COMMISSION RECOMMENDATION

of 8 January 1998

on interconnection in a liberalised telecommunications market

(Part 1 — Interconnection pricing)

(Text with EEA relevance)

(98/195/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in telecommunications with regard to ensuring universal service and interoperability through the application of the principles of open network provision (ONP) [1], and in particular Article 7(5) thereof,

Whereas Commission Directive 96/19/EC of 13 March 1996 amending Directive 90/388/EEC with regard to the implementation of full competition in telecommunications markets [2], abolishes special and exclusive rights as regards the provision of telecommunications networks and services;

Whereas it is Community policy to create an open and competitive market in the telecommunications sector; whereas for new entrants in the telecommunications market seeking to compete with the incumbent operators, interconnection to the existing public switched telecommunications networks is essential, and interconnection charges represent one of the biggest items of expenditure for new market entrants; whereas the Community has agreed a regulatory framework for interconnection as set out in Directive 97/33/EC;

Whereas Directive 97/33/EC gives national regulatory authorities for telecommunications (NRAs) an important role in securing adequate interconnection of networks, in accordance with Community law, taking into account recommendations defined by the Commission so as to facilitate the development of a genuine European home market (recital 12); whereas, in particular, Article 7(5) of Directive 97/33/EC calls upon the Commission to draw up recommendations on cost accounting systems and accounting separation; whereas, in accordance with the principle of subsidiarity, the setting of tariffs for interconnection is a responsibility of the Member States;

Whereas Article 7(2) of Directive 97/33/EC requires that certain organisations notified by their NRA as having significant market power (hereinafter referred to as 'notified operators') follow the principles of transparency and cost orientation for interconnection charges, and states that the burden of proof that charges are cost-oriented lies with the organisation providing interconnection to its network;

Whereas the Commission considers that that most appropriate approach to interconnection pricing is one based on forward-looking long-run average incremental costs, since this is most compatible with a competitive market; whereas this approach does not preclude the use of justified 'mark-ups' as a means of recovering the forward-looking joint and common costs of an efficient operator as would arise under competitive conditions;

Whereas until interconnection charges based on forward-looking long-run average incremental costs are put in place, it is appropriate to publish international comparisons of interconnection charges as a means of assisting national regulatory authorities in ensuring the implementation of cost-oriented interconnection to the networks of notified operators;

Whereas Article 7(5) of Directive 97/33/EC calls for NRAs to ensure that the cost accounting systems used by the organisations concerned are suitable to ensure transparency and cost orientation, but does not specify a particular cost accounting system; whereas an approach to interconnection pricing based on forward-looking long-run average incremental costs implies an accounting system based on current costs rather than historic costs; whereas activity based accounts can be used to build a 'top-down' model of the long-run average incremental cost of interconnection;

Whereas the cost of terminating a call from an interconnected network should not depend on the type of network on which the call originated; whereas the principle of non-discrimination means that the interconnection tariffs for call termination services provided by notified operators should not in general discriminate between calls originating from fixed networks and calls originating

[1] OJ L 199, 26. 7. 1997, p. 32.
[2] OJ L 74, 22. 3. 1996, p. 13.

from mobile networks, nor between calls originating from networks in the same Member State and calls originating from networks in other Member States;

Whereas Member State may make the provision of telecommunications services, including the establishment and/or operation of telecommunications networks required for the provision of such services, subject to authorisations in accordance with Directive 97/13/EC of the European Parliament and of the Council of 10 April 1997 on a common framework for general authorisations and individual licences in the field of telecommunications services [1]; whereas the general principles of the Treaty and the particular requirements of the Directive 97/33/EC, mean thal all points of interconnection open to national operators should also be open to autorised operators in other Member States who wish to deliver cross-border traffic; whereas the established practice that existing network operators can deliver traffic to other Member States without needing authorisations in the destination Member State, or needing to be established in the destination Member State, is consistent with the principle that delivery of traffic to a Member State does not constitute the offering of a service in that Member State;

Whereas Directive 97/33/EC allows Member States to establish mechanisms for sharing the net cost of universal service obligations between organisations operating public telecommunications networks and/or pubicly available voice telephony services;

Whereas Article 12(1) of Directive 95/62/EC of the European Parliament and the Council of 13 December 1995 on the application of open network provision to voice telephony [2] requires tariffs for use of the fixed public telephone network and the voice telephony service to follow the basic principles of cost orientation and transparency; whereas contributions by interconnected parties to 'access deficit' type schemes are only permissible when tariff constraints are imposed by NRAs on the grounds of affordability and accessibility of telephone service in accordance with Article 12(2) of Directive 95/62/EC; whereas the Commission has indicated that it believes such schemes should disappear by 1 January 2000 [3];

Whereas the application of the principles set out in this recommendation is without prejudice to the duty of the Member States and of undertakings to fully comply with the EU competition rules, taking account of the specific positions set out in the communication from the Commission on the application of the competition rules to access agreements in the telecommunications sector [4];

Whereas the advisory committee set up by Article 9(1) of Directive 90/387/EEC on the establishment of the internal market for telecommunications services through the implementation of open network provision [5] ('the ONP Committee') has given broad support to the principles contained in this recommendation, and the Commission has taken utmost account of the views expressed,

MAKES THE FOLLOWING RECOMMENDATION:

1. This recommendation concerns the interconnection of telecommunications networks, and in particular the pricing of call termination on the networks of operators designated by their national regulatory authority as having significant market power (hereinafter referred to as 'notified operators') in accordance with Directive 97/33/EC.

2. Article 7(2) of Directive 97/33/EC requires the interconnection charges of notified operators to follow the principles of cost orientation and transparency. The principle of cost orientation when applied to interconnection means that interconnection charges should reflect the way in which the costs of interconnection are actually incurred. Notified operators should be able to recover the one-off incremental cost required to connect the networks, and the incremental capacity costs imposed by the interconnecting traffic.

   Annex I of this recommendation provides further details on the type of costs associated with call termination.

3. Interconnection costs should be calculated on the basis of forward-looking long run average incremental costs, since these costs closely approximate those of an efficient operator employing modern technology. Interconnection charges which are based on such costs may include justified 'mark-ups' to cover a portion of the forward-looking joint and common costs of an efficient operator, as would arise under competitive conditions.

4. The interconnection charges based on 'best current practice' given below provide guidance to NRAs when assessing the interconnection charges for call termination proposed by notified operators, until calculated costs for interconnection based on forward-looking, long-run average incremental costs are available.

(1) OJ L 117, 7. 5. 1997, p. 15.
(2) OJ L 321, 30. 12. 1995, p. 6.
(3) COM(96) 608, 27.11.1996, Commission communication on assessment criteria for national schemes for the costing and financing of universal service in telecommunications and guidelines for the Member States on operation of such schemes.
(4) OJ C 76, 11. 3. 1997, p. 9.
(5) OJ L 192, 24. 7. 1990, p. 1.

Based on the data given in Annex II of this recommendation, the following 'best current practice' charges are recommended maximum interconnection charges for the period starting 1 January 1998.

'Best current practice' interconnection charges

'Best current practice' interconnection charge for call termination at the LOCAL level (i. e. at a local exchange or as near a local exchange as possible)

between ECU 0,6 and 1,0/100 per minute (at peak rate)

'Best current practice' interconnection charge for SINGLE TRANSIT interconnection *(metropolitan level)*

between ECU 0,9 and 1,8/100 per minute (at peak rate)

'Best current practice' interconnection charge for DOUBLE TRANSIT interconnection *(national level — more than 200 km)*

between ECU 1,5 and 2,6/100 per minute (at peak rate)

5. It is recommended that where charges lie outside the ranges of 'best current practice' charges given in point 4, national regulatory authorities use their rights under Article 7(2) of the Directive 97/33/EC to request full justification of the proposed charges, and if appropriate, to require retrospective changes to interconnection charges. The ranges of 'best current practice' charges given in point 4 are considered to be wide enough to cover recognised cost differences between Member States.

6. The use of forward-looking, long-run average incremental costs implies a cost accounting system using activity-based allocations of current costs, rather than historic costs. It is recommended that national regulatory authorities (NRAs) set deadlines for their notified operators for the implementation of new costs accounting systems based on current costs, where such systems are not already in place. Activity-based costing systems, in which costs are allocated to each product and/or service on the basis of the underlying cost drivers and activities of an efficient operator, are recommended in order to minimise the joint and common costs that cannot be directly allocated.

7. In keeping with current practive for cross-border interconnection between operators of established networks, and the principle of non-discrimination, operators authorised in one Member State that merely interconnect to deliver traffic to another Member State, and that do not offer services or operate infrastructure in that other Member State, should not need to be authorised or established in that other Member State.

   It is recommended that the reference interconnection offer of notified organisations should include — as a discrete unbundled element of the interconnection offer — terms and conditions and tariffs for the transmission link between the actual point of interconnection and the border of the Member State.

8. Without prejudice to the principle of non-discrimination, any contributions to access deficits or universal service paid by organisations operating public telecommunications networks and/or voice telephony services operators in a Member State (which in accordance with Community law must be separated from interconnection charges), should not be imposed on organisations which merely interconnect to deliver traffic to a Member State and do not actually offer telecommunications services in that Member State, nor be imposed indirectly on consumers in other Member States.

9. This recommendation, and in particular the 'best current practice charges' in point 4 and the data in Annex II, will be reviewed by the Commission by 31 July 1998 at the latest, and updated where necessary.

10. This recommendation is addressed to the Member States.

Done at Brussels, 8 January 1998.

For the Commission

Martin BANGEMANN

Member of the Commission

ANNEX I

COMPONENTS OF INTERCONNECTION CHARGES FOR CALL TERMINATION

Directive 97/33/EC requires the interconnection charges of notified operators to follow the principles of cost orientation. This Annex considers the implications of this requirement for the components of an interconnection charge for call termination.

1. **Pricing the local loop for interconnection purposes**

The local loop refers to the final links between the customer and the local exchange. In a fixed network using wired or wireless local loops, the cost of an unswitched local loop is largely a one-off cost, with periodic maintenance costs. Where call termination is being purchased, the 'lowest' place in the network where this can occur is on the main network side of the local switch [1]. Interconnection at this point may impose additional switch capacity costs, but there is no additional capacity cost or investment requirement relating to those components of the local loop which are dedicated to a particular customer (i.e. the pair of copper wires in a traditional network).

It follows from the principle of cost orientation that since the provision of interconnection does not lead to any increase of costs in the dedicated components of the local loop of the terminating network, the calculation of interconnection charges should not include any component relating to the direct cost of the subscriber-dedicated components of the local loop. The cost of those components in the unswitched local loop that are dedicated to a particular customer should therefore be recovered from that customer through a subscriber line charge, or as a combination of this and revenues from other services, to the extent that competition permits.

A difficulty arises if the incumbent is prevented from rebalancing its tariffs by regulatory measures and thus cannot charge an economic price to its own customers to cover the cost of the local loop. This gives rise to the so-called 'access deficit'. In a monopoly environment the operator compensates for the deficit in the 'access network' (i.e. the local loop) by charging prices in excess of economic cost for other services, such as international calls. With cost-oriented interconnection, competitors are able to capture some of this long distance and international traffic, and the incumbent's ability to compensate for the access deficit is reduced. An access deficit scheme involves contributions being imposed on other operators to compensate the incumbent for the loss of revenues that would have been used to fund this deficit.

Access deficit contribution schemes always provide inefficient investment signals, and raise overall industry costs. They are also administratively cumbersome, and lack transparency. As mentioned in the 'Guidelines on costing and pricing of universal service' published by the Commission in November 1996 [2] it is expected that access deficit type schemes will only be applied on a temporary basis, up to the year 2000, by which time a sufficient level of re-balancing should have been completed in all Member States.

In accordance with the Interconnection Directive, any contribution to 'access deficits' paid by interconnecting parties must be clearly separated from the interconnection charges. Payment of 'access deficit contributions' by interconnected parties is only permissible under Community law where Member States impose regulatory constraints on the retail tariffs of notified operators. Where an operator is not prevented by regulatory measures from rebalancing its tariffs, and 'access deficit' charge is not justified.

2. **Pricing uncompleted calls for interconnection purposes**

Uncompleted busy hour calls that originate from interconnected networks may impose additional capacity costs on a terminating network. In some cases, however, the reason for call failure could be lack of performance of the incumbent's own network. The Interconnection Directive places the onus of proof regarding costs on the network operator, so any operator seeking to include in its interconnection tariffs a fee for uncompleted calls would have to demonstrate that lack of performance of its own network had not been a reason for call failure.

(1) The provision of 'unbundled' local loop, whereby a new entrant takes over and has exclusive use of a local loop installed by an incumbent, for an appropriate fee, is not strictly 'interconnection' in EU terms.
(2) COM(96) 608, 27. 11. 1996.

3. **Call set-up charges for interconnection purposes**

In a fixed network, switch costs are mainly driven by two factors — call duration and call events (i.e. signalling and call set-up). A great deal of information is required to determine the proper balance in terms of cost causation between these two types of costs. Partly because of this, it is common for regulatory authorities to allow recovery of switching costs only on the basis of duration of completed calls. A charge for call set-up could only be considered to be a valid component of an interconnection tariff if the operator could demonstrate the extent to which calls originating from interconnected networks imposed incremental costs on the terminating network in terms of additional processing power required to handle the additional call set-up attempts occurring during the peak period. If a call set-up charge is used, the corresponding call duration charges should be lower than when there is no call set-up charge.

4. **Interconnection charges and retail pricing**

Some countries have in the past calculated interconnection charges on the basis of discounted retail tariffs. However, current retail tariffs are not necessarily cost-oriented, and this approach would in most cases be incompatible with the requirements of Community law.

Even if retail tariffs were cost-oriented, the approach is not desirable because it tends to lock new entrants into the same retail tariff structure as that of the incumbent, thus preventing the development by new entrants of innovative retail tariff schemes targeted at different types of user. The variety and choice of retail tariff schemes currently available on mobile networks in Member States shows there is considerable scope for innovative retail tariffing as a means of providing consumer choice and increasing the market demand for telecommunications services.

Where interconnection charges include time of day and day of week variations, they should be applied in a non-discriminatory manner to new entrants and to the incumbent's own traffic.

ANNEX II

'BEST PRACTICE' INTERCONNECT CHARGES AND THEIR DERIVATION

1. **Approach**

The approach taken is to use the interconnect charges in the three lowest cost Member States (for which data was available at 1 September 1997) as the starting point for a set of 'best current practice' figures at which to aim in the short term.

The figure below shows the level of interconnection charges for Member States. The costs in this figure refer to call termination on fixed networks at peak rates. Call set-up charges are included where they exist, but other non-traffic-related charges are in general not included. The figures do not include any 'access deficit' type contributions or universal service contributions. These additional contributions will not be required in many Member States, but where they are required as part of the regulatory environment in a Member State, they must be calculated and shown separately from the interconnection charge, in accordance with the Interconnection Directive.

Note that these figures concern one specific element of the cost of interconnection, i.e. the charge for call termination. They do not represent the full interconnection charges that may be payable in a given country.

1997/1998 — Interconnection rates

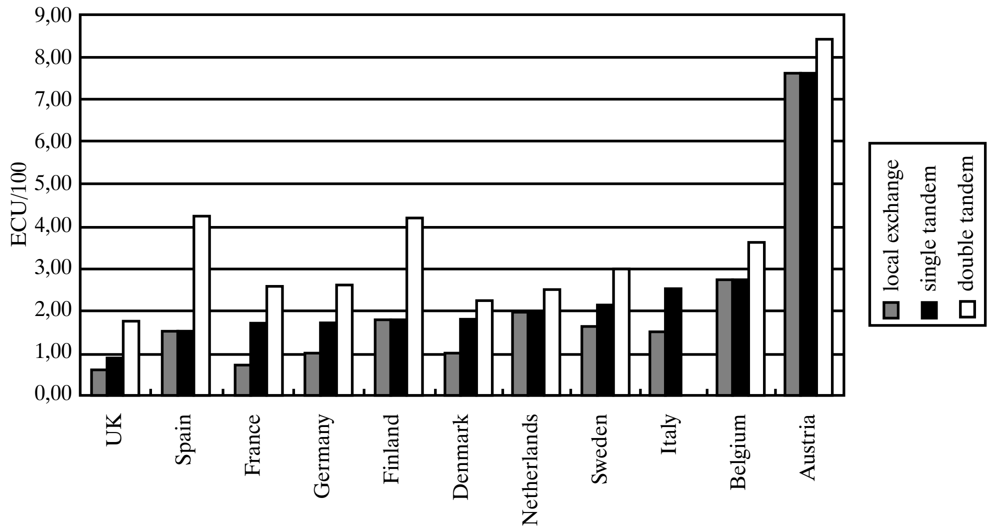

Figure 1

Interconnection charges for local, single transit and double transit levels, at peak rates

(rate in ECU/100 per minute, based on a three minute call duration)

The tables in section 3 give the data upon which this chart is based.

There are factors such as average density of connections, labour costs, geological factors, permitted rate of return on capital employed (1), which vary between EU Member States. While such variations will to some extent affect the cost of interconnection, the differences are not considered to be large enough to invalidate the 'best current practice' charges recommended here (2).

It is intended to review the figures in this recommendation during 1998, and it is to be expected that the 'best current practice' interconnection charges will be progressively reduced in the future to reflect both the downward trend in network costs and better estimation of those costs. Currently interconnection charges worldwide are reducing at about 8 % per annum.

It must be stressed that these 'best current practice' charges are higher — in some cases considerably higher — than those which would be expected using a bottom-up LRAIC calculation. Nevertheless given the situation in the EU as of January 1998, it is considered that these 'best current practice' charges represent a realistic intermediate goal.

2. **Derivation of 'best current practice' interconnection charges**

The price ranges were derived from the tariffs that were available as of 1 September 1997. Changes in interconnection tariffs occurring after that date have not been taken into account.

The top price in each range shown above corresponds to the charge that applied at 1 September 97 in the third lowest-cost Member State, rounded up to the nearest ECU/1 000.

The bottom price in each range corresponds to the charge that applied at 1 September 97 in the lowest cost Member State, rounded down to the nearest ECU/1 000, and with an adjustment to the 'double transit' rate to take account of the fact that in smaller Member States a distance component of less than 200 km may be appropriate.

3. **Detailed cost data for Member States**

Interconnect charges per minute based on a three-minute call duration as of 1 January 1998 basic starting values in ECU cents (ECU/100)				Exchange rates to ECU at September 1997	Interconnection charges in local currencies Date at which prices are effective, other supplementary information
Member State	Local	Single transit	Double transit (1)		
UK	0,64	0,91	1,74	0,68	Prices from October 1997 (GBP/100): — local exchange = 0,434 per min. — single tandem = 0,618 per min. — double tandem (> 200 km) = 1,177 per min.
Spain (2)	1,51 (3)	1,51	4,22	166	Prices since April 1997 (ESP): — local = not provided — metropolitan = 2,5 per min. — national = 7 per min.
France	0,71	1,73	2,55	6,59	Prices for 1 January 1998 (FRF/100): — local exchange = 4,69 per min. — single tandem = 11,40 per min. — double tandem (> 200 km) = 16,77 per min. Charges without ADC or USO contribution
Germany (4)	1,00 (5)	1,71-2,16 (6)	2,61	1,97	Prices for 1 January 1998 (DEM/100): — city = 1,97 per min. — Regio50 = 3,36 par min. — Regio200 = 4,25 per min. — national = 5,14 per min.

(1) Historically, the real cost of capital has been higher in some countries, and some regions of the world compared with other. Rates of return on capital employed may therefore differ between states by several percentage points per annum.
(2) The density of connections is largely reflected in access cost, a dedicated cost to the end customer, rather than imposing great differences in interconnection rates. A similar argument can be made regarding differences in geological factors.

Interconnect charges per minute based on a three-minute call duration as of 1 January 1998 basic starting values in ECU cents (ECU/100)				Exchange rates to ECU at September 1997	Interconnection charges in local currencies Date at which prices are effective, other supplementary information
Member State	Local	Single transit	Double transit (1)		
Finland	1,81 (3)	1,81	4,20 (7)	5,88	Prices since September 1997 (FIM/100): — local = not provided — metropolitan = 20 per call + 4 per min. — national = 20 per call + 13,8 to 18 per min.
Denmark	0,98	1,82	2,22	7,49	Prices since September 1997 (DKK/100): — local exchange = 4 per call + 6 per min. — single tandem = 8 per call + 11 per min. — double tandem = 8 per call + 14 per min.
Netherlands	2,00 (3)	2,00	2,52	2,21	Prices since July 1997 (NLG/100): — local exchange = not provided — local segment = 2,5 per call + 3,6 per min. — national = 3,2 per call + 4,5 per min.
Sweden	1,68	2,15	2,98	8,51	Prices since January 1997 (SEK/100): — local exchange = 7 per call + 12 per min. — single segment = 7 per call + 16 per min. — double segment = 7 per call + 23 per min.
Italy (*)	1,54 (8)	2,52		1 921	Proposed tariffs for 1 January 1998 (ITL): — local (only from 1 September 1998) = 29,6 per min. — region = 48,4 per min. — national = not provided
Belgium (*)	2,78 (3)	2,78	3,62	40	Proposed tariffs for 1 January 1998 (BEF): — local = not provided — region = 0,354 per call + 0,996 per min. — national = 0,460 per call + 1,294 per min.
Austria (*)	7,61 (3)	7,61	8,41	13,79	Proposed tariffs for 1 January 1998 (ATS/100): — local = not provided — region = 1,05 per min. — national = 1,16 per min.

Source: OVUM and Commission services

(*) Initial tariffs proposed by the operator but not yet approved by the national regulatory authority.

(1) The 'double transit' rate includes a distance component for links of > 200 km.

(2) In Spain, until full liberalisation on 1 December 1998, (in accordance with the derogation granted under Directive 96/19/EC) this offer is only available to a limited number of authorised operators.

(3) In Spain, Finland, Netherlands, Belgium and Austria the lowest interconnection charge covers interconnection at a local or a tandem exchange. Thus the 'local' rate is the same as the 'single transit' rate.

(4) Interconnection charges in Germany were not available on 1 September 1997 and have not been used in the derivation of 'best current practice' price ranges. The four zones in Germany, which are defined by distance, do not correspond on a 1:1 basis to the three bands in the table which are defined in technical terms.

(5) In Germany the local tariff is in general identical with the so-called City-zone, which also covers large cities, but might sometimes include single transit interconnection.

(6) In Germany the single transit segment or metropolitan area is covered by two regional zones: Regio50 = 1,71 ECU/100 per minute and Regio200 = 2,16 ECU/100 per minute (Regio200 might sometimes include double transit connection).

(7) The price range is between 3,48 and 4,20 according to traffic carried.

(8) In Italy local tariffs are only available from 1 September 1998.

In Greece, Ireland, Luxembourg, and Portugal, telecommunications organisations have not published interconnection prices, in accordance with the derogations granted under Directive 96/19/EC.