 km: 5737
International leased-lines (ECU)			
analogue (3,1 kHz)	• connection: 1365	• nearest EU ⁷ : not available	• furthest EU: 1660
digital (2Mbit/s)	• connection: 24542	• nearest EU ⁷ : not available	• furthest EU: not available
Average time for delivery leased lines (analogue/2Mbit/s) by the incumbent	• national: 23,5 working days		• international: 15,3 working days

LICENCE FEES			
Public fixed voice telephony licence fees (ECU)			
services / infrastructure (public network)	local/regional	• up-front: 18763	• annual fees: 15011
	long distance	• up-front: 60043	• annual fees ⁸ : 30021
	international	• up-front: 10507	• annual fees: 12008
Public mobile telephone services licence fees (ECU)			
analogue/GSM 900/ DCS 1800		• up-front: 55540	• renewal fees: 52537
Average time for granting individual licences		approx. 6 weeks	
Individual licence applications pending/refused		• pending: 60	• refused: 8 since 1991

PUBLIC NETWORK INTERCONNECTION			
Interconnection agreements⁹			
fixed-mobile		24	
fixed-fixed		200	
mobile-mobile		8	
NRA arbitration		7	
Access deficit charge to be paid to the incumbent		none	
Universal service contribution in place		none	
Interconnection charges		ECU/100 per min.	deviation from "best current practice"
<i>fixed-fixed</i> networks I/C charges ¹⁰	local level	0,64	none
	single transit (<i>metropolitan</i>)	0,91	none
	double transit (<i>national</i>)	1,74	none
<i>mobile-fixed</i> networks I/C charges	local level	0,64	none
	single transit (<i>metropolitan</i>)	0,91	none
	double transit (<i>national</i>)	1,74	none
% difference between fixed-fixed and mobile-fixed I/C charges			local /single/ double transit: none

¹ Long distance voice service operators allowed to provide local voice services are included.

² The 140 individual licences are held between 8 Multiple System Operators.

³ International Facilities Licences.

⁴ Total mobile voice telephony market share (analogue, GSM 900, DCS 1800).

⁵ Trunk operators allowed to provide local loop are included

⁶ ITC broadband homes passed divided by 1991 Census GB household (+2% for Northern Ireland).

⁷ Tariffs to Ireland are distance dependent.

⁸ But not more than 0,08% of turnover.

⁹ Oftel estimates

¹⁰ In local currency (£/100): (1) local level: 0,434 per min.; (2) single transit: 0,618 per min.; (3) double transit (>200km): 1,177 per min.