

Report on

Telecoms Tariff Data

as of
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DG Information Society

The opinions expressed in this Study are those of the authors and do not necessarily reflect the views of the European Commission.
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Important: These appendices are only available for use within the European Commission, and should not be distributed to other parties.

- Appendix A: PSTN tariffs (Spreadsheet file)
- Appendix B: PSTN discount packages (Document)
- Appendix C: ISDN tariffs (Spreadsheet file)
- Appendix D: Leased line tariffs (Spreadsheet file)
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Disclaimer: This report has been commissioned as an independent study to examine tariff developments in the European Community. The Commission does not accept any responsibility for the accuracy or completeness of the information contained herein.

1. Report summary

1.1. Background

This report is produced for the DG Information Society of the European Commission by Teligen Ltd. It is the sixth report in a series presenting telecommunications tariff information from 1998 onwards. **As this report will only present the price situation and development in each country, an accompanying report will analyse the prices, using basket methodologies, in order to compare real price relationships over time.**

This report shows the actual prices as of 1 December 2002. Wherever possible these prices are compared with December 2001 data in order to report on individual price changes.

Teligen has collected tariff data from primary sources, i.e. directly from the telecoms operators and Internet Service Providers. As a specialist in tariff information, Teligen maintains direct contacts with all the operators covered on a regular basis, using a unique network of personal contacts within the operators' organisations (the so called liaison officers).

Throughout the report prices are converted into euro, and exclude VAT. Due to the fact that three of the currencies are floating in relation to the euro, some of the results may show a change even when there has not been any underlying price change in national currency. **Please see section 2.3 Exchange rates for more information on the changes in exchange rates from December 2001 to December 2002.**

This report covers:

- **Fixed telephone tariffs**
- **ISDN tariffs**
- **Leased lines tariffs**
- **Mobile service tariffs**
- **Internet tariffs (dial up access)**
- **ADSL tariffs**

1.2. PSTN

After the liberalisation of the telecommunications market in 1998, the prices have changed significantly in many countries. The changes mentioned below have occurred since the last tariff report which covered data as of December 2001, and up to December 2002.

In December 2002, the following 12 countries use per second charging: Belgium, Denmark, Spain, France, Ireland, Italy, the Netherlands, Austria¹, Portugal, Finland, Sweden, United Kingdom. The remaining 3 countries still use unit based charging (Germany, Greece and Luxembourg).

All countries using per second charging apply some sort of safeguard against calls of short duration, such as a minimum or call setup charge. The following three different ways of doing this have been identified:

1. Call setup charge raised at the beginning of the call, and per second charging thereafter. This applies in Belgium, Denmark, Italy, Netherlands, Finland and Sweden.
2. A fixed initial charge covering a fixed number of seconds of call time, and per second charging thereafter. This applies in Spain, France and Portugal.
3. A minimum charge per call, applied when the total call charge is less than the minimum. This applies to Austria, Ireland and United Kingdom.

This report covers standard charges from the incumbent operators, i.e. undiscounted prices. In the Netherlands and Austria the most appropriate (basic) tariff package have been selected, in the absence of standard prices.

Please note that the call charges referred to in the following overview relates to standard peak time charges by incumbent operators. Tariffs that are lower than these standard peak time charges are widely available from the incumbent operators and alternative competing suppliers.

Many providers in the euro-zone countries have adjusted their tariffs over the period from the prices that were derived by calculation from national currency at the euro introduction to new prices calculated in euro from the start.

Fixed charges have had the following changes from December 2001 to December 2002 (based on national currency):

Connection charges

- remained unchanged in 10 Member States
- decreased in Spain by -37.4%, in Italy by -3.2% and in Luxembourg by -19.3%
- increased in Ireland by 3.4% and in Austria by 20%

¹ Telekom Austria uses per second charging for the TikTak series of packages, which are the most used by residential users. Unit based charging still applies for Business 1 and 2, Standard and Minimum packages.

Monthly rental charges

- remained unchanged in 5 Member States
- decreased in the Netherlands by 8.2% (business only) and in Austria by -4.8% (business) and -13.5% (residential reduction due to change in tariff monitored)
- increased in Denmark (3.2%), Germany (5%), Greece (21.5%), Spain (11.5%), France (3.5%), Ireland (7.5%), Italy (Business 4%, Residential 13.6%), Netherlands (Residential 4.6%), UK (Business 4.3%).

Peak time (3 minute) standard usage charges for local, long distance and intra-EU calls have had the following changes from December 2001 to December 2002:

Local call charges

- remained unchanged in 9 Member States.
- decreased in Denmark (-8%), Germany (-2%), Greece (-16%), Austria (-27% due to change in tariff monitored)
- increased in France (41%) and the Netherlands (5%)
- Spain, Greece and Luxembourg maintain the lowest charges for local calls. The highest charges are found in the UK, followed by the Austria.

Regional call charges are used in five countries (France, Greece, Spain, Italy, Portugal).

- Remained unchanged in 3 Member States
- decreased in Greece (-15.6%) and Spain (-36.2%)

Long distance (National) call charges

- remained unchanged in 9 Member States.
- decreased in Denmark (-8%), Greece (-16%), Spain (-40%) and Austria (-13% due to change in tariff monitored)
- increased in France (18%) and the Netherlands (3%)

Calls from fixed to mobile phones

- remained unchanged in 4 Member States.
- decreased in Belgium (-25%), Germany (-50%), Spain (-15%), Ireland (-13%), Luxembourg (-10%), Austria (-12% due to change in tariff monitored), Portugal (-6%) and Finland (-15%).
- Increased in France (16%), Italy (16%) and the Netherlands (15%).

International call charges within the EU, average to all other member states:

- remained unchanged in 9 Member States.
- increased in Belgium (2%).
- reduced in Spain (-33%), Italy (-16%), Luxembourg (-35%), the Netherlands (-2%) and Austria (-18% due to change in tariff monitored).

Some countries have further simplified their time band definitions through the period. Germany, the Netherlands and Finland have the most complicated system with the call charges changing 3 times during a weekday. Most other countries only change their prices twice a day. No country has more than 3 different price levels related to time of day.

In this report the Economy calls are assumed to be the cheapest rate possible. The weekday night-time (03:00) rate is the lowest rate in Germany and Finland. The Sunday rate is the lowest in Ireland and United Kingdom. The weekday night-time and Sunday rates are the same (and lowest) in the other 11 countries.

1.3. ISDN

Standard ISDN fixed and usage charges of the incumbent operators have been analysed in this study. There are significant variations in the fixed charges with relation to what is seen for PSTN. This means that the ranking of the countries with relation to ISDN rental charges is very different to that seen for PSTN rental, even for Basic rate ISDN.

Rental charges

- Basic Rate Access decreased in Ireland (-16%) and Austria (-17%).
- Basic Rate Access increased in Denmark (2%), Germany (29%), France (3%) and the Netherlands (4%).
- Basic rate is least expensive in Greece, while the most expensive is the United Kingdom.

National call charges for voice and data calls are identical to those for PSTN, for all countries. Please see the comments in section 1.2 above.

For **Intra-EU calls**, only the United Kingdom (BT) has different (higher) charges for transparent 64 kbit/s calls (data calls) than for voice calls. The other 14 countries have the same call charges for both voice and data calls.

1.4. Leased lines

As with the previous reports, this report is only looking at circuits 2 Mbit/s and higher. The availability of tariffs for 34 Mbit/s and 155 Mbit/s circuits is the same or less than last year. Several operators still offer these circuits on a case by case basis only, and some do not give any information on the availability of these speeds.

The leased lines are covered with 3 national distances (2 km, 50 km and 200 km), and 3 international destinations (near EU country, distant EU country, and USA).

The 2 km circuit will in all cases be a local circuit, and will normally be priced with one single charge, possibly with a distance element.

National circuits include a 2 km local circuit at each end. The price of, for example, a 50 km circuit is built from one local circuit of 2 km + trunk circuit of 46 km + one local circuit of 2 km. Some operators do have separate prices for the local end circuits.

In Denmark, Greece, Spain, Netherlands, Austria and the United Kingdom (BT), there were price reductions for 2 Mb/s circuits through 2002.

In Germany, Spain and Portugal there were price increases for some or all 2 Mb/s circuits through 2002.

BT (UK) has stopped publishing correct prices for international leased lines, they now only provide "base line" prices and require potential customers to contact them for a quote. This is similar to what Deutsche Telekom did a few years ago. The reason is the highly competitive market for such circuits.

High-speed circuit prices (34 and 155 Mb/s) have been removed from the incumbent operator's pricelist in Denmark and Greece.

Please see the overview in section 2.2 below.

1.5. Mobile

The GSM service is covered for two operators in each country, the incumbent-owned operator, and the most prominent mobile competitor. There has been a significant change in both the tariff package offerings and the overall price levels. Many operators have completely redefined their tariff packages, something that makes a direct year-to-year comparison difficult.

Prepaid packages are covered for all EU Member States.

1.6. Internet

In this survey, price and service information have been collected from 101 ISPs across the 15 EU Member States, with a total of 315 dial-up packages. From these packages, 103 are relevant for business users, and 274 are relevant for residential users (some packages are relevant for both). Prices have been analysed, and an overview is provided in this report.

A strict comparison between these prices is not necessarily right, as the packages have very different content, with regard to email addresses, web-space, and other service offerings. The survey also shows that the prices vary immensely, and there are few nation-specific trends.

Call charges for PSTN dial up access have been analysed, and in 8 countries (Belgium, Denmark, Germany, Greece, Ireland, Luxembourg, Austria and United Kingdom) there are alternative rates for Internet access offered by the incumbent.

The assumption is that ISP services shall be reached with a local call. In some countries there are special access codes for Internet access, using free-phone or premium rate numbers to ensure local (or discounted) call charges from all locations of the country.

The so called "free" Internet access is now available in most countries, where regular local call charges paid to the telecom operator are also used to cover the ISP charges. Hence the ISP appears to be free to the user, but call charges still have to be paid.

Another variant is where the ISP provides a free-phone number for access. In these cases the ISP will normally have a usage based charge (e.g. per minute) to cover the cost of the access.

Flat rate services are also offered in some countries. In the UK there are several services where the customer pays a fixed monthly fee that covers both the ISP service and the unlimited access through modem dial-up. However, users who would have this kind of usage will normally consider ADSL a better alternative.

A number of operators allow “Friends and Family” type of discounts to be used also for Internet access. This can provide additional discounts on the PSTN call charges for Internet access, but has not been included in this report as such discounts are individual to each customer.

Special offerings or deals for schools and libraries have been identified in all countries except Denmark, Finland and Sweden. These offerings are initiated either by the ISPs themselves, or through regulatory pressure.

2. Overview of changes in EU countries for the period 1 December 2001 to 1 December 2002

2.1. Changes in telephone charges

B	<p>Currency changes into Euros.</p> <p>On 1 November 2002</p> <ul style="list-style-type: none"> The charge for an additional line was reduced by 50%.
DK	<ul style="list-style-type: none"> No change.
D	<p>Currency changes into Euros.</p> <p>On 17 April 2002</p> <ul style="list-style-type: none"> Monthly rental charge has increased by 5%
EL	<p>Currency changes into Euros</p> <p>On 1 February 2002.</p> <ul style="list-style-type: none"> Monthly rental charges for both business and residential customers increased by 21.5%. Local and regional call charges were reduced by 19% A national flat rate has been introduced and the call charges have been reduced considerably, peak charges reduced by 69% and off peak charges reduced by 38%. Calls to mobile have been reduced by 2%
E	<p>Currency changes into Euros.</p> <p>On 1 February 2002</p> <ul style="list-style-type: none"> Connection charges were reduced: Exchange line connection (business and residential) reduced by 37% and charges for additional lines (per line) reduced by 18%. Per minute charges for Provincial coverage were reduced as follows: Peak by 20% and Off Peak by 29%. Per minute charges for National coverage were reduced as follows: Peak by 19% and Off Peak by 36%. Decrease of 33% for intra EU calls both Peak and Off Peak
F	<p>Currency changes into Euros.</p> <p>On 8 October 2002</p> <ul style="list-style-type: none"> Monthly charge for a basic PSTN subscription increased by 4% Calls to mobile Orange and SFR changed as follows: Business customers now pay a flat rate fee of €0,210 per minute for peak charges. This is a reduction of 17%, but for off peak charges this is an increase of 65%. Residential customers saw their call charges reduce as follows: Peak call by 24% and off peak calls by 14%. Business: Monthly charges for "Contrat Professionnel" per line increased by 3.5% and monthly charges for "Contrat Professionnel Présence" per line was increased by 3%.

IRL	<p>Currency changes into Euros.</p> <p>On 1 July 2002</p> <ul style="list-style-type: none"> Residential and Business: Connection charge was increased by 3.4%. Take over charge increased by 24%. Residential and Business: Monthly rental for an exchange line was increased by 7%. Calls to mobile have been changed so that specific charges apply to each mobile operator. Three new zones have been added for International calls.
I	<p>Currency changes into Euros.</p> <p>On 1 July 2002</p> <ul style="list-style-type: none"> Installation charge for business and residential customers was reduced by 3% and takeover was reduced by 52%. The monthly charge was increased for business customers by 4%, for residential customers by 13.7% and for residential customer incoming traffic only by 13.6% Calls to mobile for residential customers have been reduced by 8% Calls to mobile for business customers changed as follows: peak charges have been increased by 17% but off peak charges were reduced by 41%.
L	<p>Currency changes into Euros.</p> <p>On 1 September 2001</p> <ul style="list-style-type: none"> Installation charge was reduced by 19.3%
NL	<p>Currency changes into Euros.</p> <ul style="list-style-type: none"> Monthly rental has been increased by 4,6% . . Call set up charge for local calls has been increased by 2% and for long distance calls increased by 10%. Calls to mobile were increased as follows: peak calls by 9% and off peak calls by 1.9%. Zones for international tariffs have changed but the tariffs have not changed.
AUT	<p>Currency changes into Euros.</p> <ul style="list-style-type: none"> On 1 September 2002 Installation charges were increased by 20%. Two more mobile subscription zones have been added.
P	<p>Currency changes into Euros.</p> <p>On 4 June 2002</p> <ul style="list-style-type: none"> Peak calls to mobile were reduced as follows: To Optimus and Telecel by 6% and the TMN by 9% Off Peak calls to mobile were increased as follows: To Optimus by 9%, to TMN by 7% and to Telecel by 2%.
FIN	<p>Currency changes into Euros.</p> <ul style="list-style-type: none"> No change.

SWE	<ul style="list-style-type: none">• No change.
UK	On 1 October 2002 <ul style="list-style-type: none">• Monthly rental changed as follows: for business customers monthly rental increased by 4.3% and for residential customers monthly rental reduced by 4.9%.

Notes:

Tariff information is collected directly from the incumbent operators, and covers the “standard” services. Discount schemes are not included.

Percentages are approximate. Where a range of percentages is given this means that different types of calls (e.g. standard rate and reduced rate) have changed at different rates.

2.2. Changes in Leased Line charges

Changes in Leased Lines charges during the period 1 December 2001 to 1 December 2002

B	International digital leased lines were restructured on 1 st April 2002, reductions in monthly rentals ranged from 3% to 40% depending on destination.
DK	On 1 st October 2002, Tele Danmark revised national circuits, mainly 2M. Connection charges increased by 25%, local end circuits increased by 10-15%. Main link circuits were reduced by up to 45%.
D	Deutsche Telekom, changed its national digital leased line charges as of 17 th April 2002. Local circuits were increased by average 4% while long distance high speed (34 & 155M) circuits were reduced by 4-15%.
EL	On January 27 th , 2002, OTE made some changes to digital circuit connection charges. Local connections were cut by around 5% while trunk circuits increased around 10%. International circuits were also reduced, by an average 10% to certain destinations.
E	Telefonica revised national circuits on 31 st October 2002; local circuits were reduced by between 2-15%. Trunk circuits increased by average 5%
F	France Telecom introduced new tariffs changes on 1 st January 2002. Installation charges were reduced by 28% on circuits up to 2Mbit/s and some minor changes made to national monthly rentals. In October international circuits were restructured resulting in changes to rentals for border and neighbouring countries only. On 1 st November national high-speed (34M & 155M) circuits were reduced. Changes ranged from 10% on local circuits up to over 66% on long distance main links.
IRL	On 1 st December 2002, 155M connection and rental charges were published for the first time, later that month; Eircom reduced local end annual rentals on 1M & 2M circuits by 8%.
I	No changes were made to Telecom Italia's Leased Line prices during this period. The last changes occurred in November 2001.
L	With effect from 1 January 2002, 155M connection charges increased by 4%.
NL	On 1 st October 2002, KPN increased access charges on national circuits by between 2% and 17%. Monthly rental charges also changed resulting in local circuits decreasing by average 30% and reductions of up to 35% on many long distance speeds ranging from 64k to 2M.
AUT	No changes were made to Telecom Austria's Leased Line prices during this period. The last changes occurred in September 2001.
P	Portugal Telecom introduced new tariffs on 2 nd June 2002. Local circuits were increased by up to 40% in certain cases. Main link rentals were also increased, changes ranged from around 15% on trunk circuits up to 30% on regional circuits.

FIN	Sonera continue to offer leased line prices on a case-by-case basis. No changes were published during this period. The last changes recorded, occurred in October 2001.
SWE	No changes were made to Telia's Leased Line prices during this period. The last changes occurred in April 2000.
UK	On 31 st December 2001, BT reduced 2M connection charges by 25%. New tariffs were introduced for 2M annual rentals on 18 th May 2002. These included local circuit rental outside Central London increasing by around 30%. Main link services were reduced by average 25%. On November 18 th , 2002, BT announced that all international leased lines pricelists would be withdrawn and prices offered on a case-by-case basis. An on-line international quote service was introduced.

Notes:

Tariff information is collected directly from the incumbent operators, and covers the "standard" services. Discounts are not included.

2.3. Exchange rates and VAT percentages

The following table lists the exchange rates and the VAT rates used in this report.

Table 2.1 Exchange rates and VAT percentages (December 2001 and December 2002)

	Exchange rate to euro		VAT	
	December 2001	December 2002	December 2000	December 2001
B	40.339900	1.0	21%	21%
DK	7.440000	7.430000	25%	25%
D	1.955830	1.0	16%	16%
EL	340.750000	1.0	18%	18%
E	166.386000	1.0	16%	16%
F	6.559570	1.0	19.6%	19.6%
IRL	0.787564	1.0	21%	21%
I	1936.270000	1.0	20%	20%
L	40.339900	1.0	15%	15%
NL	2.203710	1.0	17.5%	19%
AUT	13.760300	1.0	20%	20%
P	200.482000	1.0	17%	19%
FIN	5.945730	1.0	22%	22%
SWE	9.440000	9.100000	25%	25%
UK	0.620000	0.642000	17.5%	17.5%
USA	0.892000	1.018000	10% ¹	10% ¹
Japan	113.400000	124.200000	5%	5%

Prices in this report are given in euro and exclude VAT.

Exchange rates for the countries outside the euro-zone are average rates for the two months, as reported by European Central Bank.

www.ecb.int , go to ECB Monthly Bulletin, Euro Area Statistics, section 10.

1) Tax in USA will vary with the state.

Please note the exchange rate changes in Denmark (0.13%), Sweden (3.6%), the United Kingdom (-3.55%), USA (-14.13%) and Japan (-9.52%) between December 2001 and December 2002. These changes will mean that even though prices as reported in euro might appear to have changed for these countries, they may in fact not have changed at all.

3. PSTN prices

The prices given are expressed in euro, using average December 2002 exchange rates.

Due to the change to euro for many EU Member States the comparisons with December 2001 prices are done in euro, something that will mean that exchange rate variations may impact on the results.

3.1. PSTN connection

Connection charges for new PSTN lines are listed below. Prices are in euro and exclude VAT.

Table 3.1 PSTN connection charges 12/2002 (in euro excluding VAT)

	Connection charge			Nominal change Business 2001.12-2002.12	Nominal change Residential 2001.12-2002.12	Notes
	Business	Residential	Low user			
B	54.54	54.54		0.0 %	0.0 %	
DK	102.29	102.29		0.0 %	0.0 %	
D	44.46	44.46		0.0 %	0.0 %	
EL	29.34	29.34		0.0 %	0.0 %	
E	59.50	59.50	17.85	-37.4 %	-37.4 %	1
F	38.56	38.56		0.0 %	0.0 %	
IRL	107.43	107.43		3.4 %	3.4 %	
I	100.00	100.00		-3.2 %	-3.2 %	
L	50.00	50.00		-19.3 %	-19.3 %	
NL	37.82	37.82		0.0 %	0.0 %	
AUT	130.80	130.80		20.0 %	20.0 %	
P	71.83	71.83		0.0 %	0.0 %	
FIN	81.96	81.96		-0.1 %	-0.1 %	2
SWE	85.71	85.71		0.0 %	0.0 %	
UK	154.21	99.41		0.0 %	0.0 %	
USA, CA	66.02	32.43		0.0 %	0.0 %	3
USA, OH	61.74	35.85		0.0 %	0.0 %	
Japan	579.71	579.71		0.0 %	0.0 %	4
EU Average	76.56	72.91				5

Notes:

1. Disabled and elderly customers pay a lower connection charge.
2. Only business customers pay VAT on this charge. Connection charge is tax free for residential customers
3. Connection charges in USA may vary considerably with the location and nature of service. The figure given is based on a best effort assumption.
4. The telephone connection in Japan is a tradeable asset, and may be resold. Hence the high charge.
5. The EU Average is a simple un-weighted average
6. Low user tariffs are available from some operators to provide a low cost basic service for those who cannot afford to pay the regular charges. Generally these services provide a low fixed cost, as a low cost entry to the service, but higher usage cost. These services are normally reserved for low income customers on social welfare, or elderly people on pensions, or in some cases people with specific disabilities.

3.2. PSTN monthly rental

Rental charges for standard PSTN lines are listed below. Prices are in euro and exclude VAT.

Table 3.2 PSTN monthly rental charges 12/2002 (in euro excluding VAT)

	Monthly rental			Nominal change Business 12/2001 – 12/2002	Nominal change Residential 12/2001 – 12/2002	Notes
	Business	Residential	Low User			
B	13.39	13.39	9.50	0.0 %	0.0 %	
DK	12.60	12.60	9.98	3.2 %	3.2 %	
D	11.49	11.49	4.00	5.0 %	5.0 %	1
EL	9.98	9.98		21.5 %	21.5 %	
E	11.68	11.68		11.5 %	11.5 %	
F	13.10	10.87	5.85	3.5 %	3.6 %	2
IRL	16.20	16.20		7.5 %	7.5 %	
I	15.20	12.14	6.07	4.0 %	13.6 %	
L	16.00	16.00		-0.1 %	-0.1 %	
NL	14.44	14.44	7.96	-8.2 %	4.6 %	3
AUT	17.44	13.32	0.00	-4.8 %	-13.5 %	4
P	11.85	11.85	10.46	0.0 %	0.0 %	5
FIN	9.65	9.65		0.0 %	0.0 %	6
SWE	12.75	10.99		0.0 %	0.0 %	
UK	21.37	12.59	4.24	4.3 %	-4.9 %	7
USA, CA	9.63	5.60		0.0 %	0.0 %	
USA, OH	22.35	6.58		0.0 %	0.0 %	
Japan	20.93	14.09		0.0 %	0.0 %	
EU Average	13.81	12.48	5.87			8

Notes:

1. Low user tariff applies only to customers on social welfare schemes.
2. Business package shown is Contrat Professionel. A package with higher rental is available to high volume business users (Professionel Présence), which gives a 10% reduction on all peak rate calls. For low user subscribers, calls are charged at double the normal rates, up to a bi-monthly threshold of FR 272.94. Once this level of spending has been reached during any two month period, all subsequent calls are charged at normal rates.
3. Low user (BelBudget) customers who make international calls pay 5.5 times the normal charges. BelBasis is assumed as the residential and business plan (while earlier the BelPlus was used for business).
4. The Business Package shown is Business 1, The Residential package shown is TikTak Privat. The Social Tariff Scheme is available to all residents in Austria whom have either physical disabilities or receive social benefit. Recipients pay no monthly line rental.
5. The low user charge shown represents the maximum discount available. This applies to subscribers using between 1 and 167 units per month (6.3% discount).
6. Charges vary according to the area in which the subscriber is located. The charge shown relates to the Helsinki area.
7. The low user charge shown represents the maximum discount available under the Light User scheme. The maximum discount only applies to subscribers with zero usage. Regular residential users receive a call allowance of GBP 1.532 (excl. VAT).
8. The EU Average is a simple un-weighted average

Figure 3.1 PSTN monthly rental for Business customers 12/2002

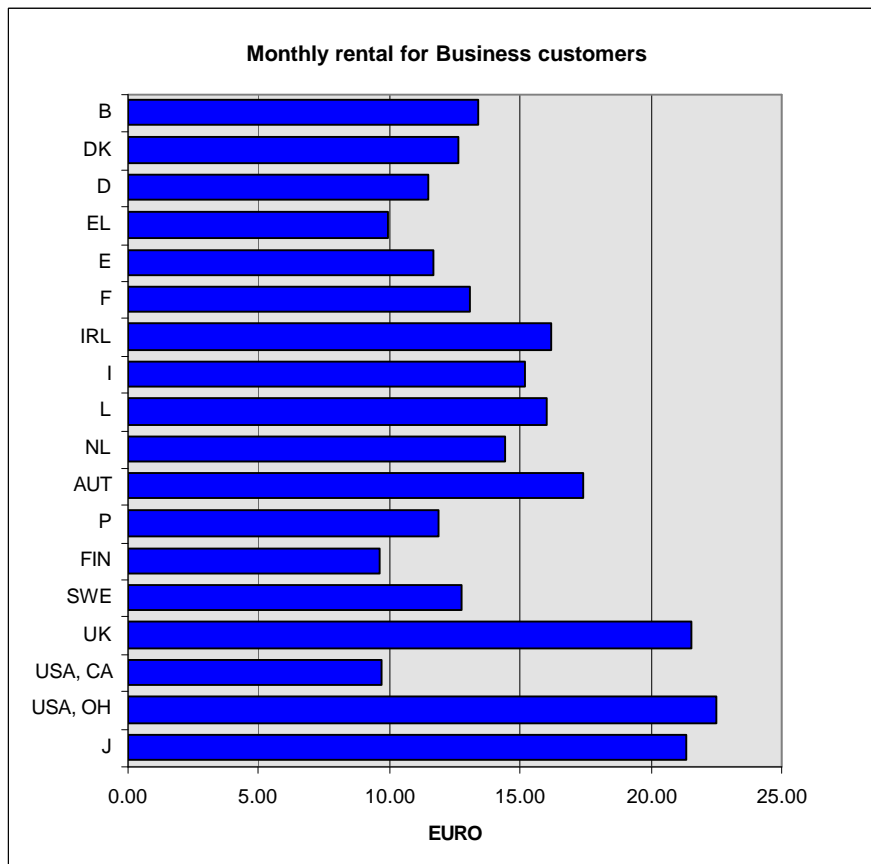
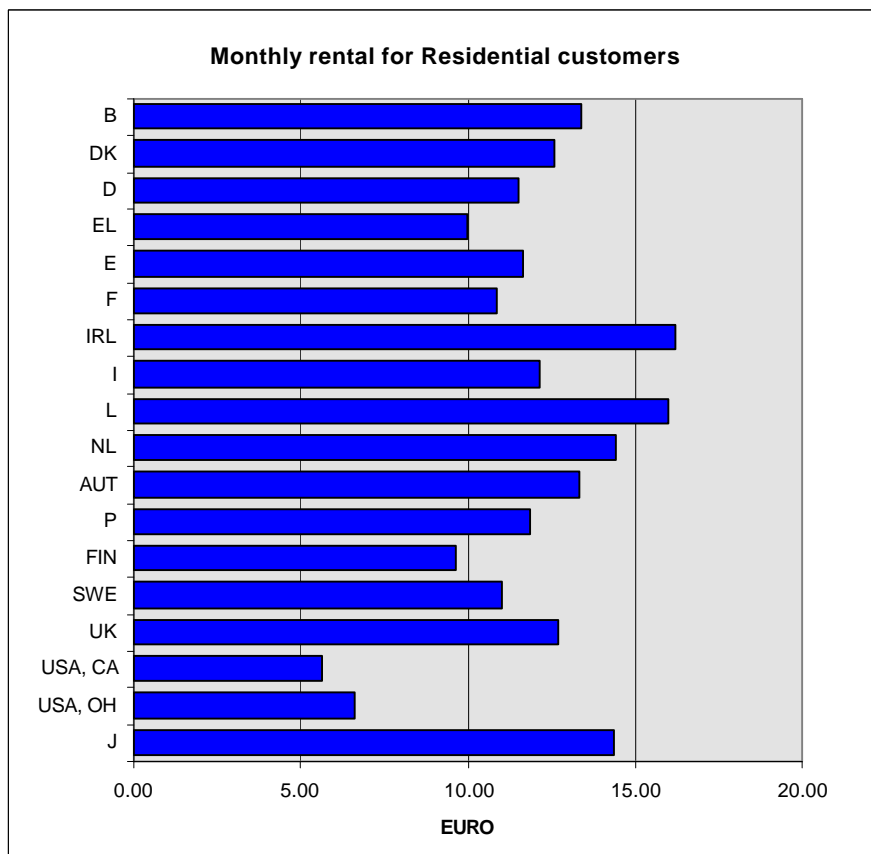


Figure 3.2 PSTN monthly rental for residential customers 12/2002



3.3. PSTN Local call charges

This section lists **local call charges for standard PSTN service**. Discounts are not included. Prices are in euro and exclude VAT. Charges are given for actual calls of 3, 5 and 10 minutes. Peak hour calls are assumed to be at 11:00 on weekdays, off-peak calls are assumed to be at 20:00 on weekdays, and economy calls are assumed to be the cheapest rate possible. The weekday night-time rate is the lowest in Germany, while the Sunday rate is the lowest in United Kingdom. The weekday night-time and Sunday rates are the same (and lowest) in the other 13 countries.

The charges shown in the tables below are valid for the default tariff applied to Residential and Business customers. In Austria and the Netherlands there are no default tariffs, and the customer will have to make a choice.

The call costs includes call setup and minimum charges, and where unit based charging is used, the cost of full units are included, relative to the call duration.

The countries now using per second charging are: Belgium, Denmark, Spain, France, Ireland, Italy, the Netherlands, Portugal, Finland, Sweden and United Kingdom. Germany, Greece and Luxembourg still use unit based charging, while Austria use both systems, depending on the chosen tariff.

In USA several options may be available: per minute measured rate, message rate or flat rate. Message rate may involve a monthly minimum charge with a call allowance, and flat rate is purely based on a monthly charge.

In Japan (NTT) a unit based system is used.

The size of local calling areas in different countries is a constant source of concern when comparing local call charges. A direct comparison is difficult, as many operators are reluctant to provide information on average size of the local calling areas (because it is often considered commercially sensitive information).

**Table 3.3 Residential PSTN local call charges, peak time (11:00 weekdays)
(in euro excluding VAT)**

	Peak 3 minute local call		Peak 5 minute local call		Peak 10 minute local call	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.12	0.12	0.20	0.21	0.41	0.41
DK	0.12	0.11	0.18	0.16	0.33	0.30
D	0.11	0.10	0.21	0.21	0.37	0.36
EL	0.09	0.08	0.15	0.13	0.31	0.26
E	0.08	0.08	0.12	0.12	0.24	0.24
F	0.09	0.13	0.15	0.67	0.29	0.81
IRL	0.13	0.13	0.21	0.21	0.42	0.42
I	0.10	0.10	0.13	0.13	0.21	0.21
L	0.08	0.08	0.13	0.13	0.27	0.27
NL	0.10	0.11	0.15	0.15	0.26	0.27
AUT	0.19	0.14	0.32	0.23	0.58	0.47
P	0.12	0.12	0.16	0.16	0.26	0.26
FIN	0.13	0.13	0.14	0.14	0.19	0.19
SWE	0.10	0.10	0.14	0.14	0.23	0.24
UK	0.16	0.16	0.27	0.26	0.54	0.52
USA, CA meas	0.04	0.04	0.06	0.05	0.11	0.10
USA, OH meas	0.06	0.05	0.09	0.07	0.17	0.11
USA, OH mess	0.09	0.08	0.09	0.08	0.09	0.08
Japan	0.09	0.07	0.18	0.14	0.35	0.27
EU Average	0.11	0.11	0.18	0.20	0.33	0.35

Notes:

The EU Average is a simple un-weighted average

Exchange rate variations for non-euro countries affect the results.

For Austria the TikTak Privat tariff is now used to represent residential usage. The numbers for 2001 reflect the "Standard" package.

In California, USA a flat rate service is available to residential users at €11.91 per month instead of the measured rate monthly rental of €6.35.

In Ohio, USA a flat rate service is available to residential users at €8.58 per month on top of the monthly line rental at €7.47.

Message rate service involves a monthly charge of €6.85 for business, and €2.58 for residential. This monthly charge includes an allowance of 73 local messages (calls) for business, and 30 for residential. The call charge in the table above is for calls beyond the allowance, but does also largely correspond to the value of the calls in the allowance.

The monthly rental charges will vary with location both in California and Ohio. Charges shown are the most common, applicable in most local areas.

**Table 3.4 Residential PSTN local call charges, off-peak time (20:00 weekdays)
(in euro excluding VAT)**

	Off-peak 3 minute local call		Off-peak 5 minute local call		Off-peak 10 minute local call	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.06	0.06	0.10	0.10	0.21	0.21
DK	0.07	0.07	0.10	0.09	0.18	0.16
D	0.11	0.10	0.11	0.10	0.21	0.21
EL	0.09	0.08	0.15	0.13	0.31	0.26
E	0.07	0.07	0.09	0.09	0.14	0.14
F	0.09	0.11	0.12	0.65	0.20	0.72
IRL	0.03	0.03	0.05	0.05	0.11	0.10
I	0.08	0.08	0.10	0.10	0.14	0.14
L	0.05	0.04	0.08	0.07	0.13	0.13
NL	0.07	0.07	0.09	0.10	0.16	0.16
AUT	0.13	0.05	0.13	0.08	0.26	0.17
P	0.12	0.12	0.16	0.16	0.26	0.26
FIN	0.13	0.13	0.14	0.14	0.19	0.19
SWE	0.07	0.07	0.09	0.09	0.14	0.14
UK	0.06	0.06	0.10	0.10	0.20	0.20
USA, CA meas	0.03	0.03	0.04	0.04	0.08	0.07
USA, OH meas	0.06	0.05	0.09	0.07	0.17	0.11
USA, OH mess	0.09	0.08	0.09	0.08	0.09	0.08
Japan	0.09	0.07	0.18	0.14	0.35	0.27
EU Average	0.08	0.08	0.11	0.14	0.18	0.21

Notes: The EU Average is a simple un-weighted average

Exchange rate variations for non-euro countries affect the results.

Please see further notes after table 3.3.

**Table 3.5 Residential PSTN local call charges, economy time (Cheapest rate possible)
(in euro excluding VAT)**

	Economy 3 minute local call		Economy 5 minute local call		Economy 10 minute local call	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.06	0.06	0.10	0.10	0.21	0.21
DK	0.07	0.07	0.10	0.09	0.18	0.16
D	0.11	0.05	0.11	0.10	0.21	0.21
EL	0.06	0.05	0.09	0.08	0.15	0.13
E	0.07	0.07	0.09	0.09	0.14	0.14
F	0.09	0.11	0.12	0.65	0.20	0.72
IRL	0.03	0.03	0.05	0.05	0.11	0.10
I	0.08	0.08	0.10	0.10	0.14	0.14
L	0.05	0.04	0.08	0.07	0.13	0.13
NL	0.06	0.06	0.07	0.08	0.11	0.12
AUT	0.13	0.05	0.13	0.08	0.26	0.17
P	0.10	0.10	0.12	0.12	0.17	0.17
FIN	0.13	0.13	0.14	0.14	0.19	0.19
SWE	0.07	0.07	0.09	0.09	0.14	0.14
UK	0.04	0.04	0.07	0.07	0.14	0.13
USA, CA meas	0.02	0.01	0.02	0.02	0.04	0.04
USA, OH meas	0.06	0.03	0.09	0.03	0.17	0.06
USA, OH mess	0.09	0.08	0.09	0.08	0.09	0.08
Japan	0.09	0.07	0.18	0.14	0.35	0.27
EU Average	0.07	0.07	0.10	0.13	0.16	0.19

Notes: The EU Average is a simple un-weighted average.
Exchange rate variations for non-euro countries affect the results.

Please see further notes after table 3.3.

Economy rates are cheapest rate possible, regardless of time of day. The weekday night-time are the lowest in 14 countries, except UK.

The variation in the Economy charges across call durations and some changes between December 2001 and December 2002 may result from the fact that unit based charging systems may lead to non-proportional call charges relative to call duration. Per second based charging generally gives call charges which are proportional to call duration.

Figure 3.3 Local call charge comparison December 2001 - December 2002, peak time

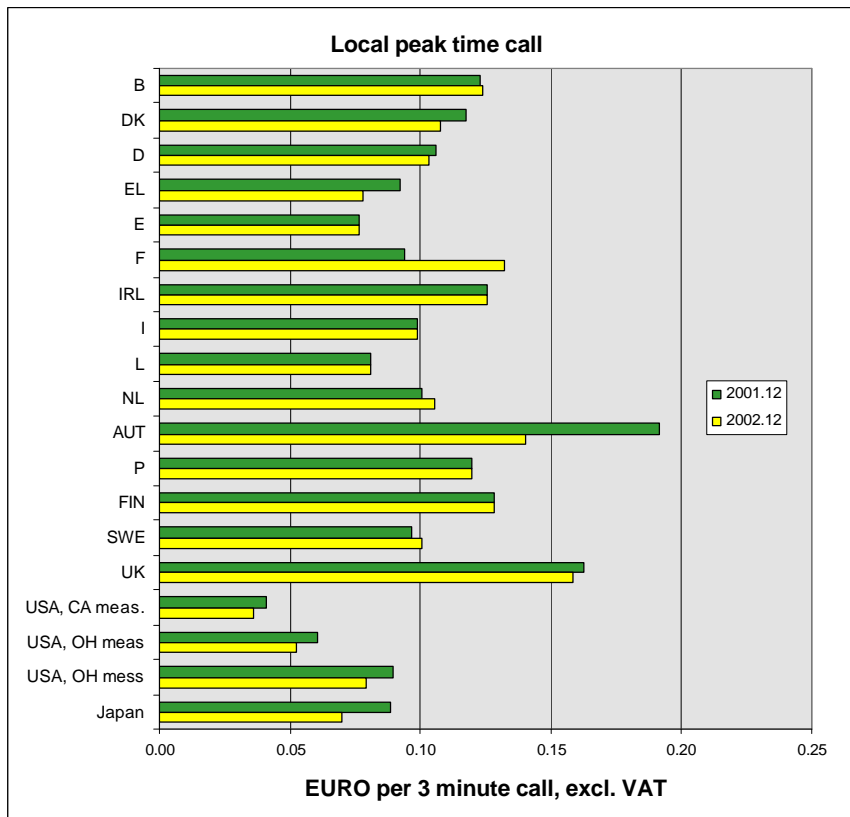
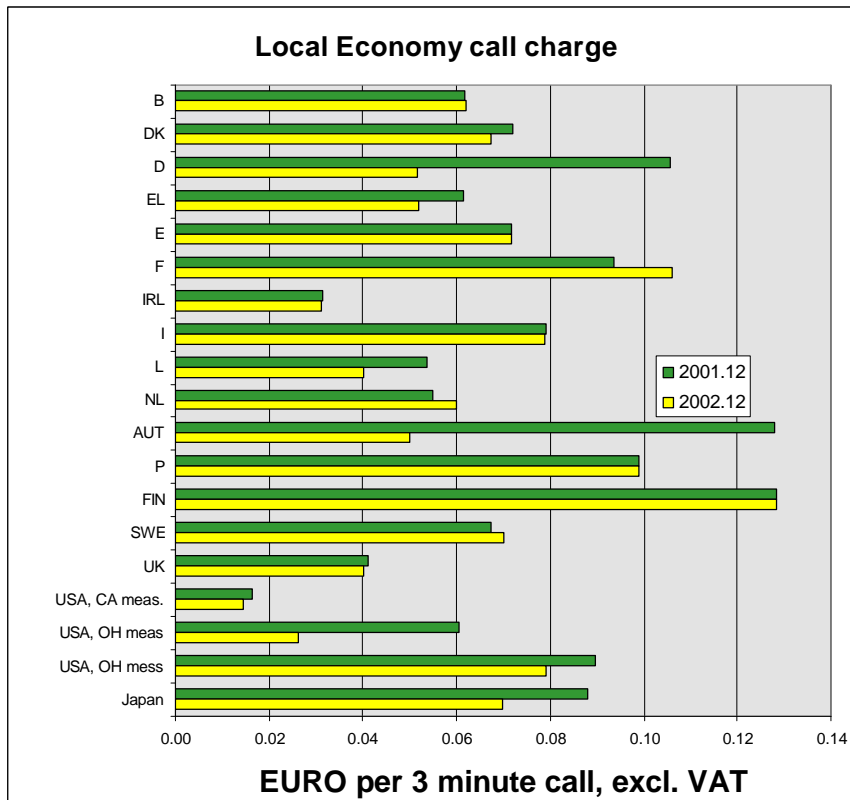


Figure 3.4 Local call charge comparison December 2001 - December 2002, economy time



Note: Economy rates are cheapest rate possible, regardless of time of day.
Exchange rate variations may affect the results

3.4. PSTN regional call charges

Some operators use several tariff zones to price the national calls. Once a call goes beyond the local calling area, it can be classified as a long distance call. But as not all operators use only two zones, local and long distance, it is useful to classify the zones in between as regional zones. Distances covered by these zones will normally be from 10km (or whatever the radius of the local calling area is) and upwards.

Regional call charges for standard PSTN service are listed below. Prices are in euro and exclude VAT. Charges are given for actual calls of 3, 5 and 10 minutes. Peak hour calls are assumed to be at 11:00 on weekdays, off-peak calls at 20:00 on weekdays, and economy calls are assumed to be the cheapest rate. The weekday night-time and Sunday rates are the same (and lowest) in the 4 countries using regional zones.

The charges shown in the tables below are valid for both Residential and Business customers.

The call costs include call setup and minimum charges, and where unit based charging is used, the cost of full units are included, relative to the call duration.

There are 5 countries that have regional zones in their tariffs: France, Greece, Spain, Italy, and Portugal. Except for Belgium, Denmark, Luxembourg and Sweden, where there is only one charge for the entire country (local), the remainders have only got local and long distance zones.

None of the countries have more than one regional zone. An exception is France where there in principle are 3 zones, but the two longest (distance) are priced identical to the National zone.

Out of the five countries having regional zones, four use per second charging: France, Spain, Italy and Portugal. Greece still uses unit based charging.

Intra-state charges in the USA can be classified as regional call charges. The local operator has traditionally provided such service, but in recent years the long-distance carriers have been allowed to enter into this market. The prices offered by these operators tend to be lower than the prices from the local operator.

Both Japan and USA will have several distance bands for the regional charges, something which makes these very difficult to compare with other countries on a charge-by-charge basis.

**Table 3.6 Regional call charges at peak time (11:00 weekdays)
(in euro excluding VAT)**

		Peak 3 minute Regional call		Peak 5 minute Regional call		Peak 10 minute Regional call	
		December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B		N/R	N/R	N/R	N/R	N/R	N/R
DK		N/R	N/R	N/R	N/R	N/R	N/R
D		N/R	N/R	N/R	N/R	N/R	N/R
EL	< 45 km	0.09	0.08	0.15	0.13	0.31	0.26
E	Provincial	0.31	0.20	0.46	0.28	0.83	0.47
F	25-30 km	0.15	0.15	0.25	0.25	0.51	0.51
IRL		N/R	N/R	N/R	N/R	N/R	N/R
I	< 15 km	0.22	0.22	0.32	0.32	0.58	0.58
L		N/R	N/R	N/R	N/R	N/R	N/R
NL		N/R	N/R	N/R	N/R	N/R	N/R
AUT		N/R	N/R	N/R	N/R	N/R	N/R
P	10 - 50 km	0.23	0.23	0.35	0.35	0.63	0.63
FIN		N/R	N/R	N/R	N/R	N/R	N/R
SWE		N/R	N/R	N/R	N/R	N/R	N/R
UK		N/R	N/R	N/R	N/R	N/R	N/R
USA, CA	21 - 32 km	0.19	0.17	0.30	0.26	0.56	0.49
	32 - 64 km	0.27	0.24	0.45	0.39	0.88	0.77
	64 - 112 km	0.30	0.26	0.49	0.43	0.96	0.84
	> 112 km	0.32	0.28	0.52	0.46	1.04	0.91
USA, OH		0.64	0.53	1.07	0.88	2.13	1.77
Japan	< 20 km	0.18	0.16	0.35	0.32	0.62	0.56
	20 - 60 km	0.26	0.24	0.44	0.40	0.88	0.81
	> 60 km	0.35	0.32	0.62	0.56	1.23	1.13

Notes:

1. N/R = not relevant. Regional zones do not exist in the tariff.
2. Regional calls in Ohio are not distance dependent
3. Regional charges in France only differ from long distance for distances below 30 km.

**Table 3.7 Regional call charges at off-peak time (20:00 weekdays)
(in euro excluding VAT)**

		Off-Peak 3 minute Regional call		Off-Peak 5 minute Regional call		Off-Peak 10 minute Regional call	
		December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B		N/R	N/R	N/R	N/R	N/R	N/R
DK		N/R	N/R	N/R	N/R	N/R	N/R
D		N/R	N/R	N/R	N/R	N/R	N/R
EL	< 45 km	0.09	0.08	0.15	0.13	0.31	0.26
E	Provincial	0.21	0.16	0.29	0.22	0.49	0.35
F	25-30 km	0.12	0.12	0.17	0.17	0.30	0.30
IRL		N/R	N/R	N/R	N/R	N/R	N/R
I	< 15 km	0.14	0.14	0.19	0.19	0.32	0.32
L		N/R	N/R	N/R	N/R	N/R	N/R
NL		N/R	N/R	N/R	N/R	N/R	N/R
AUT	50 - 200 km	N/R	N/R	N/R	N/R	N/R	N/R
P	10 - 50 km	0.23	0.23	0.35	0.35	0.63	0.63
FIN		N/R	N/R	N/R	N/R	N/R	N/R
SWE		N/R	N/R	N/R	N/R	N/R	N/R
UK		N/R	N/R	N/R	N/R	N/R	N/R
USA, CA	21 - 32 km	0.15	0.13	0.24	0.21	0.45	0.39
	32 - 64 km	0.22	0.19	0.36	0.31	0.70	0.61
	64 - 112 km	0.24	0.21	0.39	0.34	0.77	0.67
	> 112 km	0.24	0.21	0.39	0.34	0.77	0.67
USA, OH		0.44	0.41	0.73	0.69	1.46	1.38
Japan	< 20 km	0.18	0.16	0.35	0.32	0.62	0.56
	20 - 60 km	0.26	0.24	0.35	0.32	0.71	0.64
	> 60 km	0.26	0.24	0.44	0.40	0.88	0.81

Notes:

1. N/R = not relevant. Regional zones do not exist in the tariff.
2. Regional calls in Ohio are not distance dependent
3. Regional charges in France only differ from long distance for distances below 30 km.

**Table 3.8 Regional call charges at economy time (Cheapest rate possible)
(in euro excluding VAT)**

		Economy 3 minute Regional call		Economy 5 minute Regional call		Economy 10 minute Regional call	
		December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B		N/R	N/R	N/R	N/R	N/R	N/R
DK		N/R	N/R	N/R	N/R	N/R	N/R
D		N/R	N/R	N/R	N/R	N/R	N/R
EL	< 45 km	0.06	0.08	0.09	0.13	0.15	0.26
E	Provincial	0.19	0.16	0.29	0.22	0.49	0.35
F	25-30 km	0.21	0.12	0.29	0.17	0.49	0.30
IRL		N/R	N/R	N/R	N/R	N/R	N/R
I	< 15 km	0.14	0.14	0.19	0.19	0.32	0.32
L		N/R	N/R	N/R	N/R	N/R	N/R
NL		N/R	N/R	N/R	N/R	N/R	N/R
AUT	50 - 200 km	N/R	N/R	N/R	N/R	N/R	N/R
P	10 - 50 km	0.15	0.15	0.21	0.21	0.35	0.34
FIN		N/R	N/R	N/R	N/R	N/R	N/R
SWE		N/R	N/R	N/R	N/R	N/R	N/R
UK		N/R	N/R	N/R	N/R	N/R	N/R
USA, CA	21 - 32 km	0.12	0.10	0.18	0.16	0.34	0.30
	32 - 64 km	0.16	0.14	0.27	0.24	0.53	0.46
	64 - 112 km	0.18	0.16	0.29	0.26	0.58	0.50
	> 112 km	0.19	0.17	0.31	0.27	0.62	0.54
USA, OH		0.44	0.35	0.73	0.59	1.46	1.18
Japan	< 20 km	0.18	0.16	0.35	0.24	0.62	0.40
	20 - 60 km	0.26	0.16	0.35	0.32	0.71	0.56
	> 60 km	0.26	0.16	0.44	0.32	0.88	0.56

Notes:

1. N/R = not relevant. Regional zones do not exist in the tariff.
2. Regional calls in Ohio are not distance dependent
3. Regional charges in France only differ from long distance for distances below 30 km.

3.5. PSTN long distance call charges

Long distance (national) calls apply to all calls outside the regions covered by local and regional calls. The distance definitions used in the different countries vary a lot, and not all operators define the average minimum distance. Please see section 3.10 for the “official” definitions.

Long distance (national) call charges for standard Residential PSTN service are listed below. Prices are in euro and exclude VAT. Charges are given for actual calls of 3, 5 and 10 minutes. Peak hour calls are assumed to be at 11:00 weekdays, off-peak calls are assumed to be at 20:00 weekdays, and economy calls are assumed to be the cheapest rate possible. The weekday night-time rate is the lowest in Finland and Germany. The Sunday rate is the lowest in Ireland and the United Kingdom. The weekday night-time and Sunday rates are the same (and lowest) in the other 11 countries.

The charges shown in the tables below are valid for the default tariff applied to Residential and Business customers. In Austria and the Netherlands there are no default tariffs, and the customer will have to make a choice.

The call costs include call setup and minimum charges, and where unit based charging is used, the cost of full units are included, relative to the call duration (i.e. to the end of the last unit after the end of the call).

The countries now using per second charging are: Belgium, Denmark, Spain, France, Ireland, Italy, the Netherlands, Portugal, Finland, Sweden and United Kingdom. Germany, Greece and Luxembourg still use unit based charging, while Austria use both systems, depending on the chosen tariff.

Long distance services in USA are traditionally offered by long distance operators. In recent years the local/regional operators have also been allowed to enter into this market, when certain criteria are fulfilled. There are a wide variety of prices available, and it would be impossible to report all of those. Most long distance rates are now quite simple, with a single charge for all of USA, at all times.

**Table 3.9 Residential national call charges at peak time (11:00 weekdays)
(in euro excluding VAT)**

	Peak 3 minute National call		Peak 5 minute National call		Peak 10 minute National call	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.12	0.12	0.20	0.21	0.41	0.41
DK	0.12	0.11	0.18	0.16	0.33	0.30
D	0.32	0.32	0.53	0.53	1.06	1.06
EL	0.25	0.21	0.40	0.34	0.77	0.65
E	0.48	0.29	0.73	0.42	1.38	0.76
F	0.27	0.32	0.43	0.47	0.81	0.85
IRL	0.23	0.23	0.39	0.39	0.77	0.77
I	0.35	0.35	0.54	0.54	1.02	1.02
L	0.08	0.08	0.13	0.13	0.27	0.27
NL	0.15	0.15	0.22	0.22	0.40	0.40
AUT	0.19	0.17	0.32	0.28	0.64	0.56
P	0.33	0.33	0.51	0.51	0.96	0.96
FIN	0.26	0.26	0.39	0.39	0.72	0.72
SWE	0.10	0.10	0.14	0.14	0.23	0.24
UK	0.33	0.31	0.54	0.52	1.09	1.05
USA	0.25	0.22	0.42	0.37	0.84	0.74
Japan	0.35	0.32	0.62	0.56	1.23	1.13
EU average	0.24	0.22	0.38	0.35	0.72	0.67

Notes:

The EU Average is a simple un-weighted average

Minor exchange rate variations affect the results

**Table 3.10 Residential national call charges at off-peak time (20:00 weekdays)
(in euro excluding VAT)**

	Off-peak 3 minute National call		Off-peak 5 minute National call		Off-peak 10 minute National call	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.06	0.06	0.10	0.10	0.21	0.21
DK	0.07	0.07	0.10	0.09	0.18	0.16
D	0.16	0.16	0.26	0.27	0.53	0.53
EL	0.25	0.21	0.40	0.34	0.77	0.65
E	0.28	0.20	0.40	0.27	0.71	0.46
F	0.21	0.25	0.31	0.35	0.57	0.60
IRL	0.15	0.15	0.25	0.25	0.51	0.51
I	0.21	0.14	0.31	0.19	0.56	0.32
L	0.05	0.04	0.08	0.07	0.13	0.13
NL	0.08	0.09	0.11	0.13	0.19	0.21
AUT	0.19	0.08	0.32	0.13	0.58	0.25
P	0.33	0.33	0.51	0.51	0.96	0.96
FIN	0.17	0.17	0.24	0.24	0.41	0.42
SWE	0.07	0.07	0.09	0.09	0.14	0.14
UK	0.16	0.16	0.27	0.26	0.54	0.52
USA	0.25	0.22	0.42	0.37	0.84	0.74
Japan	0.26	0.24	0.44	0.40	0.88	0.81
EU average	0.16	0.15	0.25	0.22	0.47	0.41

Notes:

The EU Average is a simple un-weighted average.
Minor exchange rate variations affect the results

**Table 3.11 Residential national call charges at economy time (Cheapest rate possible)
(in euro excluding VAT)**

	Economy 3 minute National call		Economy 5 minute National call		Economy 10 minute National call	
	December	December	December	December	December	December
	2001	2002	2001	2002	2001	2002
B	0.06	0.06	0.10	0.10	0.21	0.21
DK	0.07	0.07	0.10	0.09	0.18	0.16
D (weekday night)	0.08	0.08	0.13	0.13	0.26	0.27
EL	0.25	0.21	0.40	0.34	0.77	0.65
E	0.28	0.20	0.40	0.27	0.71	0.46
F	0.21	0.25	0.31	0.35	0.57	0.60
IRL (Sunday)	0.03	0.03	0.05	0.05	0.11	0.10
I	0.21	0.14	0.31	0.19	0.56	0.32
L	0.05	0.04	0.08	0.07	0.13	0.13
NL	0.08	0.09	0.11	0.13	0.19	0.21
AUT	0.19	0.08	0.32	0.13	0.58	0.25
P	0.21	0.21	0.30	0.30	0.52	0.52
FIN (weekday night)	0.17	0.17	0.24	0.24	0.41	0.42
SWE	0.07	0.07	0.09	0.09	0.14	0.14
UK (Sunday)	0.08	0.08	0.14	0.13	0.27	0.26
USA	0.25	0.22	0.42	0.37	0.84	0.74
Japan	0.18	0.16	0.35	0.32	0.62	0.56
EU Average	0.14	0.12	0.21	0.17	0.37	0.31

Notes:

The EU Average is a simple un-weighted average.

Minor exchange rate variations affect the results

Economy rates are cheapest rate possible, regardless of time of day. The weekday night-time and Sunday rates are the same (and lowest) in 11 EU countries.

Figure 3.5 National call charge comparison December 2001 – December 2002, peak time.

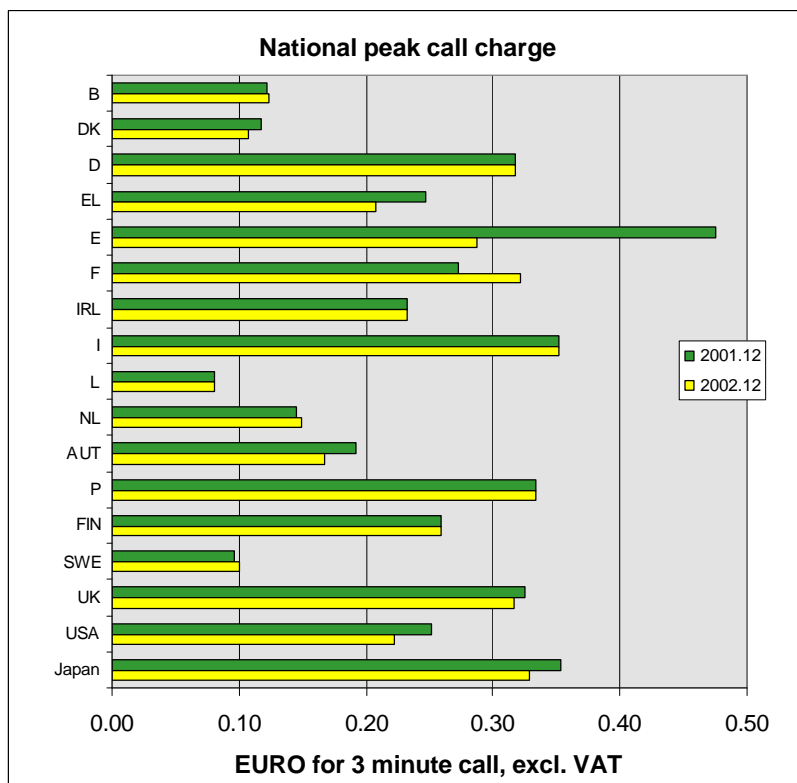
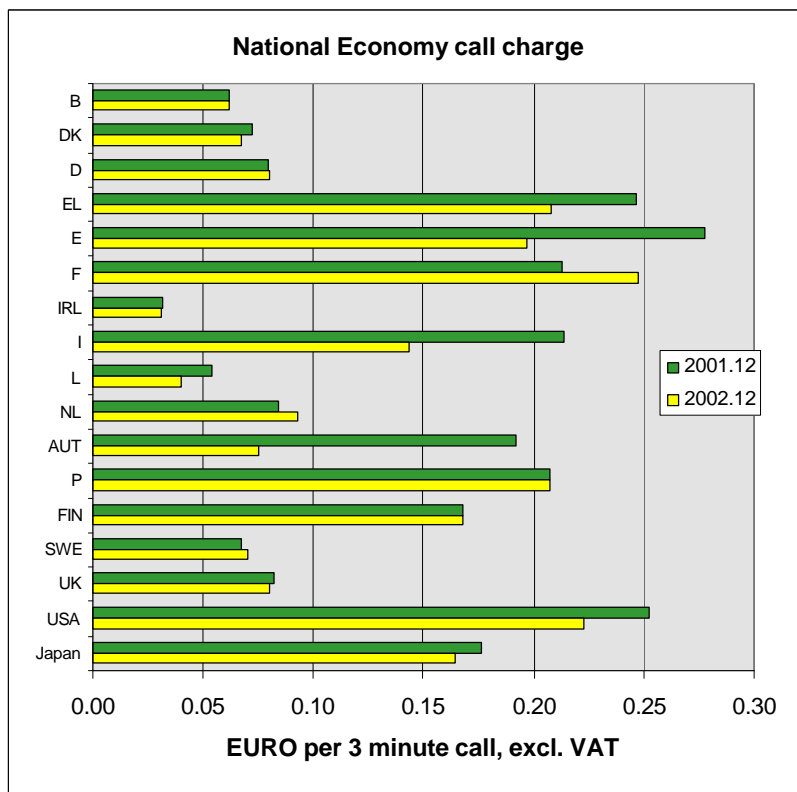


Figure 3.6 National call charge comparison December 2001 – December 2002, economy time.



Note: Economy rates are cheapest rate possible, regardless of time of day.
Exchange rate variations may affect the results

3.6. PSTN calls to mobile phones

Charges for calls from standard residential PSTN service to mobile phones are listed below. Where charges are different, calls to the mobile network operated by the incumbent operator are assumed. Prices are in euro and exclude VAT. Charges are given for actual calls of 3, 5 and 10 minutes.

Peak hour calls are assumed to be at 11:00 weekdays, off-peak calls are assumed to be at 20:00 weekdays, and economy calls are assumed to be the cheapest rate possible. The weekday night-time and Sunday rates are the same (and lowest) in all countries, except for calls to Telecel in Portugal, where weekend calls are cheaper.

The prices include call setup and minimum charges, and where unit based charging is used, the cost of full units are included, relative to the call duration.

The countries now using per second charging are: Belgium, Denmark, Spain, France, Ireland, Italy, the Netherlands, Portugal, Finland, Sweden and United Kingdom. Germany, Greece and Luxembourg still use unit based charging, while Austria use both systems, depending on the chosen tariff.

Table 3.12 Residential call charges to mobile phones at peak time (11:00 weekdays) (in euro excluding VAT)

	Peak 3 minute call to mobile		Peak 5 minute call to mobile		Peak 10 minute call to mobile	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.93	0.70	1.46	1.10	2.80	2.11
DK	0.59	0.59	0.97	0.97	1.91	1.91
D	1.27	0.64	2.11	1.06	4.23	2.12
EL	0.86	0.87	1.45	1.45	2.90	2.90
E	0.77	0.65	1.24	1.04	2.41	2.01
F	0.76	0.89	1.27	1.34	2.54	2.47
IRL	0.72	0.63	1.21	1.06	2.41	2.11
I	0.72	0.84	1.16	1.35	2.26	2.64
L	0.54	0.49	0.86	0.81	1.62	1.62
NL	0.69	0.79	1.14	1.29	2.28	2.54
AUT	0.54	0.48	0.90	0.80	1.81	1.60
P	0.93	0.87	1.55	1.45	3.09	2.90
FIN	0.72	0.72	1.16	1.16	2.26	2.26
SWE	0.64	0.66	1.06	1.10	2.12	2.20
UK	0.78	0.75	1.30	1.25	2.61	2.51
Japan, same	0.71	0.64	1.23	1.13	2.38	2.17
Japan, other	0.88	0.81	1.41	1.29	2.73	2.50
EU average	0.77	0.71	1.27	1.15	2.51	2.26

Notes: The EU Average is a simple un-weighted average

Minor exchange rate variations affect the results

Calls to mobile phones in USA are charged in a very different way than what is normal in most other countries. The caller pays for the call to the mobile network "gateway" with a local or long distance call, and the mobile user pays for the mobile section of the call ("receiving party pays").

Calls to mobiles in Japan (by NTT) are split into two categories: Whether the mobile phone is in the same "NTT business area" as the caller, or another area.

**Table 3.13 Residential call charges to mobile phones at off-peak time (20:00 weekdays)
(in euro excluding VAT)**

	Off-peak 3 minute call to mobile		Off-peak 5 minute call to mobile		Off-peak 10 minute call to mobile	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.47	0.47	0.73	0.74	1.40	1.41
DK	0.31	0.31	0.50	0.50	0.97	0.97
D	0.63	0.64	1.06	1.06	2.11	2.12
EL	0.86	0.87	1.45	1.45	2.90	2.90
E	0.77	0.65	1.24	1.04	2.41	2.01
F	0.76	0.89	1.27	1.34	2.54	2.47
IRL	0.48	0.48	0.80	0.80	1.61	1.61
I	0.72	0.45	1.16	0.71	2.26	1.36
L	0.43	0.42	0.75	0.70	1.40	1.40
NL	0.51	0.60	0.85	0.98	1.71	1.91
AUT	0.48	0.43	0.78	0.71	1.51	1.42
P	0.93	0.87	1.55	1.45	3.09	2.90
FIN	0.49	0.49	0.77	0.77	1.48	1.48
SWE	0.39	0.40	0.64	0.66	1.28	1.32
UK	0.67	0.52	1.11	0.87	2.22	1.74
Japan, same	0.71	0.64	1.23	1.13	2.38	2.17
Japan, other	0.88	0.81	1.41	1.29	2.73	2.50
EU Average	0.60	0.57	0.99	0.92	1.95	1.80

Notes: The EU Average is a simple un-weighted average

Minor exchange rate variations affect the results

Calls to mobile phones in USA are charged in a very different way than what is normal in most other countries. The caller pays for the call to the mobile network "gateway" with a local or long distance call, and the mobile user pays for the mobile section of the call ("receiving party pays").

Calls to mobiles in Japan (by NTT) are split into two categories: Whether the mobile phone is in the same "NTT business area" as the caller, or another area.

**Table 3.14 Residential call charges to mobile phones at economy time (Cheapest rate possible)
(in euro excluding VAT)**

	Economy 3 minute call to mobile		Economy 5 minute call to mobile		Economy 10 minute call to mobile	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.47	0.34	0.73	0.53	1.40	1.01
DK	0.31	0.31	0.50	0.50	0.97	0.97
D	0.63	0.64	1.06	1.06	2.11	2.12
EL	0.86	0.87	1.45	1.45	2.90	2.90
E	0.47	0.41	0.73	0.63	1.39	1.19
F	0.51	0.54	0.76	0.75	1.40	1.30
IRL	0.48	0.48	0.80	0.80	1.61	1.61
I	0.72	0.45	1.16	0.71	2.26	1.36
L	0.43	0.42	0.75	0.70	1.40	1.40
NL	0.29	0.36	0.49	0.56	0.97	1.09
AUT	0.48	0.43	0.78	0.71	1.51	1.42
P (Sunday)	0.72	0.77	1.20	1.28	2.39	2.55
FIN	0.49	0.49	0.77	0.77	1.48	1.48
SWE	0.39	0.40	0.64	0.66	1.28	1.32
UK	0.09	0.09	0.16	0.16	0.32	0.31
Japan, same	0.71	0.48	1.23	0.81	2.38	1.61
Japan, other	0.88	0.64	1.41	0.97	2.73	1.93
EU Average	0.50	0.47	0.81	0.75	1.59	1.47

Notes: The EU Average is a simple un-weighted average

Minor exchange rate variations affect the results

Economy rates are cheapest rate possible, regardless of time of day.

Calls to mobile phones in USA are charged in a very different way than what is normal in most other countries. The caller pays for the call to the mobile network "gateway" with a local or long distance call, and the mobile user pays for the mobile section of the call ("receiving party pays").

Calls to mobiles in Japan (by NTT) are split into two categories: Whether the mobile phone is in the same "NTT business area" as the caller, or another area.

The charts below show comparisons of the call charges for a 3 minute call to a mobile phone from the fixed PSTN network.

Figure 3.7 Peak time call charges to mobile phones December 2001 – December 2002

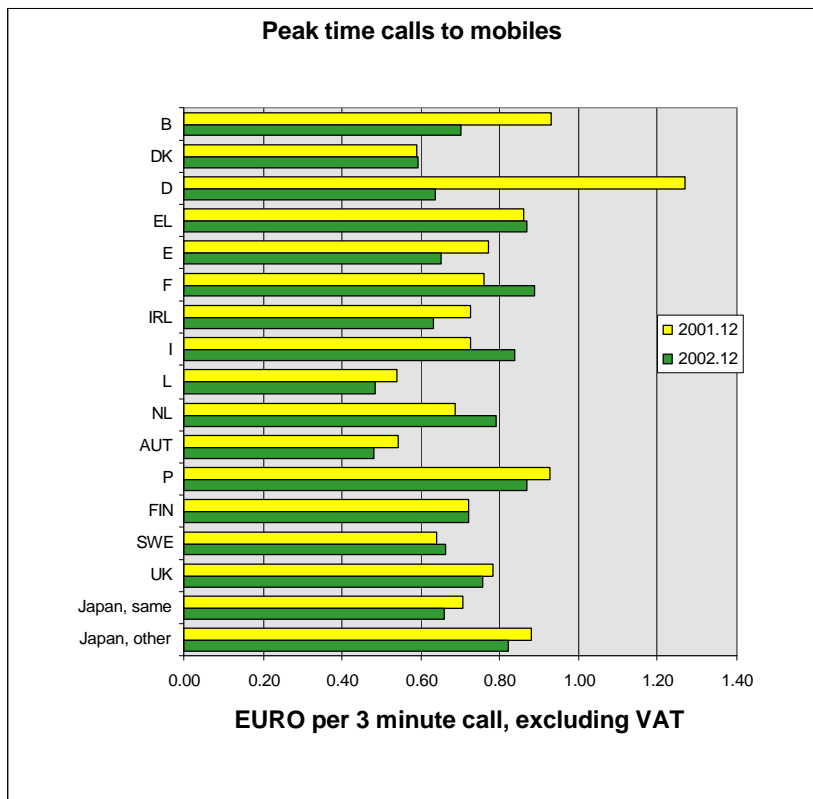
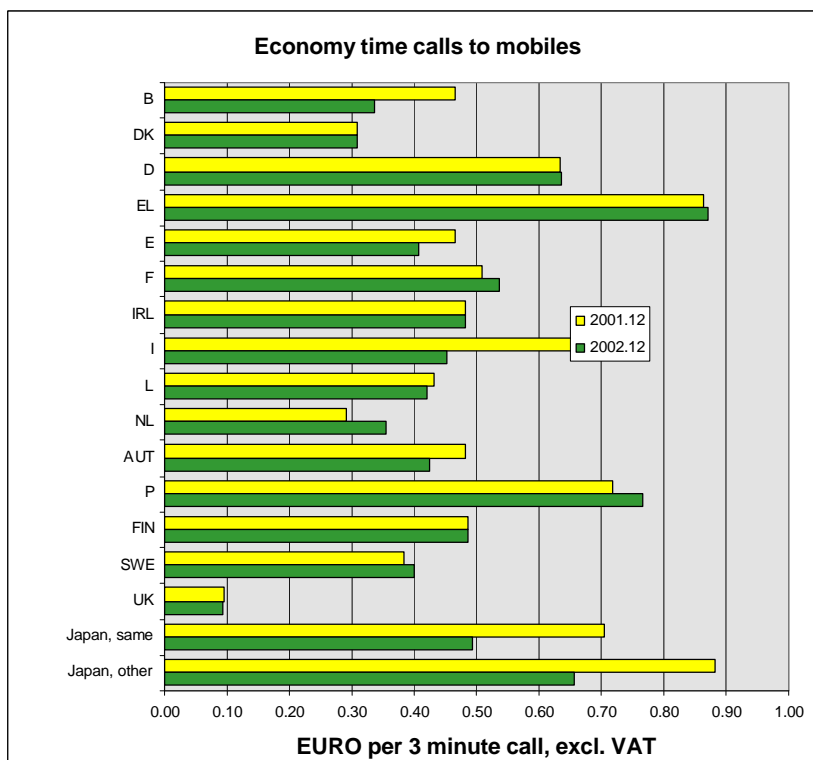


Figure 3.8 Economy time call charges to mobile phones December 2001 – December 2002



Note: Economy rates are cheapest rate possible, regardless of time of day.

3.7. PSTN calls to other EU countries

Intra-EU call charges for standard PSTN service are listed below. Prices are in euro and exclude VAT. Charges are given for actual calls of 3, 5 and 10 minutes.

Peak hour calls are assumed to be at 11:00 weekdays, off-peak calls are assumed to be at 20:00 weekdays, and economy calls are assumed to be the cheapest rate possible. All countries have the same rate for weekday night-time and Sundays, so that the Economy rates below will cover both nights and weekends.

The charges shown in the tables below are valid for both Residential and Business customers. Some operators may offer tariff packages aimed at specific customer segments with different tariffs from the ones presented here.

The call costs do include call setup and minimum charges, and where unit based charging is used, the cost of full units are included, relative to the call duration.

The countries now using per second charging are: Belgium, Denmark, Spain, France, Ireland, Italy, the Netherlands, Portugal, Finland, Sweden and United Kingdom. Germany, Greece and Luxembourg still use unit based charging, while Austria use both systems, depending on the chosen tariff.

Comparisons with call charges from USA and Japan are not really relevant because of the geographical positions of these two countries. With the variety of calling packages in the USA there may be implications also for national charges (e.g. additional fixed charges) when selecting a low cost international package.

The charges shown are simple averages of the call charges to all other EU countries. Please see tables in section 3.8 for details on call charges between individual countries.

**Table 3.15 Average intra-EU call charges at peak time (11:00 weekdays)
(in euro excluding VAT)**

	Peak 3 minute Intra-EU call		Peak 5 minute Intra-EU call		Peak 10 minute Intra-EU call	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.60	0.62	0.95	0.97	1.82	1.86
DK	0.71	0.71	1.16	1.17	2.30	2.30
D	0.34	0.34	0.57	0.57	1.13	1.14
EL	0.74	0.75	1.23	1.25	2.47	2.50
E	0.72	0.48	1.11	0.72	2.11	1.32
F	0.62	0.62	1.02	1.02	2.01	2.01
IRL	1.05	1.05	1.75	1.75	3.49	3.49
I	0.88	0.74	1.29	1.06	2.32	1.87
L	0.58	0.37	1.02	0.62	1.95	1.25
NL	0.37	0.36	0.58	0.57	1.13	1.10
AUT	0.95	0.78	1.58	1.30	3.15	2.60
P	0.82	0.82	1.31	1.31	2.54	2.54
FIN	1.15	1.16	1.87	1.88	3.68	3.71
SWE	0.46	0.48	0.75	0.78	1.46	1.51
UK	1.30	1.25	2.16	2.09	4.32	4.18
EU Average	0.75	0.70	1.22	1.14	2.39	2.23

Notes: The EU Average is a simple un-weighted average.

Minor exchange rate variations for non-euro countries affect the results

Table 3.16 Average intra-EU call charges at off-peak time (20:00 weekdays)
(in euro excluding VAT)

	Off-peak 3 minute Intra-EU call		Off-peak 5 minute Intra-EU call		Off-peak 10 minute Intra-EU call	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.44	0.44	0.67	0.68	1.26	1.28
DK	0.71	0.71	1.16	1.17	2.30	2.30
D	0.34	0.34	0.57	0.57	1.13	1.14
EL	0.74	0.75	1.23	1.25	2.47	2.50
E	0.72	0.48	1.11	0.72	2.11	1.32
F	0.39	0.39	0.62	0.62	1.18	1.18
IRL	0.92	0.92	1.53	1.53	3.05	3.05
I	0.88	0.74	1.29	1.06	2.32	1.87
L	0.46	0.31	0.71	0.52	1.41	1.03
NL	0.37	0.36	0.58	0.57	1.13	1.10
AUT	0.83	0.78	1.36	1.30	2.71	2.60
P	0.82	0.82	1.31	1.31	2.54	2.54
FIN	0.77	0.77	1.25	1.25	2.43	2.43
SWE	0.46	0.48	0.75	0.78	1.46	1.51
UK	1.16	1.12	1.93	1.87	3.86	3.73
EU Average	0.67	0.63	1.07	1.01	2.09	1.97

Notes: The EU Average is a simple un-weighted average.
Minor exchange rate variations affect the results

Table 3.17 Average intra-EU call charges at economy time (Cheapest rate possible)
(in euro excluding VAT)

	Economy 3 minute Intra-EU call		Economy 5 minute Intra-EU call		Economy 10 minute Intra-EU call	
	December 2001	December 2002	December 2001	December 2002	December 2001	December 2002
B	0.44	0.44	0.67	0.68	1.26	1.28
DK	0.71	0.71	1.16	1.17	2.30	2.30
D	0.34	0.34	0.57	0.57	1.13	1.14
EL	0.74	0.75	1.23	1.25	2.47	2.50
E	0.72	0.48	1.11	0.72	2.11	1.32
F	0.39	0.39	0.62	0.62	1.18	1.18
IRL	0.87	0.87	1.46	1.46	2.91	2.91
I	0.88	0.74	1.29	1.06	2.32	1.87
L	0.46	0.31	0.71	0.52	1.41	1.03
NL	0.37	0.36	0.58	0.57	1.13	1.10
AUT	0.83	0.78	1.36	1.30	2.71	2.60
P	0.53	0.53	0.83	0.83	1.57	1.57
FIN	0.77	0.77	1.25	1.25	2.43	2.43
SWE	0.46	0.48	0.75	0.78	1.46	1.51
UK	1.02	0.99	1.71	1.65	3.41	3.30
EU Average	0.64	0.60	1.02	0.96	1.99	1.87

Notes: The EU Average is a simple un-weighted average.
Minor exchange rate variations for non-euro countries affect the results

Economy rates are cheapest rate possible, regardless of time of day. Rates above cover both weekday nights and weekends.

3.8. PSTN intra-EU call charge relationships

The tables in this section show the relationship between the **standard published prices by incumbent between any two EU countries**. The first table (3.18) is a complete matrix of all originating and destination countries are presented separately for clarity in the following tables. All prices are presented in euro and exclude VAT.

The prices used in these tables are for a **3 minute peak call from one country to another at the end of the peak 3 minute call prices for December 2002** in the preceding section (table 3.15).

Table 3.18 Peak time call charges from and to all EU Member States (euro excluding VAT)

From →

To	B	DK	D	EL	E	F	IRL	I	L	NL	AU
B		0.67	0.32	0.75	0.48	0.62	0.94	0.74	0.37	0.21	0.7
DK	0.70		0.32	0.75	0.48	0.63	1.20	0.74	0.37	0.30	0.7
D	0.53	0.50		0.75	0.48	0.62	0.94	0.74	0.37	0.19	0.6
EL	0.70	1.08	0.64		0.48	0.63	1.20	0.74	0.37	0.72	0.9
E	0.53	1.08	0.32	0.75		0.62	1.20	0.74	0.37	0.35	0.7
F	0.53	0.67	0.32	0.75	0.48		0.94	0.74	0.37	0.21	0.7
IRL	0.70	0.96	0.32	0.75	0.48	0.62		0.74	0.37	0.38	0.9
I	0.53	0.67	0.32	0.75	0.48	0.62	1.20		0.37	0.35	0.6
L	0.53	0.80	0.32	0.75	0.48	0.62	0.94	0.74		0.32	0.7
NL	0.53	0.67	0.32	0.75	0.48	0.62	0.94	0.74	0.37		0.7
AUT	0.70	0.67	0.32	0.75	0.48	0.63	1.20	0.74	0.37	0.46	
P	0.70	1.08	0.32	0.75	0.48	0.63	1.20	0.74	0.37	0.71	0.9
FIN	0.70	0.38	0.32	0.75	0.48	0.63	1.20	0.74	0.37	0.38	0.7
SWE	0.70	0.20	0.32	0.75	0.48	0.63	1.20	0.74	0.37	0.26	0.7
UK	0.53	0.50	0.32	0.75	0.48	0.62	0.38	0.74	0.37	0.17	0.7

Table 3.19 Peak time call charges from and to Belgium (euro excluding VAT)

Base country:	<i>Belgium</i>	
3 minute peak time call charge	Call direction	
	Outgoing	Incoming
B		
DK	0.70	0.67
D	0.53	0.32
EL	0.70	0.75
E	0.53	0.48
F	0.53	0.62
IRL	0.70	0.94
I	0.53	0.74
L	0.53	0.37
NL	0.53	0.21
AUT	0.70	0.76
P	0.70	0.83
FIN	0.70	1.23
SWE	0.70	0.36
UK	0.53	1.13

Table 3.20 Peak time call charges from and to Denmark (euro excluding VAT)

Base country:	<i>Denmark</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.67	0.70
DK		
D	0.50	0.32
EL	1.08	0.75
E	1.08	0.48
F	0.67	0.63
IRL	0.96	1.20
I	0.67	0.74
L	0.80	0.37
NL	0.67	0.30
AUT	0.67	0.76
P	1.08	0.83
FIN	0.38	0.49
SWE	0.20	0.29
UK	0.50	1.13

Table 3.21 Peak time call charges from and to Germany (in euro excluding VAT)

Base country:	<i>Germany</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.32	0.53
DK	0.32	0.50
D		
EL	0.64	0.75
E	0.32	0.48
F	0.32	0.62
IRL	0.32	0.94
I	0.32	0.74
L	0.32	0.37
NL	0.32	0.19
AUT	0.32	0.62
P	0.32	0.83
FIN	0.32	1.23
SWE	0.32	0.30
UK	0.32	1.13

Table 3.22 Peak time call charges from and to Greece (in euro excluding VAT)

Base country:	<i>Greece</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.75	0.70
DK	0.75	1.08
D	0.75	0.64
EL		
E	0.75	0.48
F	0.75	0.63
IRL	0.75	1.20
I	0.75	0.74
L	0.75	0.37
NL	0.75	0.72
AUT	0.75	0.94
P	0.75	0.83
FIN	0.75	1.43
SWE	0.75	0.96
UK	0.75	1.41

Table 3.23 Peak time call charges from and to Spain (in euro excluding VAT)

Base country: 3 minute peak time call charges	<i>Spain</i>	
	Call direction	
	Outgoing	Incoming
B	0.48	0.53
DK	0.48	1.08
D	0.48	0.32
EL	0.48	0.75
E		
F	0.48	0.62
IRL	0.48	1.20
I	0.48	0.74
L	0.48	0.37
NL	0.48	0.35
AUT	0.48	0.76
P	0.48	0.75
FIN	0.48	1.23
SWE	0.48	0.56
UK	0.48	1.41

Table 3.24 Peak time call charges from and to France (in euro excluding VAT)

Base country: 3 minute peak time call charges	<i>France</i>	
	Call direction	
	Outgoing	Incoming
B	0.62	0.53
DK	0.63	0.67
D	0.62	0.32
EL	0.63	0.75
E	0.62	0.48
F		
IRL	0.62	0.94
I	0.62	0.74
L	0.62	0.37
NL	0.62	0.21
AUT	0.63	0.76
P	0.63	0.80
FIN	0.63	1.23
SWE	0.63	0.36
UK	0.62	1.13

Table 3.25 Peak time call charges from and to Ireland (in euro excluding VAT)

Base country:	<i>Ireland</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.94	0.70
DK	1.20	0.96
D	0.94	0.32
EL	1.20	0.75
E	1.20	0.48
F	0.94	0.62
IRL		
I	1.20	0.74
L	0.94	0.37
NL	0.94	0.38
AUT	1.20	0.94
P	1.20	0.83
FIN	1.20	1.23
SWE	1.20	0.56
UK	0.38	0.91

Table 3.26 Peak time call charges from and to Italy (in euro excluding VAT)

Base country:	<i>Italy</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.74	0.53
DK	0.74	0.67
D	0.74	0.32
EL	0.74	0.75
E	0.74	0.48
F	0.74	0.62
IRL	0.74	1.20
I		
L	0.74	0.37
NL	0.74	0.35
AUT	0.74	0.62
P	0.74	0.83
FIN	0.74	1.23
SWE	0.74	0.56
UK	0.74	1.41

Table 3.27 Peak time call charges from and to Luxembourg (in euro excluding VAT)

Base country:	<i>Luxembourg</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.37	0.53
DK	0.37	0.80
D	0.37	0.32
EL	0.37	0.75
E	0.37	0.48
F	0.37	0.62
IRL	0.37	0.94
I	0.37	0.74
L		
NL	0.37	0.32
AUT	0.37	0.76
P	0.37	0.83
FIN	0.37	1.23
SWE	0.37	0.36
UK	0.37	1.13

Table 3.28 Peak time call charges from and to the Netherlands (in euro excluding VAT)

Base country:	<i>Netherlands</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.21	0.53
DK	0.30	0.67
D	0.19	0.32
EL	0.72	0.75
E	0.35	0.48
F	0.21	0.62
IRL	0.38	0.94
I	0.35	0.74
L	0.32	0.37
NL		
AUT	0.46	0.76
P	0.71	0.83
FIN	0.38	1.23
SWE	0.26	0.36
UK	0.17	1.13

Table 3.29 Peak time call charges from and to Austria (in euro excluding VAT)

Base country:	<i>Austria</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.76	0.70
DK	0.76	0.67
D	0.62	0.32
EL	0.94	0.75
E	0.76	0.48
F	0.76	0.63
IRL	0.94	1.20
I	0.62	0.74
L	0.76	0.37
NL	0.76	0.46
AUT		
P	0.94	0.83
FIN	0.76	1.23
SWE	0.76	0.56
UK	0.76	1.53

Table 3.30 Peak time call charges from and to Portugal (in euro excluding VAT)

Base country:	<i>Portugal</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.83	0.70
DK	0.83	1.08
D	0.83	0.32
EL	0.83	0.75
E	0.75	0.48
F	0.80	0.63
IRL	0.83	1.20
I	0.83	0.74
L	0.83	0.37
NL	0.83	0.71
AUT	0.83	0.94
P		
FIN	0.83	1.43
SWE	0.83	0.96
UK	0.80	1.41

Table 3.31 Peak time call charges from and to Finland (in euro excluding VAT)

Base country:	<i>Finland</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	1.23	0.70
DK	0.49	0.38
D	1.23	0.32
EL	1.43	0.75
E	1.23	0.48
F	1.23	0.63
IRL	1.23	1.20
I	1.23	0.74
L	1.23	0.37
NL	1.23	0.38
AUT	1.23	0.76
P	1.43	0.83
FIN		
SWE	0.49	0.29
UK	1.23	1.53

Table 3.32 Peak time call charges from and to Sweden (in euro excluding VAT)

Base country:	<i>Sweden</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	0.36	0.70
DK	0.29	0.20
D	0.30	0.32
EL	0.96	0.75
E	0.56	0.48
F	0.36	0.63
IRL	0.56	1.20
I	0.56	0.74
L	0.36	0.37
NL	0.36	0.26
AUT	0.56	0.76
P	0.96	0.83
FIN	0.29	0.49
SWE		
UK	0.30	1.13

Table 3.33 Peak time call charges from and to United Kingdom (in euro excluding VAT)

Base country:	<i>United Kingdom</i>	
3 minute peak time call charges	Call direction	
	Outgoing	Incoming
B	1.13	0.53
DK	1.13	0.50
D	1.13	0.32
EL	1.41	0.75
E	1.41	0.48
F	1.13	0.62
IRL	0.91	0.38
I	1.41	0.74
L	1.13	0.37
NL	1.13	0.17
AUT	1.53	0.76
P	1.41	0.80
FIN	1.53	1.23
SWE	1.13	0.30
UK		

3.9. PSTN time band variations

The charts below show how the peak and off-peak charges are mapped onto the days of the week in the EU countries. The names of the timebands (Standard, Reduced and Cheap) are generic names, and do not imply any specific price relationships.

3.9.1. Weekdays

Figure 3.9 Time band variations for Local calls on weekdays

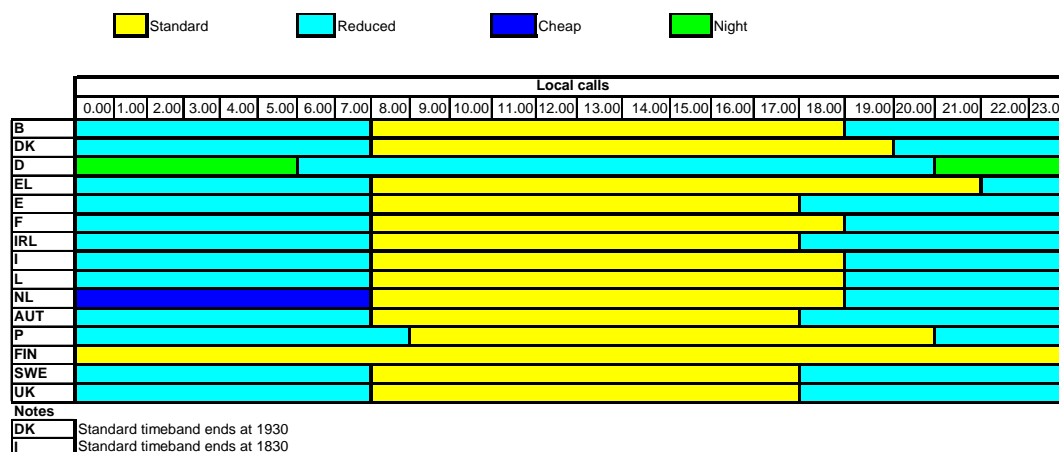
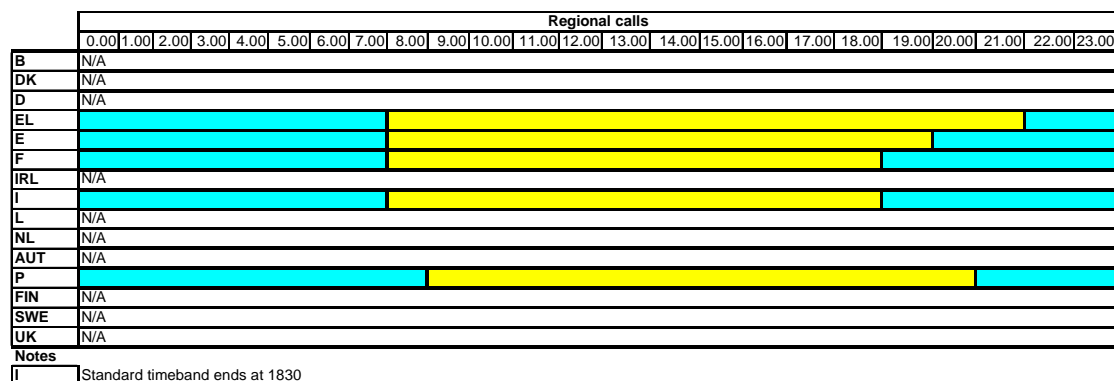


Figure 3.10 Time band variations for Regional calls on weekdays



Regional calls do not apply to Belgium, Denmark, Germany, Ireland, Luxembourg, the Netherlands, Austria, Finland, Sweden and UK.

Figure 3.11 Time band variations for National calls on weekdays

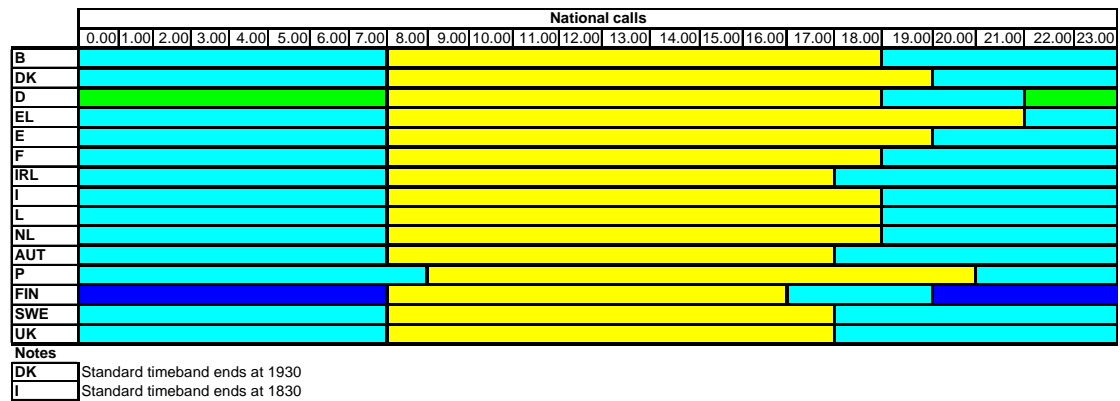


Figure 3.12 Time band variations for calls to mobiles on weekdays

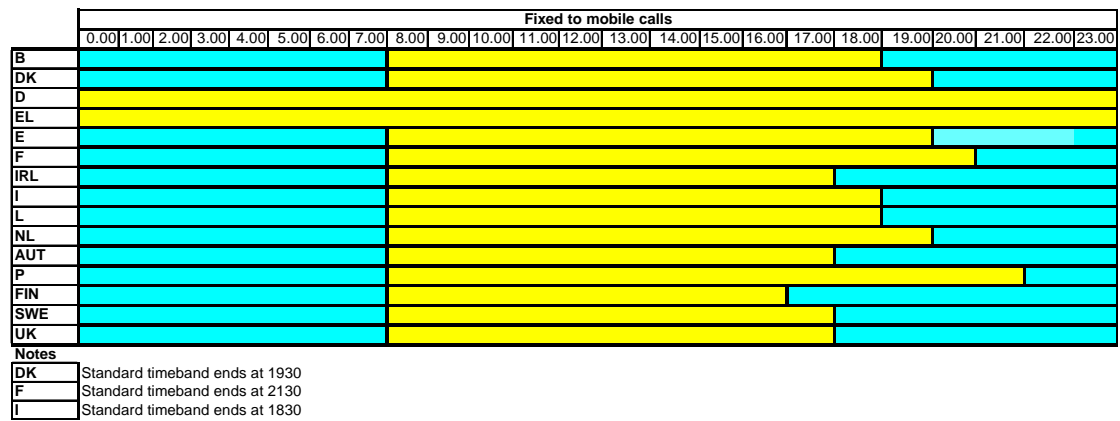
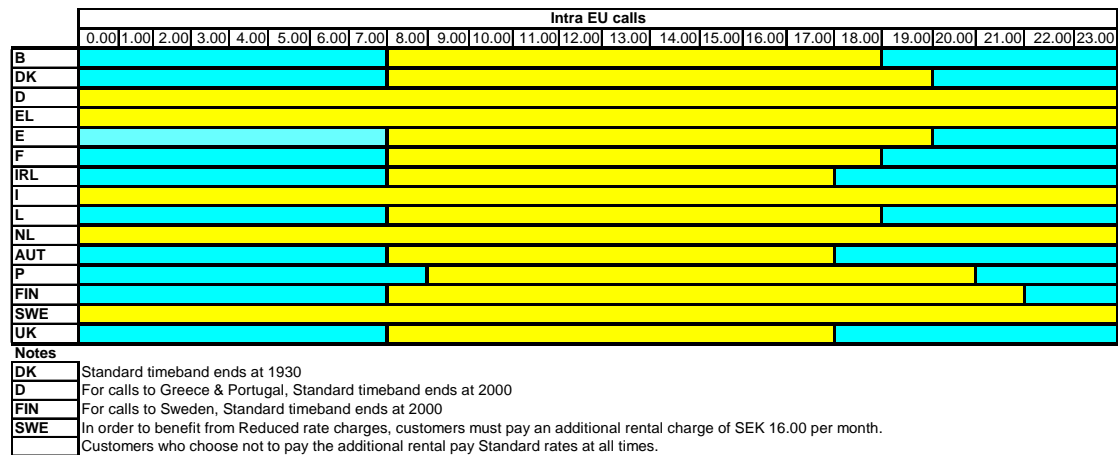


Figure 3.13 Time band variations for Intra-EU calls on weekdays



3.9.2. Saturdays

Figure 3.14 Time band variations for Local calls on Saturdays

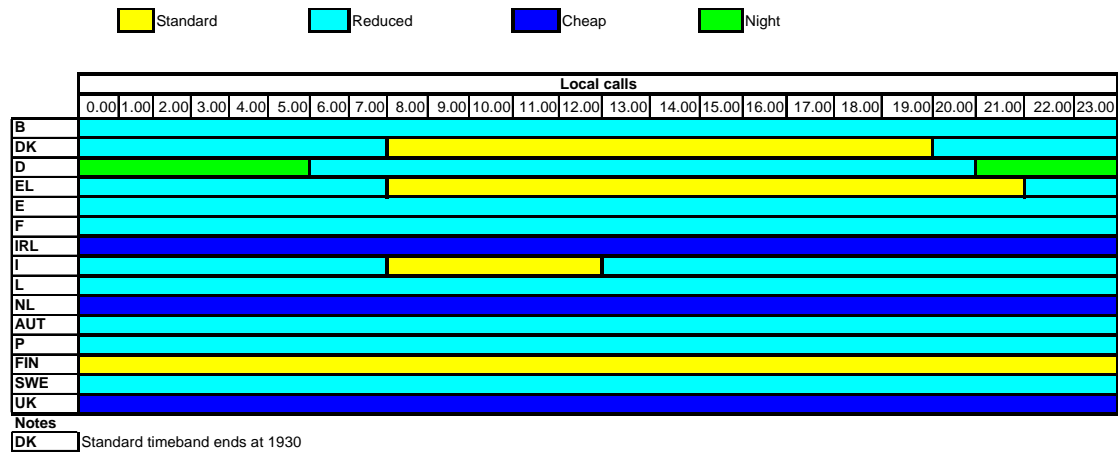
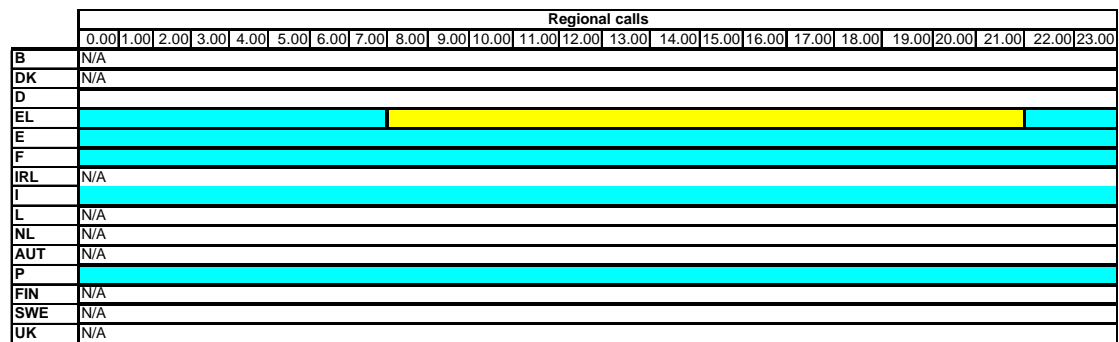


Figure 3.15 Time band variations for Regional calls on Saturdays



Regional calls do not apply to Belgium, Denmark, Germany, Ireland, Luxembourg, the Netherlands, Austria, Finland, Sweden and UK.

Figure 3.16 Time band variations for National calls on Saturdays

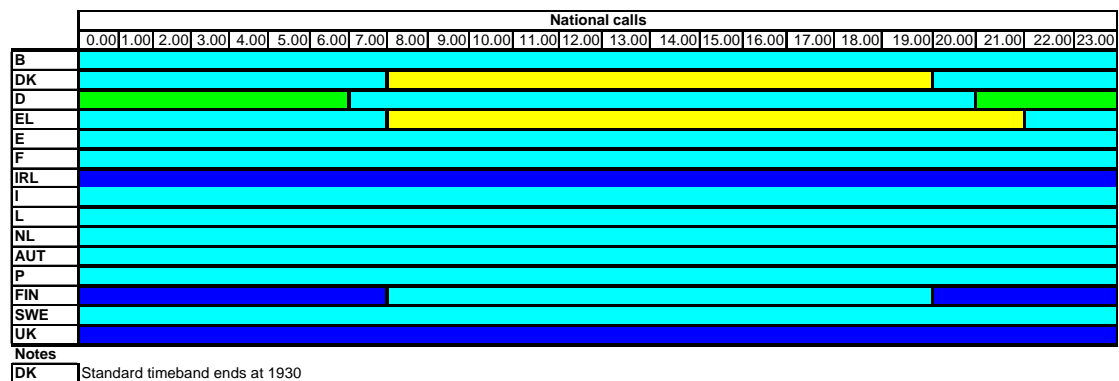


Figure 3.17 Time band variations for calls to mobiles on Saturdays

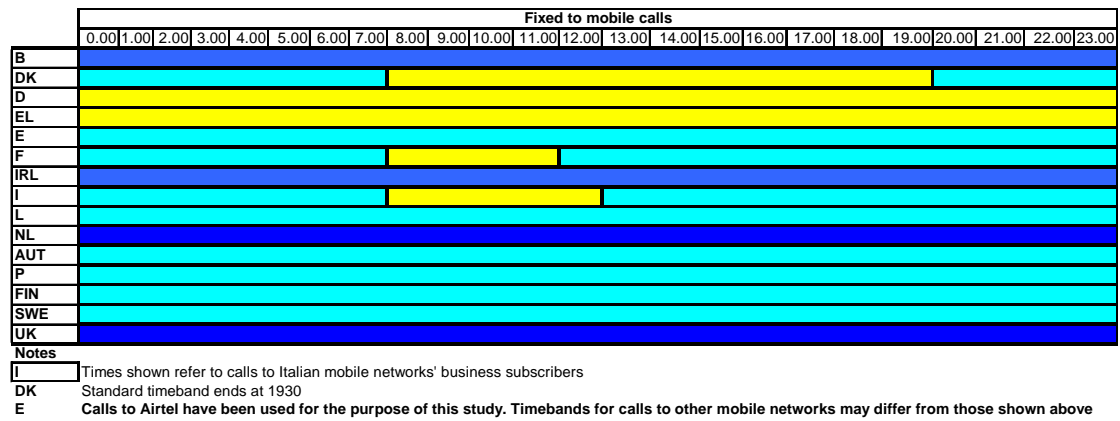
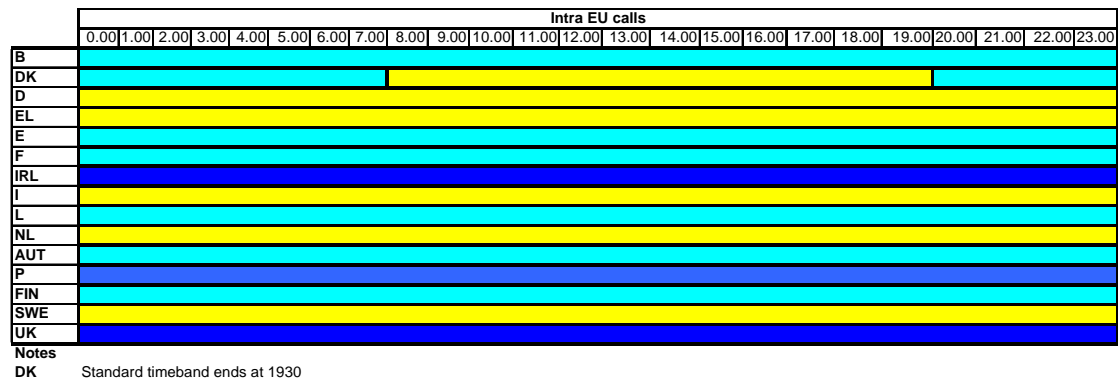


Figure 3.18 Time band variations for Intra-EU calls on Saturdays



3.9.3. Sundays

Figure 3.19 Time band variations for Local calls on Sundays

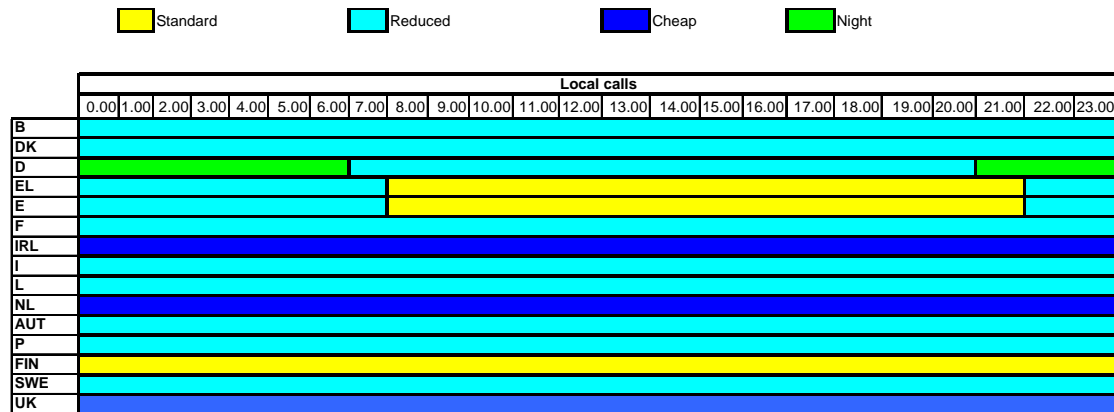
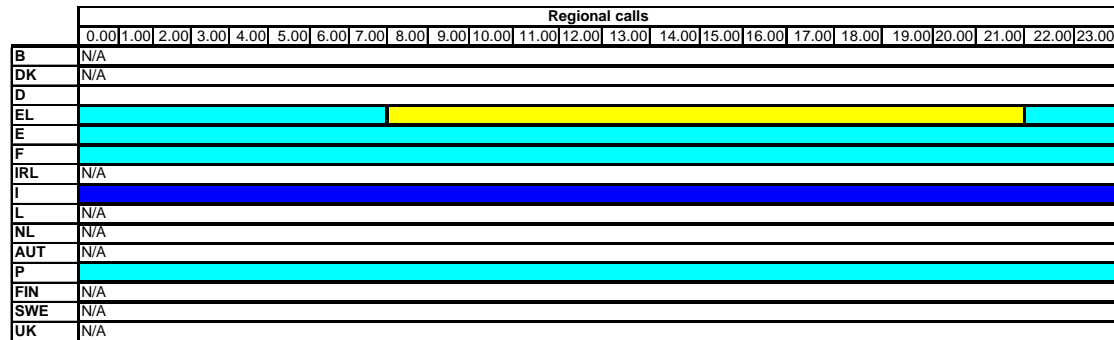


Figure 3.20 Time band variations for Regional calls on Sundays



Regional calls do not apply to Belgium, Denmark, Germany, Ireland, Luxembourg, the Netherlands, Austria, Finland, Sweden and UK.

Figure 3.21 Time band variations for National calls on Sundays

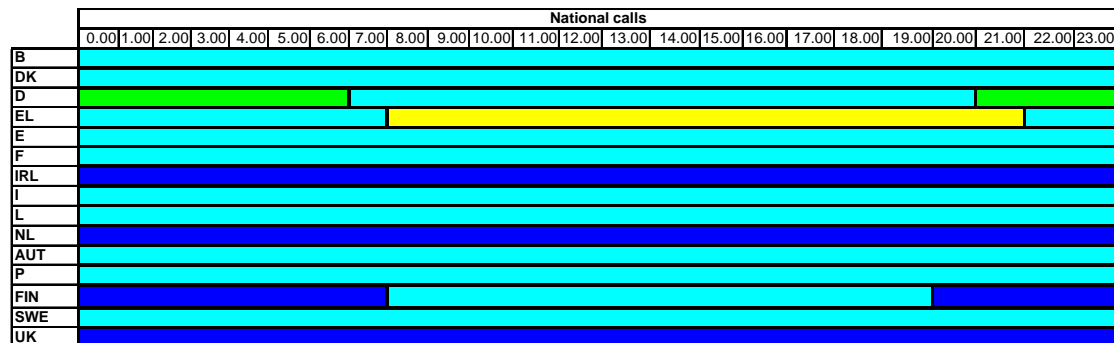


Figure 3.22 Time band variations for calls to mobiles on Sundays

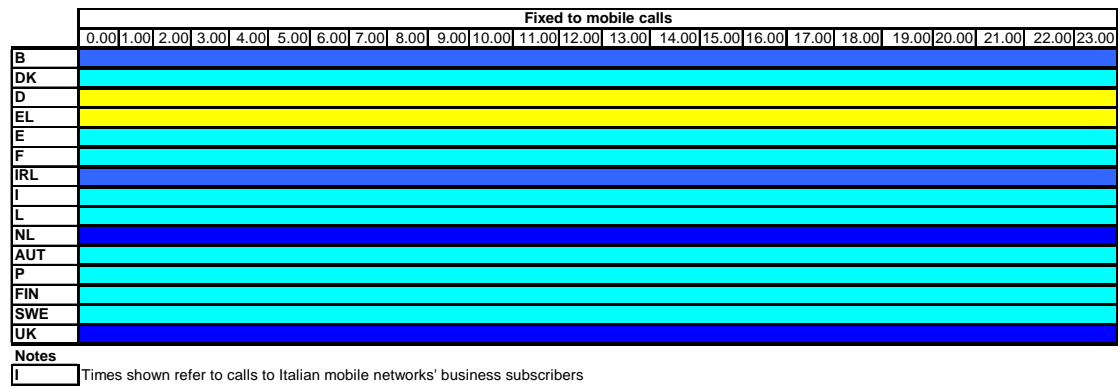
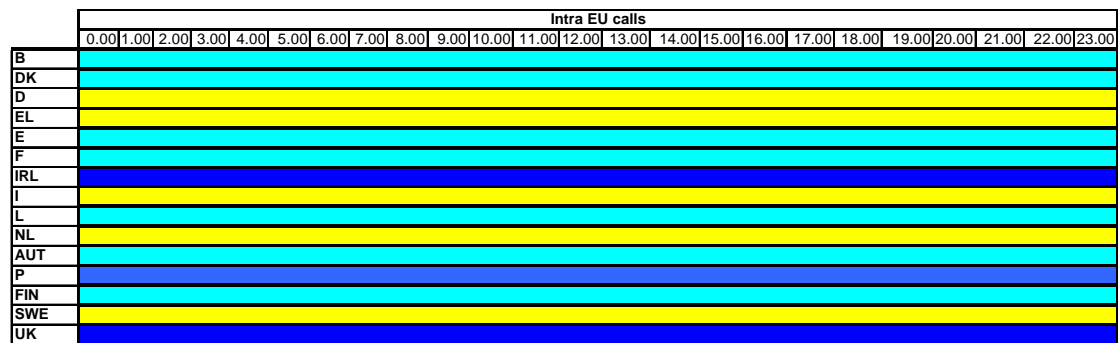


Figure 3.23 Time band variations for Intra-EU calls on Sundays



3.10. PSTN zone definitions

The call charges for domestic calls are defined differently in the different countries. Below is a summary of the call charges for domestic calls in each country, in the grouping they appear in this report. Distance information is included where possible. Maximum distance. In such cases the zone boundaries relate to exchange area boundaries, and the actual distance from the caller.

Table 3.33 PSTN zone definitions

	Local	Regional
B	National	n/a
DK	National	n/a
D	City: Local	n/a
EL	Local	Always <45 km, and in some Prefectures >45km
E	Metropolitan: Calls made within the same area code Between urban area codes and adjacent area codes	Provincial: All non-local calls made within the same province
F	Local	25-30 km
IRL	Local	n/a
I	Local	Between Local areas inside the district <15km
L	National	n/a
NL	Local: within the same region	n/a
AUT	Local: Within exchange area	n/a
P	Local, Inside a local area, between adjacent local areas, or between non-adjacent Local areas up to a distance of 10kms.	Regional: Between non-adjacent Local Areas of up to 10kms but under 50 kms
FIN	Local	n/a
SWE	National	n/a
UK	Local	n/a

4. ISDN prices

The prices given are expressed in euro, using average December 2002 exchange rates. Any comparisons with December 2001 prices are done in euros due to the changes in national currencies.

4.1. ISDN connection

Connection charges for new ISDN lines are listed below. Prices are in euro and exclude VAT. Prices are the same for business and residential customers. The charges shown are standard charges, as presented in the regular pricelists. Basic rate service provides two 64 kbit/s channels plus a 16 kbit/s data channel, while Primary rate service provides thirty 64 kbit/s channels plus a 64 kbit/s data channel.

The variation in connection charges is quite large, with the lowest Basic rate charge (Greece) being only 27% of the highest (UK), and similarly for Primary rate the lowest (Netherlands) is only 28% of the highest (UK). This is however a big improvement on the differences shown in the report from 2001.

There have been price changes in most countries, mostly because of adjustments after the change to euro.

Primary rate ISDN services in Japan and USA are not comparable in price as they offer 24 channels per system rather than 30. Also, in USA the ISDN service is sold in a variety of ways with different types of channels and additional services. This makes any comparison very difficult.

Table 4.1 ISDN connection charges (in euro excluding VAT)

ISDN Connection charges					
	December 2001		December 2002		Notes
	Basic	Primary	Basic	Primary	
B	66.93	1928.61	66.93	1928.61	1
DK	150.54	1397.85	150.74	1399.73	
D	44.46	66.93	44.45	88.92	
EL	44.02	1467.35	44.02	1467.35	
E	168.28	3606.07	168.28	3606.07	2
F	102.90	640.29	103.00	640.29	3
IRL	208.82	4418.69	202.47	3299.00	
I	103.29	309.87	100.00	300.00	
L	75.01	1673.28	75.00	1673.28	
NL	85.80	3085.71	61.37	3085.71	
AUT	130.81	959.28	130.80	821.17	4
P	139.66	718.27	143.65	718.27	
FIN	218.64	2522.82	218.64	2522.82	
SWE	209.22	1059.32	217.03	1098.90	
UK	401.61	927.42	387.85	895.64	5
EU Average	143.33	1652.12	140.95	1569.72	9

* Minor exchange rate variations for non-euro countries will affect the results

Notes to ISDN connection charges:

1. The Primary Rate connection charge does not include wiring, which is charged on a case by case basis.
2. Metropolitan area tariffs are shown, higher charges apply in provincial areas.
3. The selected Basic Rate Access package excludes Euro-Numeris.
4. The Primary Rate connection charge includes a 'Building and Measuring' service, installation and an administrative charge.
5. For Basic Rate Access, the 'Low Start' package tariffs are displayed.
6. The EU Average is a simple un-weighted average.

4.2. ISDN monthly rental

Rental charges for standard ISDN lines are listed below. Prices are in euro and exclude VAT.

Table 4.2 ISDN monthly rental charges (in euro excluding VAT)

ISDN Business monthly rental charges					
	December 2001		December 2002		Notes
	Basic	Primary	Basic	Primary	
B	29.00	348.04	29.00	348.04	
DK	22.94	271.33	23.36	271.69	
D	19.79	230.30	25.55	230.30	1
EL	13.21	293.47	13.20	293.47	
E	22.84	342.58	22.84	342.58	
F	32.62	489.36	33.60	504.00	
IRL	36.82	264.11	30.99	264.11	
I	27.37	371.85	27.37	390.00	
L	22.01	223.10	22.00	223.10	
NL	21.93	212.14	20.92	199.00	2
AUT	41.86	418.60	34.87	348.82	3
P	23.89	251.89	23.89	219.30	
FIN	13.85	247.24	13.85	247.24	
SWE	21.19	233.05	21.98	241.76	
UK	48.39	701.61	48.29	709.97	4
EU Average	26.51	326.58	26.11	322.22	9

* Minor exchange rate variations for non-euro countries will affect the results

1. Basic rate rental includes 20 units per month
2. The "BelBasis" package is shown
3. The "Business 1" package is shown.
4. For Basic Rate Access, the 'Business Highway Low Start' tariff is displayed
5. The EU Average is a simple un-weighted average

In four of the countries the monthly charge for a basic rate access will be lower for residential customers than for business customers, as shown in the table below.

Table 4.3 Residential Basic rate rental charges (in euro excluding VAT)

Basic rate monthly charges			
	Business	Residential	Difference
DK	23.36	17.98	-23.0 %
I	27.37	16.53	-39.6 %
AUT	34.87	22.16	-36.4 %
UK	48.29	30.49	-36.9 %

Figure 4.1 ISDN Basic Rate rental charges 2001.12 – 2002.12

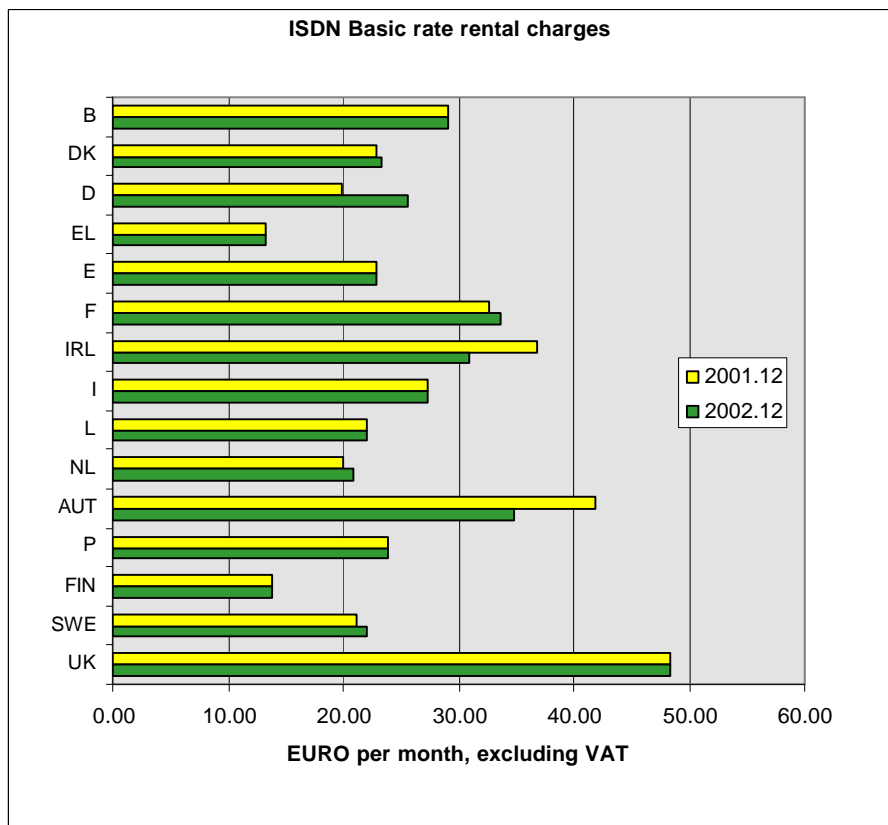
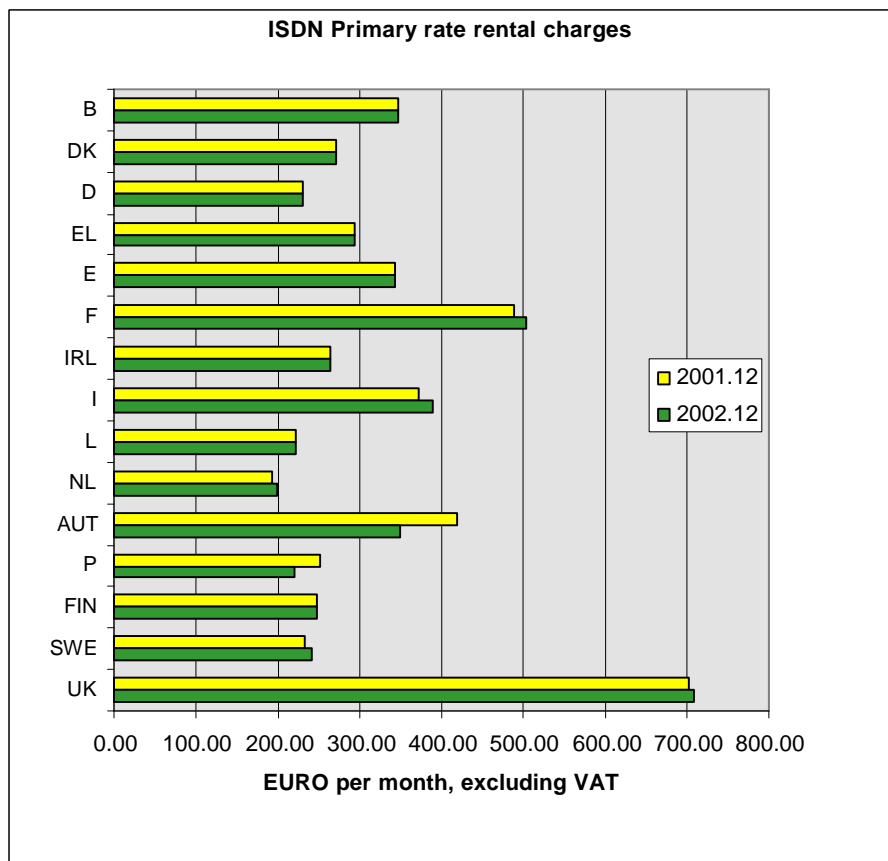


Figure 4.2 ISDN Primary Rate rental charges 2001.12 – 2002.12



4.3. ISDN call charges

ISDN call charges will generally be related to PSTN, as at least for voice calls the same service is provided:

- **National voice and data** call charges from, to or between ISDN phones are exactly the same as for PSTN. PSTN time-band and zone information also applies.
- **International voice** call charges from or to ISDN phones are exactly the same as for PSTN. Time-band and zone information also applies.
- **International data** (transparent 64 kbit/s connections) call charges between ISDN terminals may be different from PSTN. Appendix C to this report gives the status for all member countries. Only in the United Kingdom (BT) are prices identified to be different from PSTN. Calls from all other countries have the same Intra-EU charges as for PSTN.

Table 4.4 International ISDN call charges for 64 kbit/s calls

Average per minute charges for 64kbit/s ISDN calls		
From:	UK	
To:	Initial 60 minutes	Thereafter
B	1.00	0.80
DK	1.00	0.80
D	0.76	0.61
EL	1.00	0.80
E	1.00	0.80
F	0.76	0.61
IRL	0.76	0.61
I	1.00	0.80
L	1.00	0.80
NL	0.90	0.72
AUT	1.00	0.80
P	1.00	0.80
FIN	1.00	0.80
SWE	0.76	0.61
UK		
Average	0.93	0.74

Notes:

Charges are in euro, excluding VAT

In the UK the above charges are valid for the whole day

In UK the first per minute charge is valid for the first 60 minutes of the call, and the other charge for all additional minutes

The Average is a simple un-weighted average

5. Leased line prices

The prices given are expressed in euro per month, using the average December 2002 exchange rates for the latest set of data, and average exchange rates for the applicable month each year. VAT is excluded from the prices. Where applicable, 1-year contract terms have been assumed. Discounts for longer-term contracts may be available in some countries. Also, high volume contracts may be available, depending either on number of circuits purchased, or annual spend with the operator.

This report focuses on bitrates from 2 Mbit/s and upwards. Tariffs for 34 and 155 Mbit/s circuits are now becoming available in many of the EU Member States.

When the tables below specify that prices are available on a “case by case basis”, this means that prices for clearly defined circuits can be obtained from the operators through commercial quotes. No general information is published which can be used for comparison and price tracking.

Comparisons with Japan and USA are not always meaningful due to different tariff structures and different bitrates offered. A simple comparison for 2 Mb/s (1.5 Mb/s) national circuits is provided as an example.

5.1. National leased lines

The leased lines are covered with 3 national distances (2 km, 50 km and 200 km).

The 2 km circuits are always local circuits, which in most cases are priced with a single charge.

National circuits include a 2 km local circuit at each end. The price of, for example, a 50 km circuit is built from one local circuit of 2 km + trunk circuit of 46 km + one local circuit of 2 km. Not all countries price the local circuit separately. In such cases the full distance (e.g. 50 km) is used for the trunk circuit calculation.

5.1.1. 2 Mbit/s

Connection charges for the 2 Mbit/s circuits vary a lot between countries:

Table 5.1 Connection charges for 2 Mbit/s national circuits (in euro excluding VAT)

	2000.12	2001.12	2002.12	Note
B	4214	4214	4,214	
DK	2783	2504	1,863	1
D	2500	2125	2,500	
EL	2184	2348	2,348	1
E	4628	4628	3,916	
F	6098	4573	4,400	
IRL	3809	3809	3,809	
I	2066	2066	2,066	
L	2975	2974	2,974	
NL	4538	2723	2,730	
AUT	1381	1500	1,500	
P	4240	4240	4,240	
FIN	4205	N/A	N/A	2
SWE	3580	3284	3,407	1
UK	15057	14887	28,037	3

Notes:

- 1 Local circuits will have different (lower) connection charges.
- 2 Sonera has stopped publishing prices for national circuits
- 3 Charges for locations with existing facilities, i.e. fibre already in place

* Minor exchange rate variations for countries outside the euro-zone affect the results

Monthly rental charges for 2 Mbit/s circuits are listed below, for December 2001 and 2002.

Charges for Japan and USA are included for reference, but these charges refer to 1.5 Mb/s circuits instead of 2 Mb/s.

Table 5.2 Monthly rental for 2 Mbit/s national circuits, 2001.12 – 2002.12 (in euro excluding VAT)

	2001.12			2002.12		
	Local	City to City		Local	City to City	
	2km	50km	200km	2km	50km	200km
B	521	1,432	2,577	521	1,432	2,577
DK	163	991	1,361	163	679	836
D	326	1,900	2,404	340	1,979	2,504
EL	878	2,782	4,496	822	2,812	4,496
E	942	3,108	5,584	816	3,261	5,213
F	625	1,944	3,293	625	1,944	3,292
IRL	413	1,760	2,913	381	1,760	2,913
I	620	2,494	4,599	648	2,494	4,598
L	506	1,034	1,656	506	1,034	1,656
NL	1,114	2,791	2,791	800	1,880	1,880
AUT	390	1,950	3,450	300	1,830	3,410
P	622	2,056	3,650	897	2,853	4,259
FIN	•	•	•	•	•	•
SWE	354	434	725	379	450	752
UK	395	2,061	4,783	478	1,838	3,883
USA, CA	351	1,334	3,753	326	1,188	3,354
USA, OH	325	1,055	3,057	425	1,400	3,981
Japan	2,813	6,490	8,042	2,568	6,264	7,343
EU Average	562	1,910	3,163	548	1,875	3,019

Notes: Charges are in euro, excluding VAT

The EU Average is a simple un-weighted average across EU countries

Minor exchange rate variations for countries outside the euro-zone affect the results

B Circuits between zone 1 areas are assumed. The 2 km circuit is with a zone 1.

D The circuits have been assumed as follows: 2 km is a local 1 circuit, node to node. 50km and 200km are trunk circuits. The Standard tariff is used.

SWE The Green tariff is used, assuming circuits are in or between major cities only.

Japan, USA Prices refer to 1.5 Mb/s (T1) circuits and are as such not directly comparable with the EU country prices. Prices for USA apply to Intra-LATA circuits in California and Ohio.

FIN Sonera has stopped publishing the prices for national circuits

The changes in monthly rental charges for 2 Mbit/s circuits from December 2001 to 2002 are:

Table 5.3 Monthly rental price changes for 2 Mbit/s circuits from 2001.12 to 2002.12

	Local	City to City	
	2km	50km	200km
B	0 %	0 %	0 %
DK	0 %	-31 %	-39 %
D	4 %	4 %	4 %
EL	-6 %	1 %	0 %
E	-13 %	5 %	-7 %
F	0 %	0 %	0 %
IRL	-8 %	0 %	0 %
I	5 %	0 %	0 %
L	0 %	0 %	0 %
NL	-28 %	-33 %	-33 %
AUT	-23 %	-6 %	-1 %
P	44 %	39 %	17 %
FIN			
SWE	7 %	4 %	4 %
UK	21 %	-11 %	-19 %

Note:

Changes are calculated based on euro prices.

For a comparison between countries, the December 2002 prices have been normalised to the (simple un-weighted) EU average (i.e. EU average = 0). The charts below show the price relationships.

Figure 5.1 Connection charge relationships against EU average

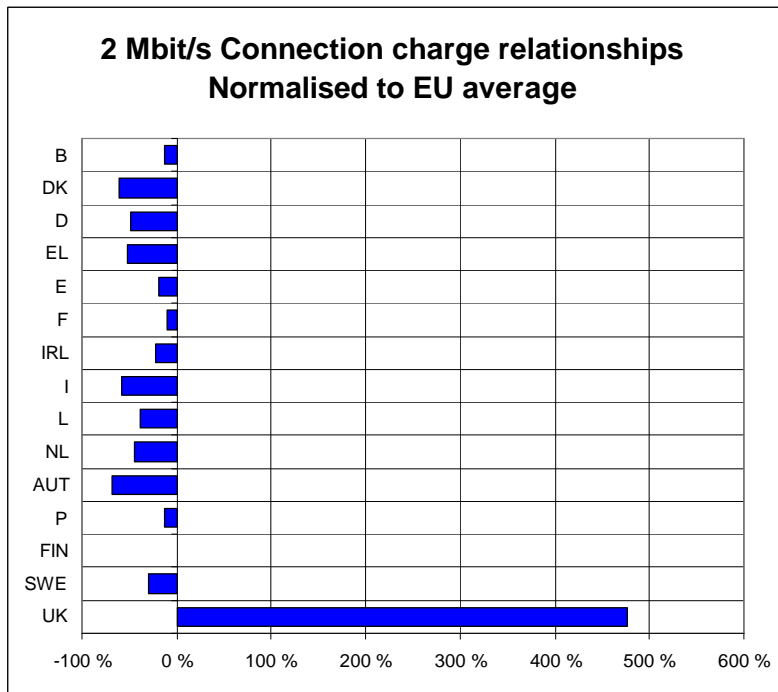
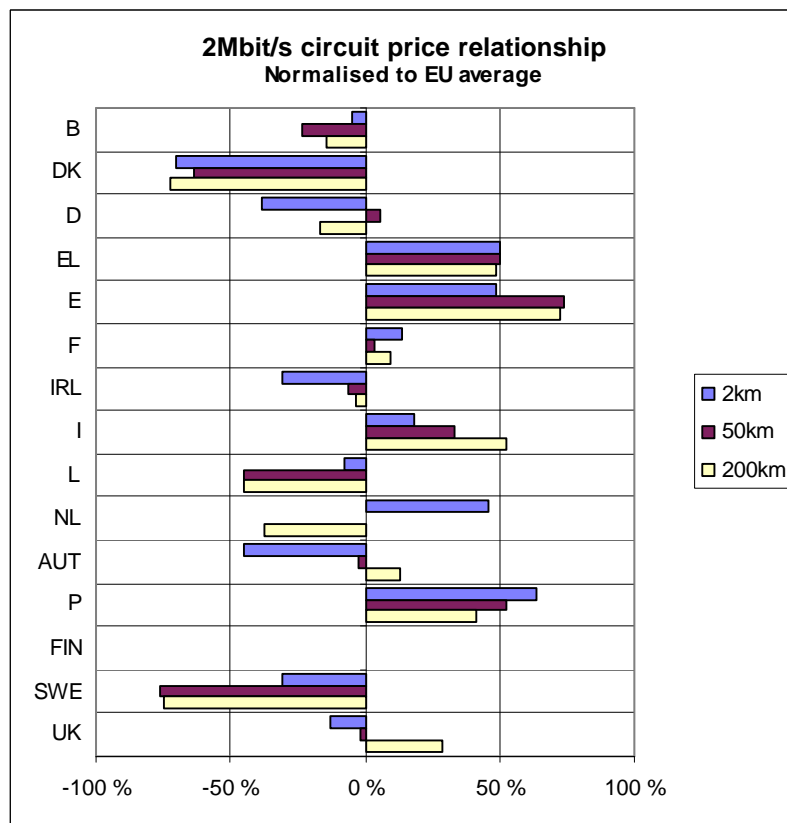


Figure 5.2 Monthly rental charge relationships against EU average



5.1.2. 34 Mbit/s

Published tariffs for 34 Mb/s now exist for 10 EU countries. There have only been a few price changes over the last year. Denmark has removed the service from their pricelist.

**Table 5.4 Connection charges for 34 Mbit/s national circuits
(in euro excluding VAT)**

	2001.12			2002.12		
	Local	City to City		Local	City to City	
	2km	50km	200km	2km	50km	200km
B	4,958	4,958	4,958	4,958	4,958	4,958
DK	32,258	44,167	48,199	◆	◆	◆
D	4,500	4,500	4,500	5,800	5,800	5,800
EL	◆	◆	◆	◆	◆	◆
E	19,833	19,833	19,833	17,600	17,600	17,600
F	24,392	24,392	24,392	6,000	14,400	14,400
IRL	7,034	7,034	7,034	7,034	7,034	7,034
I	17,043	17,043	17,043	17,044	17,044	17,044
L	◆	◆	◆	5,949	5,949	5,949
NL	◆	◆	◆	◆	◆	◆
AUT	1,500	1,500	1,500	1,500	1,500	1,500
P	◆	◆	◆	◆	◆	◆
FIN	◆	◆	◆	◆	◆	◆
SWE	4,237	6,356	6,356	5,495	6,593	6,593
UK	25,274	25,274	25,274	28,037	28,037	28,037

**Table 5.5 Monthly rental charges for 34 Mbit/s national circuits
(in euro excluding VAT)**

	2001.12			2002.12		
	Local	City to City		Local	City to City	
	2km	50km	200km	2km	50km	200km
B	1,611	7,976	11,521	1,611	7,976	11,521
DK	1,125	4,521	15,274	◆	◆	◆
D	1,008	5,352	9,817	1,050	4,735	9,385
EL	◆	◆	◆	◆	◆	◆
E	3,979	15,893	28,568	3,743	17,967	30,221
F	3,659	9,833	26,983	3,300	5,810	8,930
IRL	3,089	17,601	34,108	3,089	17,602	34,108
I	3,977	16,268	25,782	4,132	16,318	25,781
L	2,829	3,622	5,211	2,829	3,622	5,211
NL	◆	◆	◆	◆	◆	◆
AUT	2,200	15,000	26,250	1,500	14,000	25,950
P	◆	◆	◆	◆	◆	◆
FIN	◆	◆	◆	◆	◆	◆
SWE	1,608	2,613	5,155	2,123	2,710	5,348
UK	5,107	13,560	28,076	4,784	12,947	26,965

Key to symbols

◆ Tariffs available on a case by case basis

Minor exchange rate variations for countries outside the euro-zone affect the results

5.1.3. 155 Mbit/s

More information on 155 Mbit/s circuits is becoming available. 9 operators now publish these prices. Some operators will still only price on a case by case basis. Denmark has removed the service from their pricelist.

**Table 5.6 Connection charges for 155 Mbit/s national circuits
(in euro excluding VAT)**

	2001.12			2002.12		
	Local	City to City		Local	City to City	
	2km	50km	200km	2km	50km	200km
B	4,958	4,958	4,958	4,958	4,958	4,958
DK	43,011	52,849	60,914	◆	◆	◆
D	10,000	10,000	10,000	5,000	5,000	5,000
EL	◆	◆	◆	◆	◆	◆
E	◆	◆	◆	◆	◆	◆
F	15,245	15,245	15,245	6,000	14,400	14,400
IRL	◆	◆	◆	16,840	16,840	16,840
I	18,076	18,076	18,076	36,152	36,152	36,152
L	5,924	5,924	5,924	5,949	5,949	5,949
NL	◆	◆	◆	◆	◆	◆
AUT	1,381	1,381	1,381	1,500	1,500	1,500
P	◆	◆	◆	◆	◆	◆
FIN	◆	◆	◆	◆	◆	◆
SWE	9,534	15,890	15,890	13,736	16,484	16,484
UK	45,145	45,145	45,145	49,829	49,829	49,829

**Table 5.7 Monthly rental charges for 155 Mbit/s national circuits
(in euro excluding VAT)**

	2001.12			2002.12		
	Local	City to City		Local	City to City	
	2km	50km	200km	2km	50km	200km
B	3,099	15,338	22,155	3,099	15,338	22,155
DK	1,653	9,064	30,569	◆	◆	◆
D	1,056	7,896	12,361	1,100	5,435	10,085
EL	◆	◆	◆	◆	◆	◆
E	◆	◆	◆	◆	◆	◆
F	7,318	18,294	54,882	5,000	15,970	17,810
IRL	◆	◆	◆	6,350	18,600	40,475
I	11,259	43,124	66,830	11,362	43,124	66,830
L	4,701	5,974	8,672	4,701	6,024	8,672
NL	◆	◆	◆	◆	◆	◆
AUT	4,400	30,000	52,500	3,000	28,000	51,900
P	◆	◆	◆	◆	◆	◆
FIN	◆	◆	◆	◆	◆	◆
SWE	2,277	4,457	9,701	3,359	4,624	10,063
UK	13,179	38,463	80,197	11,500	36,434	79,334

Key to symbols

◆ Tariffs available on a case by case basis

Minor exchange rate variations for countries outside the euro-zone affect the results

5.2. International leased lines

5.2.1. 2 Mbit/s

For a comparison of international half-circuit prices, 3 destinations have been assumed. The Intra-EU destinations will be individual to each country, and are listed in the notes. The third destination is the US.

Table 5.8 Monthly rental charges for international 2 Mbit/s half-circuits (in euro excluding VAT)

	International half-circuits 2001.12			International half-circuits 2002.12		
	Near EU	Far EU	USA	Near EU	Far EU	USA
B	12,060	29,326	18,220	9,200	17,600	12,100
DK	2,699	9,914	9,624	2,703	9,927	9,637
D	●	●	●	●	●	●
EL	17,608	26,412	29,347	17,608	23,478	26,412
E	15,025	17,219	21,035	15,025	17,219	21,035
F	11,037	11,861	13,385	11,037	11,861	13,385
IRL	3,704	13,650	10,597	3,703	13,650	10,597
I	18,547	18,547	16,280	9,791	14,837	14,837
L	4,998	9,103	9,748	4,998	9,103	9,748
NL	6,773	12,020	12,336	6,773	12,020	12,336
AUT	13,588	18,433	28,122	13,588	18,433	28,122
P	12,510	20,000	18,000	12,510	20,000	18,000
FIN	5,004	21,245	34,025	4,002	15,903	25,518
SWE	4,506	20,510	24,665	4,674	21,277	25,587
UK	5,248	18,894	6,438	◆	◆	◆
EU Average	9,522	17,652	17,987	8,893	15,793	17,486

Notes:

Charges are in euro, excluding VAT

The EU Average is a simple un-weighted average

Minor exchange rate variations for countries outside the euro-zone affect the results

- **Important:** As Deutsche Telekom and BT have decided to keep their international leased line prices out of the public domain, it is no longer possible to track price levels for circuits to and from Germany and the UK.

The following destinations are used for near and distant EU countries:

Table 5.9 European destinations for near and distant circuits

From:	Near EU	Far EU	From:	Near EU	Far EU
B	F	EL	L	D	EL
DK	SWE	EL	NL	D	EL
D	F	EL	AUT	D	EL
EL	I	DK	P	E	DK
E	P	DK	FIN	SWE	EL
F	B	EL	SWE	DK	EL
IRL	UK	EL	UK	F	EL
I	EL	DK			

Changes in international 2 Mbit/s half-circuit prices from December 2000 to 2001 are:

Table 5.10 Price changes from 2000.12 to 2001.12 in 2 Mbit/s international half-circuits

	Cross-Border		
	Near EU	Far EU	USA
B	-24 %	-40 %	-34 %
DK	0 %	0 %	0 %
D			
EL	0 %	-11 %	-10 %
E	0 %	0 %	0 %
F	0 %	0 %	0 %
IRL	0 %	0 %	0 %
I	-47 %	-20 %	-9 %
L	0 %	0 %	0 %
NL	0 %	0 %	0 %
AUT	0 %	0 %	0 %
P	0 %	0 %	0 %
FIN	-20 %	-25 %	-25 %
SWE	4 %	4 %	4 %
UK			

Note:

Changes are calculated based on euro prices.

5.2.2. 34 Mbit/s

Information on 34 Mbit/s international circuits is now becoming available in 10 countries. Some types of circuits may still be priced case by case. The remaining 5 countries will still price all circuits on a case by case basis.

Table 5.11 Monthly rental charges for international 34 Mbit/s halfcircuits (in euro excluding VAT)

	Cross-Border					
	2001.12			2002.12		
	Near EU	Far EU	USA	Near EU	Far EU	USA
B	126,630	◆	209,532	96,200	◆	126,900
DK	22,527	◆	◆	22,557	◆	◆
D	●	●	●	●	●	●
EL	146,735	164,343	181,952	◆	◆	◆
E	105,177	119,902	189,319	105,177	119,902	189,319
F	◆	◆	◆	◆	◆	◆
IRL	23,278	◆	◆	23,279	◆	◆
I	157,596	157,596	161,173	58,744	89,025	89,025
L	23,759	◆	◆	23,759	◆	◆
NL	76,624	123,442	173,308	76,624	123,442	173,308
AUT	◆	◆	◆	◆	◆	◆
P	◆	◆	◆	◆	◆	◆
FIN	30,022	127,470	204,150	19,213	95,602	156,112
SWE	◆	◆	◆	◆	◆	◆
UK	29,376	◆	29,536	◆	◆	◆

Key to symbols

◆	Tariffs available on a case by case basis
●	Tariffs not published (see note)

Notes:

Charges are in euro, excluding VAT

Minor exchange rate variations for countries outside the euro-zone affect the results

Important: As Deutsche Telekom has decided to keep their international leased line prices out of the public domain, it is no longer possible to track price levels for circuits to and from Germany. BT in the UK has also decided to not publish actual prices, but rather what they call "Base prices" which are the highest any customer will pay. Such prices are not comparable with other countries.

5.2.3. 155 Mbit/s

Information on 155 Mbit/s circuits is generally not available. Only 4 operators publish these prices. Most operators will only price on a case by case basis.

Table 5.12 Monthly rental charges for international 155 Mbit/s halfcircuits (in euro excluding VAT)

	Cross-Border					
	2001.12			2002.12		
	Near EU	Far EU	USA	Near EU	Far EU	USA
B	◆	◆	◆	◆	◆	◆
DK	67,097	◆	◆	67,187	◆	◆
D	●	●	●	●	●	●
EL	352,164	410,858	457,814	◆	◆	◆
E	◆	◆	◆	◆	◆	◆
F	◆	◆	◆	◆	◆	◆
IRL	◆	◆	◆	◆	◆	◆
I	379,467	379,467	322,347	117,489	178,049	178,049
L	40,883	◆	◆	40,883	◆	◆
NL	185,009	298,112	418,538	185,009	298,112	418,538
AUT	◆	◆	◆	◆	◆	◆
P	◆	◆	◆	◆	◆	◆
FIN	◆	◆	◆	◆	◆	◆
SWE	◆	◆	◆	◆	◆	◆
UK	197,949	◆	188,627	◆	◆	◆

Key to symbols

◆	Tariffs available on a case by case basis
●	Tariffs not published

Notes:

Charges are in euro, excluding VAT

Minor exchange rate variations for countries outside the euro-zone affect the results

Prices for Greece are not longer found in the OTE pricelist.

Important: As Deutsche Telekom has decided to keep their international leased line prices out of the public domain, it is no longer possible to track price levels for circuits to and from Germany. BT in the UK has also decided to not publish actual prices, but rather what they call "Base prices" which are the highest any customer will pay. Such prices are not comparable with other countries.

6. Mobile service prices

The prices given are expressed in euro. VAT is excluded.

The operator owned by the incumbent telecoms operator plus the next largest competitor (in terms of market share or established position) have been chosen for each country. The December 2001 charges are taken from the December 2001 Tariff Report, and reflect the packages covered in that report. Many operators will have changed the profiles of their tariff packages over the year, and a direct comparison between the two years may not always be possible.

One high volume usage and one low volume usage package have been chosen to represent the prices of each operator. The packages are listed in the tables below.

The terms “High volume” and “Low volume” will here refer to the intensity of usage. In many cases the terms “Business” and “Residential” are used with the same meaning, but in most cases both types of packages (High / Low volume) will be available to both types of users (Business / Residential).

In general, services are available both from more than the two operators per country given here and a much wider range of packages or tariffs options is available. In addition pre-payment options are also available besides the post-payment arrangements for usage given here. Tariffs for these latter options are covered in section 6.8.

Price changes occur often in mobile services, and most operators will from time to time completely restructure their range of packages, with new names and/or new prices. This is normally the reason for some of the dramatic price changes observed.

6.1. Connection charges

Connection charges for the different operators and packages are listed in the tables below:

Table 6.1 Connection charges for High Volume Digital Mobile services 2001.12 – 2002.12 (in euro, excluding VAT)

	Operator	High volume 2001.12		High volume 2002.12	
			Package		Package
B	Proximus	40.91	Proximus Pro	40.91	Proximus Pro
	Mobistar	20.49	Optimum 2	0.00	Flexo 2
DK	Tele Danmark Mobil	10.65	Vic Flex	10.66	Mobil Talk
	Sonofon	75.27	Variant	75.37	Variant 3
D	T-Mobil D-1	22.02	ProTel D-1 Standard	22.02	ProTel
	Vodafone	22.02	Classic Premium	21.51	Classic
EL	Cosmote	0.00	Basic Programme 2	0.00	Priviledged 1
	Vodafone	0.00	Panafon180	0.00	Vodafone 180
E	Movistar	21.03	Plus Profesional	21.03	Plus Empresa
	Vodafone	21.04	Sin Horarios	0.00	Universal 20
F	Orange	0.00	Forfait Ajustable 2h	0.00	Forfait 5h
	SFR	0.00	Pro 100	0.00	Pro 100
IRL	Vodafone	0.00	Performer	0.00	Performer
	O2	0.00	Select 2	0.00	Select 2
I	Telecom Italia Mobile	0.00	TIM Menu Business	0.00	TIM Menu Business
	Omnitel	0.00	Company 50	0.00	Euro Dippiu 50
L	LuxGSM	0.00	Business	0.00	Business
	Tango	0.00	Twist	0.00	Twist
NL	KPN GSM	44.11	Flexibel Allround	44.11	Mobile 360
	Vodafone	44.11	Libertel 240	44.11	Vodafone 240
AUT	Mobilkom	33.33	A-1 Business	33.33	A-1 Business
	T-Mobile	29.08	Profi.max	33.33	EuroProfi
P	TMN	0.00	TMN Executive	0.00	TMN Executive
	Vodafone	0.00	Mais	0.00	Privado 480
FIN	Sonera GSM	6.73	Business	6.73	Classic
	Radiolinja	0.00	Usage	6.47	Tandem Aina
SWE	TeliaMobile	21.19	Mobitel Volym	21.98	Företag Bonus
	Comviq	16.95	Joker	17.58	Max
UK	O2	0.00	Business First	46.40	O2 200
	Vodafone	0.00	Vodafone 200	0.00	Vodafone 200

Notes:

Prices are expressed in euro, excluding VAT

Minor exchange rate variations for non-euro countries will affect the results

Packages with a “number” attached (120 or 6H) will normally include the corresponding number of minutes or hours as “free” calls.

Table 6.2 Connection charges for Low Volume Digital Mobile services 2001.12 – 2002.12 (in euro, Excluding VAT)

	Operator	Low volume 2001.12		Low volume 2002.12	
			Package		Package
B	Proximus	30.59	ProxiFun	30.58	ProxiFun
	Mobistar	20.49	Optimum 1	0.00	Optimum for Me
DK	Tele Danmark Mobil	0.00	Vic 45	10.66	Mobil45
	Sonofon	75.27	Variant	75.37	Variant 1
D	T-Mobil D-1	22.02	Telly D-1	22.02	Telly
	Vodafone	22.02	Fun	21.51	Fun
EL	Cosmote	0.00	Basic Programme 2	0.00	Priviledged 1
	Vodafone	0.00	Panafon 1	0.00	Vodafone 1
E	Movistar	21.03	Plus Eleccion Tarde	21.03	Plus Eleccion
	Vodafone	21.04	Tarde	0.00	Tarde
F	Orange	0.00	Forfait 1h	0.00	Forfait 2h
	SFR	0.00	Formule10h+10Text	0.00	Formulae 16€
IRL	Vodafone	0.00	Light	0.00	Light
	O2	0.00	Select 1	0.00	Select 1
I	Telecom Italia Mobile	0.00	Flash TIM	0.00	TIM Menu Family
	Omnitel	0.00	Dippiu 50 al Secondo	0.00	Euro Italy
L	LuxGSM	0.00	Liberty	0.00	Liberty
	Tango	0.00	Hip Hop	0.00	Hip Hop
NL	KPN GSM	44.11	Flexibel Hi	44.11	Mobile 120
	Vodafone	44.11	Libertel 60	44.11	Vodafone 60
AUT	Mobilkom	33.33	A-1 Fun	33.33	A-1 Fun
	T-Mobile	29.08	Freizeit.max	33.33	EuroFreizeit
P	TMN	0.00	TMN Basic	0.00	TMN Basic
	Vodafone	0.00	IntraRede	0.00	Privado 120
FIN	Sonera GSM	6.73	Private	6.73	Private
	Radiolinja	0.00	Basic	6.47	Tandem Pro
SWE	TeliaMobile	21.19	Mobitel Pott	21.98	Plus
	Comviq	16.95	Grund	17.58	Kväll
UK	O2	0.00	All Time 75	46.40	O2 Leisure
	Vodafone	0.00	Vodafone 20	0.00	Vodafone 20

Notes:

Prices are expressed in euro, excluding VAT

Minor exchange rate variations for non-euro countries will affect the results

Packages with a “number” attached (120 or 6H) will normally include the corresponding number of minutes or hours as “free” calls.

6.2. Monthly rental charges

The monthly rental charges for the same packages are listed in the table below:

Table 6.3 Monthly rental charges for High Volume Mobile services 2001.12 – 2002.12 (in euro, excluding VAT)

	Operator	High volume 2001.12		High volume 2002.12	
			Package		Package
B	Proximus	19.42	Proximus Pro	19.42	Proximus Pro
	Mobistar	10.33	Optimum Pro	20.66	Flexo 2
DK	Tele Danmark Mobil	8.96	Vic Flex	8.08	Mobil Talk
	Sonofon	8.06	Variant	6.46	Variant 3
D	T-Mobil D-1	28.63	ProTel D-1 Standard	28.62	ProTel
	Vodafone	28.63	Classic Premium	17.20	Classic
EL	Cosmote	7.34	Basic Programme 2	7.33	Privileged 1
	Vodafone	39.62	Panafon180	39.62	Vodafone 180
E	Movistar	15.02	Plus Profesional	0.00	Plus Empresa
	Vodafone	3.01	Sin Horarios	0.00	Universal 20
F	Orange	22.16	Forfait Ajustable 2h	44.73	Forfait 5h
	SFR	25.08	Pro 100	21.74	Pro 100
IRL	Vodafone	75.55	Performer	41.98	Performer
	O2	25.39	Select 2	25.39	Select 2
I	Telecom Italia Mobile	5.16	TIM Menu Business	11.12	TIM Menu Business
	Omnitel	0.00	Company 50	4.30	Euro Dippiu 50
L	LuxGSM	10.78	Business	10.78	Business
	Tango	12.00	Twist	10.43	Twist
NL	KPN GSM	15.92	Flexibel Allround	40.76	Mobile 360
	Vodafone	28.57	Libertel 240	29.41	Vodafone 240
AUT	Mobilkom	23.62	A-1 Business	23.62	A-1 Business
	T-Mobile	24.16	Profi.max	20.83	EuroProfi
P	TMN	38.00	TMN Executive	38.00	TMN Executive
	Vodafone	38.40	Mais	34.66	Privado 480
FIN	Sonera GSM	2.76	Business	2.76	Classic
	Radiolinja	8.27	Usage	7.39	Tandem Aina
SWE	TeliaMobile	13.77	Mobitel Volym	13.74	Företag Bonus
	Comviq	6.78	Joker	17.49	Max
UK	O2	19.21	Business First	39.77	O2 200
	Vodafone	34.31	Vodafone 200	33.13	Vodafone 200

Notes:

Prices are expressed in euro, excluding VAT

Minor exchange rate variations for non-euro countries affect the results

Packages with a “number” attached (120 or 6H) will normally include the corresponding number of minutes or hours as “free” calls.

Belgium, Mobistar, Flexo 2: Entire rental is used for calls

Ireland, O2, Select 2: Includes €9.52 of calling time per month.

Ireland, Vodafone, Performer: Includes 200 minutes per month

Table 6.4 Monthly rental charges for Low Volume Mobile services 2001.12 – 2002.12 (in euro, excluding VAT)

	Operator	Low volume 2001.12		Low volume 2002.12	
			Package		Package
B	Proximus	10.74	ProxiFun	10.74	ProxiFun
	Mobistar	10.33	Optimum for Me	20.24	Optimum for Me
DK	Tele Danmark Mobil	10.65	Vic 45	10.66	Mobil45
	Sonofon	2.69	Variant	2.69	Variant 1
D	T-Mobil D-1	10.99	Telly D-1	11.00	Telly
	Vodafone	10.99	Fun	8.58	Fun
EL	Cosmote	7.34	Basic Programme 2	7.33	Priviledged 1
	Vodafone	8.80	Panafon 1	8.80	Vodafone 1
E	Movistar	6.01	Plus Eleccion Tarde	0.00	Plus Eleccion
	Vodafone	5.83	Tarde	0.00	Tarde
F	Orange	6.27	Forfait 1h	25.91	Forfait 2h
	SFR	57.19	Formule 10h + 10 Texto	13.38	Formulae 16€
IRL	Vodafone	20.82	Light	15.87	Light
	O2	12.70	Select 1	12.70	Select 1
I	Telecom Italia Mobile	0.00	Flash TIM	4.30	TIM Menu Family
	Omnitel	0.00	Dippiu 50 al Secondo	4.30	Euro Italy
L	LuxGSM	5.38	Liberty	5.39	Liberty
	Tango	0.00	Hip Hop	0.00	Hip Hop
NL	KPN GSM	12.18	Flexibel Hi	19.75	Mobile 120
	Vodafone	13.02	Libertel 60	13.87	Vodafone 60
AUT	Mobilkom	17.50	A-1 Fun	17.50	A-1 Fun
	T-Mobile	18.11	Freizeit.max	12.50	EuroFreizeit
P	TMN	9.50	TMN Basic	9.50	TMN Basic
	Vodafone	10.47	IntraRede	14.21	Privado 120
FIN	Sonera GSM	2.50	Private	2.50	Private
	Radiolinja	4.14	Basic	2.73	Tandem Pro
SWE	TeliaMobile	8.05	Mobitel Pott	6.59	Plus
	Comviq	2.12	Grund	6.95	Kväll
UK	O2	24.69	All Time 75	19.89	O2 Leisure
	Vodafone	17.82	Vodafone 20	17.21	Vodafone 20

Notes:

Prices are expressed in euro, excluding VAT

Minor exchange rate variations for non-euro countries affect the results

Packages with a “number” attached (120 or 6H) will normally include the corresponding number of minutes or hours as “free” calls.

Belgium, Mobistar, Optimum for me: 60 min day/evening, 60 min weekend included

Denmark, TDM, Mobil45: €6.06 per month included

France, SFR, Formule 16€: 45 min all times, 45 min off-peak included

Ireland, Vodafone, Light: 10 min peak, 50 min off-peak included

Ireland, O2, Select 1: 6.35€ per month included

UK, O2, Leisure: 500 min national, 25 min any mobile included

6.3. National call charges, mobile to mobile networks

National call charges to other mobile phones in the same network are listed in the table below, for a 3 minute call. Any call setup charges are included.

Most operators will apply a different set of call charges if calls are made to another mobile network in the same country (i.e. a competitor).

Table 6.11 National High Volume 3 minute call charges to other mobile phones in same network December 2001 – December 2002 (in euro, excluding VAT)

	Operator (2002)	Package (2002)	High volume 2001.12		High volume 2002.12	
			Peak	Economy	Peak	Economy
B	Proximus	Proximus Pro	0.37	0.25	0.37	0.25
	Mobistar	Flexo 2	0.36	0.36	0.87	0.87
DK	Tele Danmark Mobil	Mobil Talk	0.51	0.51	0.41	0.41
	Sonofon	Variant 3	0.63	0.31	0.41	0.41
D	T-Mobil D-1	ProTel	0.38	0.38	0.39	0.39
	Vodafone	Classic	0.38	0.38	0.49	0.49
EL	Cosmote	Priviledged 1	0.63	0.63	0.63	0.63
	Vodafone	Vodafone 180	0.45	0.45	0.45	0.45
E	Movistar	Plus Empresa	0.63	0.63	0.60	0.60
	Vodafone	Universal 20	0.63	0.63	0.69	0.69
F	Orange	Forfait 5h	0.75	0.75	0.34	0.34
	SFR	Pro 100	0.65	0.65	0.73	0.73
IRL	Vodafone	Performer	0.38	0.38	0.39	0.39
	O2	Select 2	0.38	0.38	0.38	0.38
I	Telecom Italia Mobile	TIM Menu Business	0.40	0.40	0.46	0.46
	Omnitel	Euro Dippiu 50	0.56	0.56	0.67	0.67
L	LuxGSM	Business	0.32	0.19	0.32	0.19
	Tango	Twist	0.18	0.18	0.18	0.18
NL	KPN GSM	Mobile 360	0.78	0.24	0.73	0.73
	Vodafone	Vodafone 240	0.72	0.55	0.80	0.47
AUT	Mobilkom	A-1 Business	0.18	0.18	0.18	0.18
	T-Mobile	EuroProfi	0.18	0.18	0.25	0.25
P	TMN	TMN Executive	0.32	0.32	0.33	0.33
	Vodafone	Privado 480	0.33	0.33	0.42	0.36
FIN	Sonera GSM	Classic	0.41	0.41	0.42	0.42
	Radiolinja	Tandem Aina	0.46	0.46	0.34	0.34
SWE	TeliaMobile	Företag Bonus	0.86	0.24	0.76	0.25
	Comviq	Max	1.02	0.10	0.30	0.30
UK	O2	O2 200	0.34	0.34	0.40	0.40
	Vodafone	Vodafone 200	0.41	0.20	0.40	0.20

Notes:

December 2001 data may be for a different tariff package, or even a different operator.

Peak calls are at 11.00 on weekdays, and Economy calls are the cheapest call charge available, regardless of time (please see the time band information in table 6.8 for more information).

Minor exchange rate variations for non-euro countries affect the results

Table 6.12 National Low Volume 3 minute call charges to other mobile phones in same network December 2001 – December 2002 (in euro, excluding VAT)

	Operator (2002)	Package (2002)	Low volume 2001.12		Low volume 2002.12	
			Peak	Economy	Peak	Economy
B	Proximus	ProxiFun	0.37	0.25	0.37	0.25
	Mobistar	Optimum for Me	0.36	0.36	0.36	0.36
DK	Tele Danmark Mobil	Mobil45	0.99	0.43	1.00	0.43
	Sonofon	Variant 1	1.29	0.23	0.67	0.67
D	T-Mobil D-1	Telly	0.90	0.52	0.91	0.52
	Vodafone	Fun	0.91	0.52	0.75	0.49
EL	Cosmote	Priviledged 1	0.63	0.63	0.63	0.63
	Vodafone	Vodafone 1	0.63	0.63	0.63	0.63
E	Movistar	Plus Eleccion	0.82	0.34	0.81	0.33
	Vodafone	Tarde	0.69	0.69	0.87	0.30
F	Orange	Forfait 2h	0.58	0.58	0.56	0.56
	SFR	Formulae 16€	0.45	0.45	0.80	0.80
IRL	Vodafone	Light	0.76	0.34	0.77	0.37
	O2	Select 1	0.38	0.38	0.38	0.38
I	Telecom Italia Mobile	TIM Menu Family	0.72	0.72	0.46	0.46
	Omnitel	Euro Italy	0.66	0.66	0.37	0.37
L	LuxGSM	Liberty	0.32	0.19	0.32	0.19
	Tango	Hip Hop	0.30	0.30	0.31	0.31
NL	KPN GSM	Mobile 120	1.03	0.54	0.73	0.73
	Vodafone	Vodafone 60	0.93	0.55	0.80	0.47
AUT	Mobilkom	A-1 Fun	0.18	0.18	0.18	0.18
	T-Mobile	EuroFreizeit	0.18	0.18	0.25	0.25
P	TMN	TMN Basic	0.36	0.36	0.36	0.36
	Vodafone	Privado 120	0.36	0.36	0.42	0.36
FIN	Sonera GSM	Private	0.41	0.33	0.42	0.32
	Radiolinja	Tandem Pro	0.36	0.36	0.42	0.42
SWE	TeliaMobile	Plus	1.56	0.24	0.96	0.17
	Comviq	Kväll	1.40	0.19	1.09	0.14
UK	O2	O2 Leisure	0.63	0.08	1.39	0.08
	Vodafone	Vodafone 20	0.41	0.20	0.40	0.20

Notes:

December 2001 data may be for a different tariff package, or even a different operator.

Peak calls are at 11.00 on weekdays, and Economy calls are the cheapest call charge available, regardless of time (please see the time band information in table 6.8 for more information).

Minor exchange rate variations for non-euro countries affect the results

6.4. National call charges, mobile to fixed network

National call charges are listed in the table below, for a 3 minute call. Any call setup charges are included.

Table 6.5 National High Volume call charges to fixed network for a 3 minute call in December 2001 and December 2002 (In euro, excluding VAT)

	Operator (2002)	Package (2002)	High volume 2001.12		High volume 2002.12	
			Peak	Economy	Peak	Economy
B	Proximus	Proximus Pro	0.64	0.37	0.64	0.37
	Mobistar	Flexo 2	0.93	0.36	0.87	0.87
DK	Tele Danmark Mobil	Mobil Talk	0.51	0.51	0.41	0.41
	Sonofon	Variant 3	0.63	0.31	0.41	0.41
D	T-Mobil D-1	ProTel	0.38	0.20	0.39	0.21
	Vodafone	Classic	0.38	0.20	0.75	0.23
EL	Cosmote	Priviledged 1	0.63	0.63	0.63	0.63
	Vodafone	Vodafone 180	0.45	0.45	0.45	0.45
E	Movistar	Plus Empresa	0.72	0.72	0.60	0.60
	Vodafone	Universal 20	0.73	0.73	0.69	0.69
F	Orange	Forfait 5h	0.75	0.75	0.45	0.45
	SFR	Pro 100	0.65	0.65	0.73	0.73
IRL	Vodafone	Performer	0.76	0.38	0.66	0.33
	O2	Select 2	0.76	0.38	0.66	0.38
I	Telecom Italia Mobile	TIM Menu Business	0.72	0.72	0.84	0.84
	Omnitel	Euro Dippiu 50	0.56	0.56	0.67	0.67
L	LuxGSM	Business	0.32	0.32	0.32	0.32
	Tango	Twist	0.30	0.30	0.31	0.31
NL	KPN GSM	Mobile 360	0.43	0.28	0.73	0.73
	Vodafone	Vodafone 240	0.59	0.29	0.67	0.29
AUT	Mobilkom	A-1 Business	0.18	0.18	0.18	0.18
	T-Mobile	EuroProfi	0.18	0.18	0.25	0.25
P	TMN	TMN Executive	0.32	0.32	0.33	0.33
	Vodafone	Privado 480	0.45	0.36	1.32	0.36
FIN	Sonera GSM	Classic	0.72	0.41	0.79	0.42
	Radiolinja	Tandem Aina	0.76	0.46	0.49	0.39
SWE	TeliaMobile	Företag Bonus	0.86	0.24	0.76	0.25
	Comviq	Max	1.02	0.10	0.30	0.30
UK	O2	O2 200	0.39	0.08	0.40	0.40
	Vodafone	Vodafone 200	0.41	0.20	0.40	0.20

Notes:

2001 data may be for a different tariff package, or even a different operator.

Minor exchange rate variations for non-euro countries affect the results

Peak calls are at 11.00 on weekdays, and Economy calls are the cheapest call charge available, regardless of time (please see the time band information in table 6.8 for more information).

Table 6.6 National Low Volume call charges to fixed network for a 3 minute call in December 2001 and December 2002 (In euro, excluding VAT)

	Operator (2002)	Package (2002)	Low volume 2001.12		Low volume 2002.12	
			Peak	Economy	Peak	Economy
B	Proximus	ProxiFun	1.23	0.33	1.24	0.37
	Mobistar	Optimum for Me	0.94	0.36	0.94	0.36
DK	Tele Danmark Mobil	Mobil45	0.99	0.43	1.00	0.43
	Sonofon	Variant 1	1.29	0.23	0.67	0.67
D	T-Mobil D-1	Telly	1.30	0.20	1.32	0.21
	Vodafone	Fun	1.30	0.20	1.27	0.23
EL	Cosmote	Priviledged 1	0.63	0.63	0.63	0.63
	Vodafone	Vodafone 1	0.63	0.63	0.63	0.63
E	Movistar	Plus Eleccion	0.81	0.33	0.81	0.33
	Vodafone	Tarde	0.69	0.69	1.47	0.30
F	Orange	Forfait 2h	0.75	0.75	0.75	0.75
	SFR	Formulae 16€	0.45	0.45	0.80	0.80
IRL	Vodafone	Light	1.56	0.30	1.26	0.32
	O2	Select 1	1.33	0.38	1.32	0.38
I	Telecom Italia Mobile	TIM Menu Family	0.72	0.72	1.14	1.14
	Omnitel	Euro Italy	0.66	0.66	0.37	0.37
L	LuxGSM	Liberty	0.65	0.32	0.65	0.32
	Tango	Hip Hop	1.23	0.30	1.23	0.31
NL	KPN GSM	Mobile 120	1.03	0.28	0.73	0.73
	Vodafone	Vodafone 60	0.79	0.29	0.67	0.29
AUT	Mobilkom	A-1 Fun	0.71	0.34	0.71	0.35
	T-Mobile	EuroFreizeit	0.53	0.34	0.75	0.38
P	TMN	TMN Basic	0.63	0.63	0.63	0.63
	Vodafone	Privado 120	1.02	1.02	1.32	0.36
FIN	Sonera GSM	Private	0.99	0.33	0.98	0.32
	Radiolinja	Tandem Pro	0.96	0.36	0.42	0.42
SWE	TeliaMobile	Plus	1.56	0.24	0.96	0.17
	Comviq	Kväll	1.40	0.19	1.09	0.14
UK	O2	O2 Leisure	0.63	0.08	1.39	0.08
	Vodafone	Vodafone 20	0.61	0.20	0.59	0.20

Notes:

2001 data may be for a different tariff package, or even a different operator.

Minor exchange rate variations for non-euro countries affect the results

Peak calls are at 11.00 on weekdays, and Economy calls are the cheapest call charge available, regardless of time (please see the time band information in table 6.8 for more information).

The different operators use different charging methods, using either a straight per second charging, or fixed periods of a defined duration. Some operators have a different initial period, e.g. a 1 minute initial period, and then per second charging after this first minute. The table below shows the situation for the different operators.

Table 6.7 Mobile call charging methods 2002.12

Operator		Seconds Init. Period	Seconds Additional
B	Proximus	60	1
B	Mobistar	60	1
DK	Tele Danmark Mobil	1	1
DK	Sonofon	1	1
D	T-Mobil D-1	60	1
D	Vodafone	60	1
EL	Cosmote	20	1
EL	Vodafone	20	1
E	Movistar	60	1
E	Vodafone	60	30
F	Orange	60	15
F	SFR	60	30
IRL	Vodafone	1	1
IRL	O2	1	1
I	Telecom Italia Mobile	1	1
I	Omnitel	1	1
L	LuxGSM	60	15
L	Tango	15	15
NL	KPN GSM	1	1
NL	Vodafone	1	1
AUT	Mobilkom	30	30
AUT	T-Mobile	1	1
P	TMN	60	1
P	Vodafone	60	1
FIN	Sonera GSM	1	1
FIN	Radiolinja	1	1
SWE	TeliaMobile	1	1
SWE	Comviq	10	10
UK	O2	1	1
UK	Vodafone	1	1

Notes:

A "1" in the table means that calls are charged on a per second basis.

Anything different from "1" means that a period of this number of seconds is used.

Table 6.8 Time band information 2002.12

B	Proximus	Standard hours are 0800 - 1900 Monday to Friday, Reduced hours are all other times. Same timebands apply for both business and private tariffs.
B	Mobistar	Standard hours are 0700 - 1900 Monday to Friday, Reduced hours are all other times.
DK	Tele Danmark Mobil	Standard hours are 0800 – 1700 Monday to Saturday Reduced are at all other times.
DK	Sonofon	Business Standard hours are 0800 - 2100 Monday to Saturday, Reduced hours are all other times. Residential Standard hours are 0800 - 2100 Monday to Friday, Reduced hours are all other times.
D	T-Mobile	For Business Tariff Standard hours are Monday to Friday 0700 - 2000 Reduced are at all other times. Residential Standard hours are 0700 – 1700 Monday to Friday Reduced hours all other times Monday to Friday.
D	Vodafone	For Business Tariff Standard hrs are Monday to Friday 0700 - 2000 Reduced are at all other times Monday to Friday. Residential Standard hours are 0800 - 1700 Monday to Friday Reduced hours all other times Monday to Friday.
EL	Cosmote	Same charge at all times.
EL	Vodafone	Same charge at all times.
E	Movistar	Business tariff standard and residential standard hours are 0800 - 2200 Monday to Friday. Reduced hours at all other times.
E	Vodafone	Business Tariff peak 0800-2200. Reduced hours are 2400-0800 and 2200-2400. Residential Standard peak 0800-2200. Reduced hours are 2400-0800 and 2200-2400.
F	Orange	Calls are charged at the same rates at all times. Charging is per second.
F	SFR	Calls are charged at the same rates at all times. Charging is per second.
IRL	Vodafone	Standard hours are 0800 - 2000 Monday to Friday. Reduced hours are at all other times and public holidays.
IRL	O2	Standard hours are 0800 – 1800 Monday to Friday. Reduced hours are at all other times and public holidays.
I	Telecom Italia Mobile	Same charge at all times.
I	Omnitel	Same charge at all times.
L	LuxGSM	Standard hours are from 0800 – 1900 Monday to Friday. Reduced hours are at all other times.
L	Tango	Same charge at all times.

NL	KPN GSM	Business: Standard hours are from 0800 - 2000 Monday to Friday. Reduced hours are at all other times. Residential: Standard hours are from 0800 – 1900 Monday to Friday. Reduced hours are at all other times.
NL	Vodafone	Standard hours are from 0800 -2000 Monday to Friday, Reduced hours are at all other times.
AUT	Mobilkom	Both business and residential tariffs are flat rate.
AUT	T-Mobile	Both business and residential tariffs are flat rate.
P	TMN	Business tariff is flat rate. Residential: Peak-Mon-Fri 08.00-13.00 and 14.00-21.00. Off-peak-Mon-Fri 21.00-08.00 and 13.00-14.00. Weekends are classified as Saturday, Sunday and Bank Holidays.
P	Vodafone	Business tariff is flat rate. Residential: Peak-Mon-Fri 08.00-13.00 and 14.00-21.00. Off-peak-Mon-Fri 21.00-08.00 and 13.00-14.00. Weekends are classified as Saturday, Sunday and Bank Holidays.
FIN	Sonera GSM	Standard hours are from 0800 – 2200 Monday to Friday. Reduced hours are at all other times.
FIN	Radiolinja	Business and residential: Reduced rate-Mon-Fri 22.00-08.00 and weekends. For calls to Sweden Monday-Friday 20.00-08.00 and weekends. Standard rate is applicable at all other times.
SWE	TeliaMobile	Standard hours are from 0800 - 1800 Monday to Friday. Reduced hours are at all other times.
SWE	Comviq	Both business and residential tariffs are flat rate.
UK	O2	Both business and residential tariffs are flat rate.
UK	Vodafone	Standard calls are from Monday to Friday 0800 - 1900. Reduced hours are Monday to Friday 1900 – 0800 and public holidays. Economy hours are at all other times.

6.5. Comparison: National fixed and mobile call prices

Using the information about calls from fixed phones for a 3 minute call in section 3, and the information about calls from mobile phones in section 6, the following comparison table can be constructed.

The table below lists prices for a 3 minute call in the following situations:

- Mobile to mobile within the same network
- Mobile to fixed network of the incumbent operator
- National call within fixed network of incumbent operator
- Fixed network call to mobile network

Table 6.9 Comparison of 3 minute peak time call charges within, from and to mobile networks for a high volume user (in euro excluding VAT)

	Operator	Mobile to Mobile	Mobile to Fixed	Fixed to Fixed	Fixed to Mobile
B	Proximus	0.37	0.64	0.12	0.70
B	Mobistar	0.87	0.87	0.12	0.79
DK	Tele Danmark Mobil	0.41	0.41	0.11	0.59
DK	Sonofon	0.41	0.41	0.11	0.59
D	T-Mobil D-1	0.39	0.39	0.32	0.64
D	Vodafone	0.49	0.75	0.32	0.64
EL	Cosmote	0.63	0.63	0.21	0.87
EL	Vodafone	0.45	0.45	0.21	0.87
E	Movistar	0.60	0.60	0.29	0.65
E	Vodafone	0.69	0.69	0.29	0.65
F	Orange	0.34	0.45	0.32	0.89
F	SFR	0.73	0.73	0.32	0.89
IRL	Vodafone	0.39	0.66	0.23	0.63
IRL	O2	0.38	0.66	0.23	0.62
I	Telecom Italia Mobile	0.46	0.84	0.35	0.84
I	Omnitel	0.67	0.67	0.35	0.81
L	LuxGSM	0.32	0.32	0.08	0.49
L	Tango	0.18	0.31	0.08	1.34
NL	KPN GSM	0.73	0.73	0.15	0.79
NL	Vodafone	0.80	0.67	0.15	0.82
AUT	Mobilkom	0.18	0.18	0.17	0.48
AUT	T-Mobile	0.25	0.25	0.17	0.58
P	TMN	0.33	0.33	0.33	0.87
P	Vodafone	0.42	1.32	0.33	0.87
FIN	Sonera GSM	0.42	0.79	0.26	0.72
FIN	Radiolinja	0.34	0.49	0.26	0.72
SWE	TeliaMobile	0.76	0.76	0.10	0.66
SWE	Comviq	0.30	0.30	0.10	0.82
UK	O2	0.40	0.40	0.32	0.76
UK	Vodafone	0.40	0.40	0.32	0.79

Notes:

Prices in euro, excluding VAT

Peak and off peak times may not correspond for the different types of calls

Calls to and from the fixed network relate to the incumbent fixed network operator

Call charges to and from other operators may be different

Table 6.10 Comparison of 3 minute peak time call charges within, from and to mobile networks for a low volume user (in euro excluding VAT)

		Mobile to Mobile	Mobile to Fixed	Fixed to Fixed	Fixed to Mobile
B	Proximus	0.37	1.24	0.12	0.70
B	Mobistar	0.36	0.94	0.12	0.79
DK	Tele Danmark Mobil	1.00	1.00	0.11	0.59
DK	Sonofon	0.67	0.67	0.11	0.59
D	T-Mobil D-1	0.91	1.32	0.32	0.64
D	Vodafone	0.75	1.27	0.32	0.64
EL	Cosmote	0.63	0.63	0.21	0.87
EL	Vodafone	0.63	0.63	0.21	0.87
E	Movistar	0.81	0.81	0.29	0.65
E	Vodafone	0.87	1.47	0.29	0.65
F	Orange	0.56	0.75	0.32	0.89
F	SFR	0.80	0.80	0.32	0.89
IRL	Vodafone	0.77	1.26	0.23	0.63
IRL	O2	0.38	1.32	0.23	0.62
I	Telecom Italia Mobile	0.46	1.14	0.35	0.84
I	Omnitel	0.37	0.37	0.35	0.81
L	LuxGSM	0.32	0.65	0.08	0.49
L	Tango	0.31	1.23	0.08	1.34
NL	KPN GSM	0.73	0.73	0.15	0.79
NL	Vodafone	0.80	0.67	0.15	0.82
AUT	Mobilkom	0.18	0.71	0.17	0.48
AUT	T-Mobile	0.25	0.75	0.17	0.58
P	TMN	0.36	0.63	0.33	0.87
P	Vodafone	0.42	1.32	0.33	0.87
FIN	Sonera GSM	0.42	0.98	0.26	0.72
FIN	Radiolinja	0.42	0.42	0.26	0.72
SWE	TeliaMobile	0.96	0.96	0.10	0.66
SWE	Comviq	1.09	1.09	0.10	0.82
UK	O2	1.39	1.39	0.32	0.76
UK	Vodafone	0.40	0.59	0.32	0.79

Notes:

Prices in euro, excluding VAT

Peak and off peak times may not correspond for the different types of calls

Calls to and from the fixed network relate to the incumbent fixed network operator

Call charges to and from other operators may be different

6.6. Intra-EU calls, mobile to fixed network

The numbers in the table below are the average call charges to all other EU countries, for a 3 minute call. Any call setup charges are included.

Table 6.13 International High Volume 3 minute call charges for calls to fixed network December 2001 – December 2002 (In euro, excluding VAT)

	Operator	Package	High volume 2001.12		High volume 2002.12	
			Peak	Economy	Peak	Economy
B	Proximus	Proximus Pro	1.75	1.26	1.75	1.26
	Mobistar	Flexo 2	2.48	1.25	2.46	1.23
DK	Tele Danmark Mobil	Mobil Talk	1.34	1.34	1.33	1.33
	Sonofon	Variant 3	1.01	1.01	1.64	1.64
D	T-Mobil D-1	ProTel	2.33	1.72	2.70	1.98
	Vodafone	Classic	2.48	1.76	2.97	2.07
EL	Cosmote	Priviledged 1	1.15	1.15	1.38	1.38
	Vodafone	Vodafone 180	1.26	1.26	1.39	1.39
E	Movistar	Plus Empresa	1.53	1.38	1.78	1.78
	Vodafone	Universal 20	2.00	1.79	1.74	1.56
F	Orange	Forfait 5h	1.20	1.20	1.20	1.20
	SFR	Pro 100	1.28	1.28	1.28	1.28
IRL	Vodafone	Performer	2.00	1.61	2.01	1.61
	O2	Select 2	1.98	1.58	1.83	1.60
I	Telecom Italia Mobile	TIM Menu Business	0.86	0.86	1.17	1.17
	Omnitel	Euro Dippiu 50	0.70	0.70	1.50	1.50
L	LuxGSM	Business	0.32	0.32	0.72	0.65
	Tango	Twist	#N/A	#N/A	0.42	0.42
NL	KPN GSM	Mobile 360	0.79	0.49	1.82	1.30
	Vodafone	Vodafone 240	0.90	0.76	1.40	1.28
AUT	Mobilkom	A-1 Business	1.07	1.07	1.08	1.08
	T-Mobile	EuroProfi	1.28	1.28	0.59	0.59
P	TMN	TMN Executive	0.45	0.45	0.54	0.54
	Vodafone	Privado 480	0.45	0.45	1.32	0.48
FIN	Sonera GSM	Classic	1.72	1.06	1.86	1.10
	Radiolinja	Tandem Aina	1.84	1.15	1.14	1.14
SWE	TeliaMobile	Företag Bonus	1.36	1.36	1.41	1.41
	Comviq	Max	1.48	1.48	1.90	1.90
UK	O2	O2 200	3.73	3.73	3.58	3.58
	Vodafone	Vodafone 200	3.42	2.00	3.11	1.93

Notes:

December 2001 data may be for a different tariff package, as many operators have changed their packages over the year.

Peak calls are at 11.00 on weekdays, and Economy calls are the cheapest call charge available, regardless of time (please see the time band information in table 6.14 for more information).

Prices are expressed in euro, excluding VAT. Each price is an unweighted average of calls to all other EU countries.

N/A: Information not available

Minor exchange rate variations for countries outside the euro-zone affect the results

**Table 6.14 International Low Volume 3 minute call charges for calls to fixed network
December 2001 – December 2002 (In euro, excluding VAT)**

	Operator	Package	Low volume 2001.12		Low volume 2002.12	
			Peak	Economy	Peak	Economy
B	Proximus	ProxiFun	2.18	1.47	2.18	1.47
	Mobistar	Optimum for Me	2.48	1.25	2.46	1.23
DK	Tele Danmark Mobil	Mobil45	1.34	1.34	1.67	1.67
	Sonofon	Variant 1	1.25	1.25	1.88	1.88
D	T-Mobil D-1	Telly	2.62	1.72	3.03	1.98
	Vodafone	Fun	2.48	1.76	2.97	2.07
EL	Cosmote	Priviledged 1	1.15	1.15	1.38	1.38
	Vodafone	Vodafone 1	1.59	1.59	1.60	1.60
E	Movistar	Plus Eleccion	1.53	1.38	1.78	1.78
	Vodafone	Tarde	2.00	1.79	1.74	1.56
F	Orange	Forfait 2h	1.20	1.20	1.20	1.20
	SFR	Formulae 16€	1.28	1.28	1.28	1.28
IRL	Vodafone	Light	2.00	1.61	2.01	1.61
	O2	Select 1	1.98	1.58	1.97	1.60
I	Telecom Italia Mobile	TIM Menu Family	1.19	1.19	2.11	2.11
	Omnitel	Euro Italy	1.03	1.03	1.50	1.50
L	LuxGSM	Liberty	0.65	0.32	1.02	0.65
	Tango	Hip Hop	#N/A	#N/A	0.42	0.42
NL	KPN GSM	Mobile 120	0.91	0.79	1.83	1.33
	Vodafone	Vodafone 60	0.90	0.76	1.40	1.28
AUT	Mobilkom	A-1 Fun	1.30	1.29	1.29	1.29
	T-Mobile	EuroFreizeit	1.36	1.36	0.59	0.59
P	TMN	TMN Basic	0.72	0.48	0.86	0.59
	Vodafone	Privado 120	1.02	0.48	1.32	0.48
FIN	Sonera GSM	Private	1.72	1.03	2.06	1.03
	Radiolinja	Tandem Pro	2.04	1.06	1.20	1.12
SWE	TeliaMobile	Plus	1.53	1.36	1.51	1.51
	Comviq	Kväll	1.48	1.48	1.90	1.90
UK	O2	O2 Leisure	3.73	3.73	3.58	3.58
	Vodafone	Vodafone 20	3.42	2.00	3.30	1.93

Notes:

December 2001 data may be for a different tariff package, as many operators have changed their packages over the year.

Peak calls are at 11.00 on weekdays, and Economy calls are the cheapest call charge available, regardless of time (please see the time band information in table 6.14 for more information).

Prices are expressed in euro, excluding VAT. Each price is an unweighted average of calls to all other EU countries.

N/A: Information not available

Minor exchange rate variations for countries outside the euro-zone affect the results

Table 6.15 International call timebands

Belgium:

Proximus: Peak 08.00-19.00 Mon to Fri. Off-peak: 19.00-08.00 Mon-Fri, Weekends and Public Holidays. These time zones are applicable for both business and residential tariffs.

Mobistar: Business and residential: Peak 07.00-19.00 and off-peak: 19.00-07.00 as well as weekends.

Denmark:

TDK: One charge at all times.

Sonofon: One charge at all times.

Germany:

T-Mobil: Business: Peak: Monday-Friday 0700-2000. Off-peak: At all other times including weekends and all day on Federal Holidays. Residential: Peak: Mon-Fri 07.00-17.00. Off-peak: At all other times including weekends and all day on Federal Holidays.

Vodafone: For Business Tariff Standard hours are Monday to Friday 0700 - 2000 Reduced hours all other times. Residential Standard hours are 0800 - 1700 Monday to Friday Reduced hours all other times.

Greece:

CosmOTE: One charge at all times

Panafon: One charge at all times

Spain:

Business and residential: Peak: 08.00-22.00 Mon-Fri. Off-peak: 22.00-08.00 Mon-Fri and Weekends.

France:

Itineris: One charge at all times

SFR: One charge at all times.

Ireland:

Business: Peak-08.00-18.00 Monday-Friday. Off-peak: 18.00-08.00 Mon-Fri, Weekends and Public Holidays.

Italy:

Calls are charged at the same rates at all times

Luxembourg:

LuxGSM: Residential: Standard hours are Monday to Friday 0800 to 1900, Reduced hours are all other times. Business: One charge at all times.

Tango: One charge at all times.

Table 6.15 International call timebands (cont)

Netherlands:

KPN: Standard hours are Monday to Saturday 0800 to 2000 for business, 0800 to 1900 for residential, Reduced hours are all other times.

Libertel: Business and residential: Peak-Mon-Fri 08.00-20.00. Off-peak: 20.00-08.00 and Weekends.

Austria:

Mobilkom: Calls are charged at the same rate at all times

Maxmobil: Calls are charged at the same rate at all times

Portugal:

TMN: Business: There is a flat rate, which is applicable at all times. Residential: Peak-Mon-Fri 08.00-13.00 and 14.00-21.00. Off-peak-Mon-Fri 21.00-08.00 and 13.00-14.00. Weekends are classified as Saturday, Sunday and Bank Holidays.

Telecel: Business: There is a flat rate, which is applicable at all times. Residential: Peak-Weekdays: 08.00-13.00 and 14.00-21.00. Off-peak-All other times.

Finland:

Sonera: Standard hours for calls to Sweden are Monday to Friday 0800-2000, Reduced hours are at all other times. Standard hours for calls to all other EU countries are Monday to Friday 0800-2200, Reduced hours are all other times.

RadioLinja: Standard hours for calls to Sweden are Monday to Friday 0800-2000, Reduced hours are at all other times. Standard hours for calls to all other EU countries are Monday to Friday 0800-2200, Reduced hours are all other times.

Sweden:

Telia: Standard hours are Monday to Friday 0800 to 1800, Reduced hours are all other times.

Comviq: One charge at all times

United Kingdom:

Cellnet: One charge at all times.

Vodafone: One charge at all times.

Table 6.16 Average call charge for a 3 minute call to other EU Member States, from mobile and fixed networks (In euro, excluding VAT)

	Mobil operator	High volume From mobile	Low volume From mobile	From fixed
B	Proximus	1.75	2.18	0.62
B	Mobistar	2.46	2.46	0.62
DK	Tele Danmark Mobil	1.33	1.67	0.71
DK	Sonofon	1.64	1.88	0.71
D	T-Mobil D-1	2.70	3.03	0.34
D	Vodafone	2.97	2.97	0.34
EL	Cosmote	1.38	1.38	0.75
EL	Vodafone	1.39	1.60	0.75
E	Movistar	1.78	1.78	0.48
E	Vodafone	1.74	1.74	0.48
F	Orange	1.20	1.20	0.62
F	SFR	1.28	1.28	0.62
IRL	Vodafone	2.01	2.01	1.05
IRL	O2	1.83	1.97	1.05
I	Telecom Italia Mobile	1.17	2.11	0.74
I	Omnitel	1.50	1.50	0.74
L	LuxGSM	0.72	1.02	0.37
L	Tango	0.42	0.42	0.37
NL	KPN GSM	1.82	1.83	0.36
NL	Vodafone	1.40	1.40	0.36
AUT	Mobilkom	1.08	1.29	0.78
AUT	T-Mobile	0.59	0.59	0.78
P	TMN	0.54	0.86	0.82
P	Vodafone	1.32	1.32	0.82
FIN	Sonera GSM	1.86	2.06	1.16
FIN	Radiolinja	1.14	1.20	1.16
SWE	TeliaMobile	1.41	1.51	0.48
SWE	Comviq	1.90	1.90	0.48
UK	O2	3.58	3.58	1.26
UK	Vodafone	3.11	3.30	1.26

Notes:

Prices in euro, excluding VAT

Prices apply at peak time in each network. Such times may be different between networks

The incumbent operator's fixed network is assumed

6.7. International roaming

Roaming tariffs as offered by mobile operators for use of the handsets in other countries are very diverse, and are unfortunately not always readily available. Also, a number of options exist that each will incur a different set of charges: Making calls to the home country while roaming, making calls to a 3^d country while roaming, and receiving calls while roaming. As the first situation is probably the most common, and the one that can be tracked with some consistency, this report will focus on the charges for calling back to the home country while roaming.

As this report focuses on 2 main operators in each country the roaming data attempts to cover calls to and from the same operators. It has not been possible to find data for all operators, as will be seen on the following tables. As this data requires a full matrix of all operators the data is divided into 8 tables, with two roaming countries in each. All prices are retail prices, as quoted by the individual operators.

Note: There may be variations in the timeband definitions for certain carrier combinations, beyond what is indicated in the table headings.

Please also see comments on specific charges with certain network combinations in table 6.25.

Table 6.17 Roaming in Belgium and Denmark

Mobile roaming charges per minute		Roaming Country:		B				DK			
		Roaming Network:		Proximus		Mobistar		Teledanmark		Sonofon	
Home Country	Home Network	Call set-up		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
		Peak	Off-Peak	Mon-Fri 7-20	All other times	Mon-Fri 7-19	All other times	Mon-Sat 8-21.30	All other times	Mon-Sat 8-21.30	All other times
B	Proximus							0.992	0.992	0.992	0.992
B	Mobistar							1.500	1.500	1.500	1.500
DK	Teledanmark			1.014	0.758	0.966	0.721				
DK	Sonofon			1.012	0.759	0.966	0.713				
D	T-Mobil D1			1.058	0.793	1.008	0.752	1.041	0.876	0.802	0.645
D	Vodafone D2			1.055	0.791	1.007	0.755	0.798	0.642	0.806	0.645
EL	Cosmote			0.610	0.398	0.763	0.381	5.551	5.551	4.712	4.712
EL	Panafon			0.678	0.678	0.805	0.805	0.805	0.805	0.805	0.805
E	Movistar			0.510	0.510	0.510	0.510	0.510	0.510	0.510	0.510
E	Airtel			0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690
F	Itineris			0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836
F	SFR			1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087
IRL	Eircell			1.192	0.900	1.133	0.858	1.008	0.850	0.900	0.775
IRL	Esat Digifone			1.192	0.900	1.133	0.858	1.008	0.850	0.900	0.783
I	TIM			0.900	0.900	0.651	0.651	0.651	0.651	0.900	0.900
I	Omnitel			0.667	0.667	0.933	0.933	0.933	0.933	0.933	0.933
L	LuxGSM			1.059	0.791	1.009	0.753	1.042	0.881	0.808	0.646
L	Tango			1.015	0.758	0.966	0.722	0.770	0.598	0.770	0.627
NL	KPN GSM			0.891	0.798	0.891	0.798	0.891	0.798	0.891	0.798
NL	Libertel			0.870	0.870	0.870	0.870	0.870	0.870	0.870	0.870
AUT	A1 Mobilkom			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
AUT	Maxmobil			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
P	TMN			1.034	0.781	0.984	0.743			0.679	0.544
P	Telecel			1.042	0.773	0.992	0.748	0.807	0.672	0.782	0.681
FIN	Sonera			1.230	1.230	0.950	0.950	0.770	0.770	0.770	0.770
FIN	Radiolinja			1.095	0.828	1.045	0.786	0.652	0.569	0.560	0.502
SWE	Telia Mobitel			0.099	0.075	0.094	0.071	0.382	0.334	0.377	0.338
SWE	Comviq			0.113	0.086	0.107	0.081	0.434	0.379	0.429	0.385
UK	Cellnet			0.779	0.779	0.779	0.779	0.779	0.779	0.779	0.779
UK	Vodafone			0.981	0.981	1.308	1.308	1.308	1.308	1.308	1.308

All prices in euro excluding VAT

Table 6.18 Roaming in Germany and Greece

Mobile roaming charges per minute		Roaming Country:		D				EL			
		Roaming Network:		T-Mobil D1		Vodafone D2		Cosmote		Panafon	
		Call set-up		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
Home Country	Home Network	Peak	Off-Peak	Mon-Fri 9-19	All other times	Mon-Fri 7-19	All other times	Mon-Fri 7-22	All other times	At all times	At all times
B	Proximus			0.992	0.992	0.992	0.992	0.992	0.992	0.992	0.992
B	Mobistar			1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
DK	Teledanmark			1.016	0.605	1.016	0.506	0.689	0.689	0.690	0.690
DK	Sonofon			1.012	0.609	1.012	0.506	0.690	0.690	0.690	0.690
D	T-Mobil D1							0.719	0.719	0.719	0.719
D	Vodafone D2							0.767	0.647	0.719	0.719
EL	Cosmote			0.942	0.615	0.923	0.643				
EL	Panafon			0.678	0.678	0.805	0.805				
E	Movistar			0.510	0.510	0.510	0.510	0.510	0.510	0.510	0.510
E	Airtel			0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690
F	Itineris			0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836
F	SFR			1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087
IRL	Eircell			1.017	0.617	1.025	0.517	0.692	0.692	0.692	0.692
IRL	Esat Digifone			1.033	0.617	1.025	0.508			0.700	0.700
I	TIM			0.651	0.651	0.900	0.900	0.900	0.900	0.900	0.900
I	Omnitel			0.933	0.933	0.667	0.667	0.933	0.933	0.667	0.667
L	LuxGSM			1.061	0.632	1.061	0.528	0.719	0.720	0.720	0.720
L	Tango			1.017	0.605	1.026	0.513	0.656	0.656	0.684	0.684
NL	KPN GSM			0.891	0.798	0.891	0.798	0.891	0.798	0.891	0.798
NL	Libertel			0.870	0.870	0.870	0.870	0.870	0.870	0.870	0.870
AUT	A1 Mobilkom			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
AUT	Maxmobil			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
P	TMN			0.892	0.531	0.892	0.444	0.604	0.604	0.605	0.605
P	Telecel			0.891	0.538	0.891	0.445	0.605	0.605	0.605	0.605
FIN	Sonera			0.950	0.950	1.230	1.230	1.230	1.230	1.231	1.230
FIN	Radiolinja			0.945	0.560	0.945	0.468	0.602	0.602	0.644	0.644
SWE	Telia Mobitel			0.085	0.051	0.085	0.042	0.058	0.058	0.058	0.058
SWE	Comviq			0.097	0.058	0.097	0.048	0.062	0.062	0.066	0.066
UK	Cellnet			0.779	0.779	0.779	0.779	0.779	0.779	0.779	0.779
UK	Vodafone			1.355	1.355	0.981	0.981	1.308	1.308	0.981	0.981

All prices in euro excluding VAT

Table 6.19 Roaming in Spain and France

Mobile roaming charges per minute		Roaming Country:		E				F			
		Roaming Network:		Movistar		Airtel		Itineris		SFR	
		Call set-up		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
Home Country	Home Network	Peak	Off-Peak	Mon-Fri 8-22	All other times	Mon-Fri 8-22	All other times	Mon-Fri 8-21	All other times	Mon-Fri 8-21	All other times
B	Proximus			0.992	0.992	0.992	0.992	0.992	0.992	0.992	0.992
B	Mobistar			1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
DK	Teledanmark			0.621	0.621	0.701	0.609	1.035	0.632	1.012	0.598
DK	Sonofon			0.690	0.690	0.702	0.609	1.035	0.632	1.506	0.909
D	T-Mobil D1			0.719	0.719	0.727	0.636	1.058	0.636	1.033	0.603
D	Vodafone D2			0.719	0.719	0.731	0.636	1.055	0.636	1.031	0.599
EL	Cosmote			0.447	0.447	0.447	0.392	0.373	0.373	0.397	0.397
EL	Panafon			0.805	0.805	0.678	0.678	0.805	0.805	0.678	0.678
E	Movistar							0.510	0.510	0.510	0.510
E	Airtel			0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690
F	Itineris			0.836	0.836	0.836	0.836				
F	SFR			1.087	1.087	1.087	1.087				
IRL	Eircell			0.692	0.692	0.708	0.617	1.075	0.667	1.075	0.667
IRL	Esat Digifone			0.700	0.700	0.708	0.617	1.050	0.642	1.050	0.650
I	TIM			0.651	0.651	0.900	0.900	0.900	0.900	0.900	0.900
I	Omnitel			0.933	0.933	0.667	0.667	0.933	0.933	0.667	0.667
L	LuxGSM			0.720	0.720	0.732	0.636	1.056	0.636	1.056	0.624
L	Tango			0.698	0.615	0.702	0.610	0.997	0.598	1.012	0.598
NL	KPN GSM			0.891	0.798	0.891	0.798	0.891	0.798	0.891	0.798
NL	Libertel			0.870	0.870	0.870	0.870	0.870	0.870	0.870	0.870
AUT	A1 Mobilkom			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
AUT	Maxmobil			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
P	TMN			0.545	0.545	0.615	0.534	0.938	0.575	0.938	0.575
P	Telecel			0.546	0.546	0.613	0.538	0.941	0.571	0.908	0.563
FIN	Sonera			1.230	1.230	0.950	0.950	0.950	0.950	1.230	1.230
FIN	Radiolinja			0.719	0.627	0.652	0.569	0.995	0.610	0.995	0.995
SWE	Telia Mobitel			0.058	0.058	0.059	0.051	0.087	0.054	0.087	0.052
SWE	Comviq			0.059	0.059	0.067	0.058	0.099	0.060	0.099	0.059
UK	Cellnet			0.779	0.779	0.779	0.779	0.779	0.779	0.779	0.779
UK	Vodafone			1.308	1.308	0.981	0.981	1.308	1.308	0.981	0.981

All prices in euro excluding VAT

Table 6.20 Roaming in Ireland and Italy

Mobile roaming charges per minute		Roaming Country:		IRL				I			
		Roaming Network:		Eircell		Esat Digifone		TIM		Omnitel	
		Call set-up		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
Home Country	Home Network	Peak	Off-Peak	Mon-Fri 8-18	All other times	Mon-Fri 8-18	All other times	At all times	At all times	At all times	At all times
B	Proximus			0.992	0.992	0.992	0.992	0.992	0.992	0.992	0.992
B	Mobistar			1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
DK	Teledanmark			0.803	0.657	0.920	0.759	0.742	0.742	0.520	0.520
DK	Sonofon			0.805	0.656	0.920	0.759	0.678	0.678	0.518	0.518
D	T-Mobil D1			0.752	0.612	0.884	0.702	0.711	0.711	0.537	0.537
D	Vodafone D2			0.755	0.611	0.883	0.700	0.707	0.707	0.731	0.731
EL	Cosmote			0.653	0.531	0.653	0.475	0.626	0.626	0.427	0.427
EL	Panafon			0.653	0.534	0.653	0.534	0.805	0.805	0.678	0.678
E	Movistar			0.510	0.510	0.510	0.510	0.510	0.510	0.510	0.510
E	Airtel			0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690
F	Itineris			0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836
F	SFR			1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087
IRL	Eircell							0.683	0.683	0.708	0.708
IRL	Esat Digifone							0.692	0.692	0.708	0.708
I	TIM			0.900	0.900	0.651	0.651				
I	Omnitel			0.667	0.667	0.933	0.933				
L	LuxGSM			0.726	0.581	0.842	0.668	0.709	0.709	0.542	0.542
L	Tango			0.730	0.584	0.856	0.684	0.680	0.680	0.520	0.520
NL	KPN GSM			0.891	0.798	0.891	0.798	0.891	0.798	0.891	0.798
NL	Libertel			0.870	0.870	0.870	0.870	0.870	0.870	0.870	0.870
AUT	A1 Mobilkom			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
AUT	Maxmobil			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
P	TMN			0.704	0.576	0.813	0.666	0.596	0.596	0.455	0.455
P	Telecel			0.706	0.571	0.807	0.664	0.597	0.597	0.454	0.454
FIN	Sonera			1.230	1.230	0.950	0.950	0.950	0.950	1.230	1.230
FIN	Radiolinja			0.744	0.610	0.853	0.711	0.485	0.485	0.635	0.635
SWE	Telia Mobitel			0.068	0.055	0.077	0.063	0.069	0.069	0.044	0.044
SWE	Comviq			0.077	0.063			0.071	0.071	0.050	0.050
UK	Cellnet			0.467	0.467	0.467	0.467	0.779	0.779	0.779	0.779
UK	Vodafone			0.794	0.607	0.903	0.701	1.308	1.308	0.981	0.981
All prices in euro excluding VAT											

Table 6.21 Roaming in Luxembourg and the Netherlands

Mobile roaming charges per minute		Roaming Country:		L				NL			
		Roaming Network:		LuxGSM		Tango		KPN GSM		Libertel	
		Call set-up		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
Home Country	Home Network	Peak	Off-Peak	Mon-Fri 8-19	All other times	Mon-Fri 8-19	All other times	Mon-Fri 7-21	All other times	Mon-Fri 8-20	All other times
B	Proximus			0.992	0.992	0.992	0.992	0.992	0.992	0.992	0.992
B	Mobistar			1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
DK	Teledanmark			0.771	0.338	0.983	0.299	0.939	0.427	0.931	0.413
DK	Sonofon			0.920	0.897	1.115	0.437	1.184	0.678	0.920	0.678
D	T-Mobil D1			0.802	0.355	1.033	0.314	1.231	0.711	0.959	0.711
D	Vodafone D2			0.802	0.347	1.162	0.455	1.235	0.707	0.959	0.707
EL	Cosmote			0.317	0.257	0.162	0.162	0.587	0.429	0.457	0.410
EL	Panafon			0.805	0.805	0.805	0.805	0.805	0.805	0.678	0.678
E	Movistar			0.510	0.510	0.510	0.510	0.510	0.510	0.510	0.510
E	Airtel			0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690
F	Itineris			0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836
F	SFR			1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087
IRL	Eircell			0.950	0.483	1.000	0.300	0.950	0.433	0.925	0.683
IRL	Esat Digifone			0.933	0.500	1.125	0.442	1.200	0.683	0.933	0.692
I	TIM			0.651	0.651	0.900	0.900	0.900	0.900	0.900	0.900
I	Omnitel			0.933	0.933	0.933	0.933	0.933	0.933	0.667	0.667
L	LuxGSM							0.667	0.379	0.436	0.196
L	Tango							0.939	0.428	0.931	0.414
NL	KPN GSM			0.891	0.798	0.891	0.798				
NL	Libertel			0.870	0.870	0.870	0.870				
AUT	A1 Mobilkom			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
AUT	Maxmobil			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
P	TMN			0.811	0.431	0.862	0.262	0.824	0.376	0.807	0.444
P	Telecel			0.672	0.294	0.866	0.261	0.824	0.370	0.807	0.445
FIN	Sonera			1.230	1.230	1.230	1.230	0.950	0.950	1.230	1.230
FIN	Radiolinja			0.861	0.460	1.054	0.318	0.878	0.401	0.962	0.468
SWE	Telia Mobitel			0.065	0.028	0.091	0.033	0.099	0.056	0.087	0.042
SWE	Comviq			0.074	0.032	0.095	0.029	0.090	0.041	0.099	0.048
UK	Cellnet			0.779	0.779	0.779	0.779	0.779	0.779	0.779	0.779
UK	Vodafone			1.308	1.308	1.308	1.308	1.308	1.308	0.981	0.981
All prices in euro excluding VAT											

Table 6.22 Roaming in Austria and Portugal

Mobile roaming charges per minute		Roaming Country:		AUT				P			
		Roaming Network:		A1 Mobilkom		Maxmobil		TMN		Telecel	
		Call set-up		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
Home Country	Home Network	Peak	Off-Peak	At all times	At all times	At all times	At all times	At all times	At all times	At all times	At all times
B	Proximus			0.992	0.992	0.992	0.992	0.992	0.992	0.992	0.992
B	Mobistar			1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
DK	Teledanmark			1.011	1.011	0.885	0.885	0.859	0.859	0.804	0.804
DK	Sonofon			1.012	1.012	0.885	0.885	1.322	1.322	0.805	0.805
D	T-Mobil D1			1.050	1.050	0.926	0.926	0.777	0.777	0.843	0.843
D	Vodafone D2			1.054	1.054	0.922	0.922	1.198	1.198	1.079	1.079
EL	Cosmote			0.401	0.401	0.196	0.196	0.267	0.183	0.149	0.149
EL	Panafon			0.805	0.805	0.805	0.805	0.805	0.805	0.678	0.678
E	Movistar			0.510	0.510	0.510	0.510	0.510	0.510	0.510	0.510
E	Airtel			0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690
F	Itineris			0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836
F	SFR			1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087
IRL	Eircell			1.017	1.017	1.067	1.067	1.158	1.158	0.817	0.817
IRL	Esat Digifone			1.017	1.017	0.608	0.608	1.167	1.167	0.817	0.817
I	TIM			0.651	0.651	0.900	0.900	0.651	0.651	0.900	0.900
I	Omnitel			0.933	0.933	0.933	0.933	0.933	0.933	0.667	0.667
L	LuxGSM			0.092	0.092	1.112	1.112	0.006	0.006	0.004	0.004
L	Tango			1.011	1.011	0.883	0.883	0.743	0.741	0.805	0.805
NL	KPN GSM			0.891	0.798	0.891	0.798	0.891	0.798	0.891	0.798
NL	Libertel			0.870	0.870	0.870	0.870	0.870	0.870	0.870	0.870
AUT	A1 Mobilkom							#N/A	#N/A	#N/A	#N/A
AUT	Maxmobil							#N/A	#N/A	#N/A	#N/A
P	TMN			0.887	0.887	0.776	0.776				
P	Telecel			0.891	0.891	0.773	0.773				
FIN	Sonera			1.230	1.230	1.230	1.230	1.230	1.230	1.230	0.123
FIN	Radiolinja			0.945	0.945	0.836	0.836	0.694	0.694	0.962	0.962
SWE	Telia Mobitel			0.085	0.085	0.075	0.075	0.097	0.097	0.068	0.068
SWE	Comviq			0.097	0.097	0.085	0.085	0.071	0.071	0.077	0.077
UK	Cellnet			0.779	0.779	0.779	0.779	0.779	0.779	0.779	0.779
UK	Vodafone			1.308	1.308	1.308	1.308	1.308	1.308	0.981	0.981
All prices in euro excluding VAT											

Table 6.23 Roaming in Finland and Sweden

Mobile roaming charges per minute		Roaming Country:		FIN				SWE			
		Roaming Network:		Sonera		Radiolinja		Telia Mobitel		Comviq	
		Call set-up		Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
Home Country	Home Network	Peak	Off-Peak	Mon-Fri 8-22	All other times	Mon-Sun 8-21	All other times	At all times	At all times	At all times	At all times
B	Proximus			0.992	0.992	0.992	0.992	0.992	0.992	0.992	0.992
B	Mobistar			1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
DK	Teledanmark			0.551	0.504	0.460	0.310	0.666	0.377	0.636	0.636
DK	Sonofon			0.747	0.702	0.644	0.494	0.658	0.373	0.629	0.629
D	T-Mobil D1			0.661	0.488	0.488	0.488	0.694	0.694	0.661	0.661
D	Vodafone D2			1.079	0.899	0.922	0.767	0.661	0.661	0.693	0.693
EL	Cosmote			0.726	0.434	4.237	2.542	4.475	4.475	5.714	5.714
EL	Panafon			0.805	0.805	0.805	0.805	0.805	0.805	0.678	0.678
E	Movistar			0.510	0.510	0.510	0.510	0.510	0.510	0.510	0.510
E	Airtel			0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690
F	Itineris			0.836	0.836	0.836	0.836	0.836	0.836	0.836	0.836
F	SFR			1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087
IRL	Eircell			1.042	0.867	0.817	0.667	0.667	0.667	0.800	0.800
IRL	Esat Digifone			0.650	0.483	0.475	0.475	0.667	0.667		
I	TIM			0.651	0.651	0.900	0.900	0.650	0.650	0.900	0.900
I	Omnitel			0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933
L	LuxGSM			0.113	0.083	0.083	0.083	0.689	0.689	0.733	0.733
L	Tango			0.641	0.470	0.805	0.656	0.741	0.741	0.702	0.368
NL	KPN GSM			0.891	0.798	0.891	0.798	0.891	0.798	0.891	0.798
NL	Libertel			0.870	0.870	0.870	0.870	0.870	0.870	0.870	0.870
AUT	A1 Mobilkom			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
AUT	Maxmobil			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
P	TMN			0.797	0.682	0.625	0.494	0.602	0.602	0.617	0.617
P	Telecel			0.454	0.345	0.336	0.336	0.605	0.605	0.622	0.622
FIN	Sonera							0.770	0.770	0.770	0.770
FIN	Radiolinja							0.619	0.351	0.594	0.594
SWE	Telia Mobitel			0.046	0.042	0.039	0.026				
SWE	Comviq			0.053	0.048	0.044	0.030				
UK	Cellnet			0.779	0.779	0.779	0.779	0.779	0.779	0.779	0.779
UK	Vodafone			1.308	1.308	1.308	1.308	1.308	1.308	1.308	1.308
All prices in euro excluding VAT											

Table 6.24 Roaming in United Kingdom

Mobile roaming charges per minute		Roaming Country:		UK			
		Roaming Network:		Cellnet		Vodafone	
		Call set-up		Peak	Off-Peak	Peak	Off-Peak
Home Country	Home Network	Peak	Off-Peak	Mon-Fri 8-18	All other times	Mon-Sat 7.30-21.30	All other times
B	Proximus			0.992	0.992	0.992	0.992
B	Mobistar			1.500	1.500	1.500	1.500
DK	Teledanmark			1.092	0.689	0.874	0.696
DK	Sonofon			1.127	0.711	0.902	0.711
D	T-Mobil D1			1.223	0.769	0.975	0.769
D	Vodafone D2			1.179	0.744	0.943	0.744
EL	Cosmote			0.718	0.718	0.653	0.382
EL	Panafon			0.805	0.805	0.678	0.678
E	Movistar			0.510	0.510	0.510	0.510
E	Airtel			0.690	0.690	0.690	0.690
F	Itineris			0.836	0.836	0.836	0.836
F	SFR			1.087	1.087	1.087	1.087
IRL	Eircell			1.000	0.608	0.592	0.475
IRL	Esat Digifone			0.492	0.492	0.633	0.508
I	TIM			0.900	0.900	0.900	0.900
I	Omnitel			0.933	0.933	0.667	0.667
L	LuxGSM			1.150	0.716	1.139	0.732
L	Tango			1.254	0.798	1.169	0.741
NL	KPN GSM			0.891	0.798	0.891	0.798
NL	Libertel			0.870	0.870	0.870	0.870
AUT	A1 Mobilkom			#N/A	#N/A	#N/A	#N/A
AUT	Maxmobil			#N/A	#N/A	#N/A	#N/A
P	TMN			1.036	0.654	0.829	0.660
P	Telecel			0.966	0.613	0.773	0.613
FIN	Sonera			1.230	1.230	1.230	1.230
FIN	Radiolinja			1.555	0.828	1.246	0.836
SWE	Telia Mobitel			0.076	0.048	0.062	0.040
SWE	Comviq			0.086	0.055	0.057	0.045
UK	Cellnet						
UK	Vodafone						
				All prices in euro excluding VAT			

Table 6.25 Comments on special charges

B	Proximus	Proximus now offer a simplified tariff to Western Europe of €1.2 per minute.
B	Mobistar	Per second billing after first minute.
DK	Teledanmark	Calls from Movistar in Spain incur a call set-up charge of DKK.3.63, and from Vodafone in Spain call set-up charge of DKK.2.99. Calls from TIM in Italy incur a call set-up charge of DKK.3.31, and from Vodafone in Italy a call set-up charge of DKK.3.81. Calls from A1 Mobilkom in Austria incur a call set-up charge of DKK.3.10
DK	Sonofon	Roaming with Movistar is subject to a call setup charge of DKK3.63 peak and off-peak. Roaming with Vodafone is subject to a call setup charge of DKK2.99 both peak and off-peak. Roaming calls in Italy are subject to a call setup fee of DKK3.2 for TIM and DKK3.85 for Omnitel. Roaming in Austria with Mobilkom is subject to a DKK3.1 call setup fee at all times.
D	T-Mobil D1	
D	Vodafone D2	The following call set up fees apply: for roaming in Denmark TDC €0.045, for roaming in Spain with Movistar €0.493 and Vodafone €0.406, for roaming in Italy with TIM €0.435 and Vodafone Omnitel €0.522, for roaming in Luxembourg with LuxGSM €0.188, for roaming in Austria with A1 Mobilkom €0.421, for roaming in Finland with Sonera €0.014, for roaming in Sweden with Telia Mobile €0.051.
EL	Cosmote	Cosmote customers are charged the foreign network's international tariffs, with a 10% surcharge. The following call set-up charges apply: in Denmark TDC €0.250 and Sonofon €0.2, in Spain Movistar €0.34 and Vodafone €0.30, in Italy Vodafone Omnitel €0.125, in Netherlands KPN €0.04 and Vodafone €0.06
EL	Panafon Vodafone	
E	Movistar	Roaming in all EU countries incurs a call setup charge of €0.3.
E	Vodafone	Based on flat Europe tariff, EuroCall, which was introduced at the beginning of 2001.
F	Orange	
F	SFR	
IRL	Eircell	
IRL	O2	
I	TIM	
I	Omnitel	Omnitel divides it's partner operators into Gold and alternative operators. Customers of Gold operators pay a call-set up charge of €0.81 and a per min charge of €0.80 (€0.40 per 30sec), and customers of the alternative operators pay a call set-up charge of €1.12 and a per min charge of €1.12 (€0.56 per 30sec)
L	LuxGSM	
L	Tango	
NL	KPN GSM	KPN has introduced a European tariff. Tariffs apply to the Flexibel Allround tariff. They exclude call setup fees charged by operators abroad.
NL	Vodafone	Vodafone has a flat rate European tariff.

AUT	A1 Mobilkom	Prices apply to A1 business and A1 Fun tariffs. Roaming with TIM in Italy incurs a setup charge of €0.4050.
AUT	T-Mobile	Prices apply to the freizeit.max tariff. A call setup fee of €0.0464 applies to calls made when roaming with Sonofon in Denmark. A call setup fee of €0.42 applies to calls made when roaming with Airtel and €0.51 with Movistar. A call setup fee of €0.45 and €0.5346 applies to calls made when roaming with TIM and Vodafone Omnitel respectively in Italy. A call setup fee of €0.2004 applies to calls made when roaming with P&T in Luxembourg. A call setup fee of €0.0518 applies to calls made when roaming with Comviq in Sweden.
P	TMN	Calls from Denmark using Sonofon have a first minute charge of Peak €0.808 Off Peak €0.647. Calls from Spain using using Movistar have a first minute charge of €1.056, and when using Vodafone the following first minute charges apply Peak €1.068 and Off Peak €0.972. Calls from Italy using using TIM have a first minute charge of €1.069, and when using Vodafone Omnitel the following first minute charge applies €0.9770. Calls from Austria using using Mobilkom have a first minute charge of €1.404. Calls from Finland when using Vodafone the following first minute charges apply Peak €0.961 and Off Peak €0.823. Calls from Sweden using using Comviq have a first minute charge of €0.776.
P	Vodafone Telecel	Calls from Denmark using both TDC and Sonofon incur a call set-up charge of €0.04. Calls from Spain using Movistar incur a call set-up charge of €0.41 and using Vodafone Airtel €0.34. Calls from Italy using TIM incur a call set-up charge of €0.36 and using Vodafone Omnitel €0.43. Calls from Austria using Mobilkom incur a call set-up charge of €0.35. Calls from Finland using Sonera incurs a call set-up charge of €0.01. Calls from Sweden using Comviq incur a call set-up charge of €0.04.
FIN	Sonera	
FIN	Radiolinja	Calls from Italy using Omnitel Vodafone incurs a call set-up charge of €0.46 and when using TIM the call set-up charge is €0.38
SWE	Telia Mobitel	Prices are shown in Euros except for Denmark DKK and UK GBP. The following call set-up charges apply calls from Austria using Mobilkom €0.32, calls from Denmark using Sonofon and TDC DKK0.25, calls from Italy using TIM €0.4 and using Omnitel Vodafone €0.39, calls from Spain using Movistar €0.37 and using Vodafone €0.31.
SWE	Comviq	Prices are shown in Euros except for Denmark DKK and UK GBP. The following call set-up charges apply calls from Dk using TDC DK 0.23, calls from Italy using TIM €0.3099, call from Lux using P&TGSM EUR0.1336, calls from Spain using Airtel Vodafone €0.28, calls from Austria using Mobilkom €0.2906. Per minute charge from both operators in NL varies Vodafone Peak €0.9-1.13, Off Peak €0.44-0.67, KPN Peak €0.8168-1.0301, Off Peak €0.3721-0.8168
UK	O2	
UK	Vodafone	Prices are based on Vodafone 10600 package

6.8. Pre-paid options

The pre-paid tariffs will consist of the pre-paid card, which has a certain value and maximum validity time. Calls are charged against the pre-paid value, up to the value of the card. The Minimum charge per year is calculated based on maximum card validity time and minimum recharge value.

Pre-paid services will normally have considerably higher call charges than contract based (post-paid) services. However the benefit is that there are no fixed charges.

Minimum card cost per year

Table 6.26 Minimum charges for pre-paid packages

	Operator	Package	Minimum Per year	Card price	Card valid for
B	Proximus	Pay & Go Original	10.33	10.33	1 year
DK	Tele Danmark Mobil	VidTid	6.73	5.38	1 year
D	T-Mobile	XtraOne	25.86	12.93	215 days
EL	Cosmote	Cosmokarta	6.22	6.22	365 days
E	Movistar	Activa Club	34.48	17.24	9 months
F	Orange France	Mobicarte Classic	75.24	12.54	2 months
IRL	Vodafone	Ready to go	16.53	16.53	12 months
I	Telecom Italia Mobile	Autoricarica 190	4.17	4.17	12 months
L	LuxGSM	Tip Top	34.78	8.70	90 days
NL	KPN GSM	Hi Pre Pay	33.60	16.80	6 months
AUT	Mobilkom	B-Free Classic Plus	16.66	16.66	12 months
P	TMN	Mimo	85.44	4.27	30 days
FIN	Sonera GSM	Easy	27.56	13.78	6 months
SWE	Telia Mobil	Refill	8.79	8.79	12 months
UK	O2	Pay+Go	0.00	13.26	unlimited

Notes:

Prices are expressed in euro, excluding VAT

The “minimum per year” is calculated based on maximum validity period for the card and the minimum recharge value for each period.

The minimum per year for O2 reflects the fact that the call credit never expires. At least one call must be received every 6 months.

Comments to the pre-paid packages covered.

	Operator	Package	Comment
B	Proximus:	Pay&Go Original	With the introduction of Pay & Go Anytime and Pay & Go Night & Weekend, Pay & Go has been renamed Pay & go Original.
DK	Tele Danmark Mobil:	VidTid	Formerly know as MobilTid. <i>Minimum spend based on DKK200 top-up card valid 6 months.</i>
D	T-Mobile	XtraOne	Xtra Friend is no longer available and XtraOne is the closest to it. Minimum Spend is calculated on 12.93 x 2, as the cards are only valid for 7 months.
EL	Cosmote:	Cosmokarta	After 12 months, there is a 6 months grace period before the customer gets cut off.
E	Movistar:	Activa Club	Clasica is no longer available to new customers. Minimum spend per year calculated on € 17.24 x 2. There's a 15 day period before the customer gets cut off.
F	Orange France:	Mobicarte Classic	Minimum spend calculated on 6 x 2 months. Calls can be received for a further 6 months after call credit has expired.
IRL	Vodafone	Ready to go	
I	Telecom Italia Mobile:	Autoricarica 190	There is one month's grace period after expiry of the 12 months. Minimum recharge € 5 incl. VAT. Cost for each recharge is € 1 incl. VAT.
L	LuxGSM:	Tip Top	Minimum spend: 8.696 x 4
NL	KPN GSM:	Hi Pre Pay	Alternative arrangements via credit card recharges exist.
AUT	Mobilkom:	B-Free Classic Plus	There is one month's grace period after expiry of the 12 months. This package replaced B-Free Classic on 31.08.02
P	TMN:	Mimo	Calculation based on €21.36 x 4 minimum recharge valid for 90 days.
FIN	Sonera GSM:	Easy	Every six months credit should be added.
SWE	Telia Mobil:	Refill	Connection charge is SEK350 incl. VAT that includes SEK100 worth of call credit.
UK	O2	Pay+Go	Pay & Go was renamed Pay & Go Original after introduction of Pay & Go Talkalot. Call credit does not expire, but customers need to make or receive one call every six months.

Call charges for national calls

Table 6.27 National call charges for pre-paid packages

	National 3 minute call to fixed			National 3 minute call to GSM (same network)		
	Peak 11:00	Off-peak 20:00	Economy	Peak 11:00	Off-peak 20:00	Economy
B	1.86	0.60	0.60	0.90	0.60	0.60
DK	1.64	0.83	0.83	1.64	0.83	0.83
D	2.04	0.99	0.21	0.99	0.48	0.48
EL	1.21	1.21	1.21	1.21	1.21	1.21
E	0.48	0.48	0.48	0.48	0.48	0.48
F	1.25	1.25	1.25	1.25	1.25	1.25
IRL	1.59	0.64	0.32	1.12	0.32	0.32
I	0.42	0.42	0.42	0.43	0.43	0.43
L	0.65	0.32	0.32	0.32	0.19	0.19
NL	0.93	0.93	0.93	0.93	0.93	0.93
AUT	1.77	0.75	0.75	0.75	0.75	0.75
P	0.65	0.65	0.43	0.65	0.65	0.43
FIN	0.84	0.84	0.84	0.84	0.84	0.84
SWE	1.62	0.25	0.25	1.62	0.25	0.25
UK	1.39	0.40	0.08	0.40	0.40	0.08

Notes:

Prices are expressed in euro, excluding VAT

For list of operators and packages, see table 6.15 above

Economy time calls are the cheapest rates available. Only in Germany, Ireland and United Kingdom are these lower than the off-peak rates.

In Portugal the peak rate also applies at 20:00 weekdays, the reduced rate starts at 21:00.

Call charges for Intra-EU calls

Table 6.28 International call charges for pre-paid packages

	International 3 minute Intra-EU call (average)	
	Peak	Economy
B	2.48	1.86
DK	2.64	1.63
D	5.13	5.13
EL	2.08	2.08
E	1.78	1.78
F	1.74	1.74
IRL	2.52	2.52
I	1.52	1.52
L	1.11	0.79
NL	2.96	2.96
AUT	1.77	1.77
P	1.02	0.51
FIN	1.68	1.21
SWE	1.62	1.44
UK	5.96	5.96

Notes:

Prices are expressed in euro, excluding VAT

Peak charges are 11:00 weekdays, Economy are the cheapest price available, regardless of time.

For list of operators and packages, see table 6.25 above

International call charges are simple averages of charges to all EU fixed network destinations

6.9. Comparing Post-paid and Pre-paid

The tables below compare the prices of 3 minute calls from high and low volume post-paid packages and pre-paid packages of ex-incumbent mobile operators.

Table 6.29 Post- and pre-paid package call charges for a 3 minute call to another mobile in the same network (in euro, excluding VAT)

		Post-paid High volume	Post paid Low Volume	Pre-paid
B	Proximus	0.37	0.37	0.90
DK	Tele Danmark Mobil	0.41	1.00	1.64
D	T-Mobil D-1	0.39	0.91	0.99
EL	Cosmote	0.63	0.63	1.21
E	Movistar	0.60	0.81	0.48
F	Orange	0.34	0.56	1.25
IRL	Vodafone	0.39	0.77	1.12
I	Telecom Italia Mobile	0.46	0.46	0.43
L	LuxGSM	0.32	0.32	0.32
NL	KPN GSM	0.73	0.73	0.93
AUT	Mobilkom	0.18	0.18	0.75
P	TMN	0.33	0.36	0.65
FIN	Sonera GSM	0.42	0.42	0.84
SWE	TeliaMobile	0.76	0.96	1.62
UK	O2	0.40	1.39	0.40

Notes:

All prices in euro, excluding VAT

Prices apply to peak time calls

Table 6.30 Post- and pre-paid package call charges for a 3 minute call to incumbent's fixed network (in euro, excluding VAT)

		Post-paid High volume	Post paid Low Volume	Pre-paid
B	Proximus	0.64	1.24	1.86
DK	Tele Danmark Mobil	0.41	1.00	1.64
D	T-Mobil D-1	0.39	1.32	2.04
EL	Cosmote	0.63	0.63	1.21
E	Movistar	0.60	0.81	0.48
F	Orange	0.45	0.75	1.25
IRL	Vodafone	0.66	1.26	1.59
I	Telecom Italia Mobile	0.84	1.14	0.42
L	LuxGSM	0.32	0.65	0.65
NL	KPN GSM	0.73	0.73	0.93
AUT	Mobilkom	0.18	0.71	1.77
P	TMN	0.33	0.63	0.65
FIN	Sonera GSM	0.79	0.98	0.84
SWE	TeliaMobile	0.76	0.96	1.62
UK	O2	0.40	1.39	1.39

Notes:

All prices in euro, excluding VAT

Prices apply to peak time calls

Table 6.31 Post- and pre-paid package average call charges for a 3 minute call to other EU Member States (in euro, excluding VAT)

		Post-paid High volume	Post paid Low Volume	Pre-paid
B	Proximus	1.75	2.18	2.48
DK	Tele Danmark Mobil	1.33	1.67	2.64
D	T-Mobil D-1	2.70	3.03	5.13
EL	Cosmote	1.38	1.38	2.08
E	Movistar	1.78	1.78	1.78
F	Orange	1.20	1.20	1.74
IRL	Vodafone	2.01	2.01	2.52
I	Telecom Italia Mobile	1.17	2.11	1.52
L	LuxGSM	0.72	1.02	1.11
NL	KPN GSM	1.82	1.83	2.96
AUT	Mobilkom	1.08	1.29	1.77
P	TMN	0.54	0.86	1.02
FIN	Sonera GSM	1.86	2.06	1.68
SWE	TeliaMobile	1.41	1.51	1.62
UK	O2	3.58	3.58	5.96

Notes:

All prices in euro, excluding VAT

Prices apply to peak time calls

7. Internet prices

This section provides information on 3 specific issues related to Internet:

- Dial up access charges using PSTN for accessing the Internet
- Cost of using different Internet Service Providers (ISPs) with dial up access
- Special arrangements for schools and libraries, to provide a more economical service to these institutions.

Unless otherwise stated, the prices are given expressed in euro, using the average December exchange rates.

The terms Business and Residential are used in this section to identify intensive and less intensive usage, at peak time (working hours) and off-peak time (evenings), respectively. *Many Internet packages are open to both Business and Residential users. This does not necessarily indicate that a Residential user is prohibited from taking a package identified as Business, and vice versa.*

Note also that ADSL service and connection via leased lines (whose pricing is covered elsewhere) are alternatives for intensive Internet users.

The price analysis below assumes a usage of 400 hours per year (33.3 hours per month). However, surveys have shown that in Europe, residential subscribers paying Internet usage charges stays on-line for average of 15 minutes per day (7,5 hours per month) whereas flat rate users stays for 1 hour per day average (30 hours per month).

7.1. Internet dial up access

This section covers Internet access via PSTN, where the user will use a modem and a phone line to dial up the Internet Service Provider (ISP) access point. A range of different charge elements may apply:

- PSTN call charges, either as regular local charges or specific ISP access charges
- ISP usage charges, normally on a per hour basis
- ISP connection charges, as a non-recurring set up charge
- ISP fixed rental charges (e.g. on a monthly basis)

PSTN charges are normally paid to the telecoms operator, while ISP charges are normally paid to the ISP. Fixed PSTN charge elements are not included in this analysis, assuming the use of an already existing telephone line.

A comparison of the PSTN call charges applicable for Internet access is shown below. As Internet related calls are normally local, and have durations of one hour or more, the table below assumes an average local call of 1 hour, multiplied up to an annual usage of 400 hours. Where special Internet access rates are available, these are identified in addition. This makes the PSTN usage costs combinable with the ISP charges in the next section.

The 400 hours is a general assumption of usage, which for businesses would mean slightly less than 2 hours on-line per working day, and for residential users would mean 8 hours of usage (at off-peak hours) per week. The purpose of this traffic volume is not to suggest any specific usage profiles, but simply to produce call cost figures that are combinable with the ISP costs in the next section.

Call charges are the same as for normal local calls, except in Belgium, Denmark, Germany, Ireland, Luxembourg, Austria and United Kingdom, where specific charges may apply for calls to Internet services. The special "Internet call" charges do not necessarily apply to all ISPs or all packages, as the individual ISP may choose to use normal local call charges or a toll-free number combined with a flat fee or a duration-sensitive charge.

In the cost comparisons in section 7.2 only those ISP services that clearly state the use of reduced (special Internet) access charges will be assigned such charges. Many ISPs do not clearly state what kind of charges is used for dial up access, and in such cases the normal local call charges are applied.

Some operators offer discount packages aimed at Internet usage. In Denmark for example it is possible to use the "Favorit Internet" package, which provides reduced rates after 60 minutes of call time (per call). In other countries the "Friends and Family" type of packages can also include an Internet access number, providing a reduced rate for these calls. Such packages have not been included in the comparisons shown, as the effects of these will be individual to each user.

Table 7.1 Dial up costs using PSTN

	Cost of 400 local PSTN call hours	
	Peak 11:00	Economy 20:00
AUT (local)	1121	401
AUT (Internet)	499	259
B (local)	1008	513
B (Internet)	845	348
D (Local)	827	496
D (Internet)	310	310
DK (Local)	657	334
DK (Internet)	734	269
DK (Opasia Plus)	631	217
DK (Tele2)	631	321
DK (Telia)	629	319
E (Local)	578	252
EL (Local)	624	312
EL (Internet)	146	73
FIN (local)	240	240
F (Local) Res	691	384
I (Local)	371	223
I (Wind 24 Ore)	271	271
I (Wind Family)	351	192
IRL (Local)	1006	250
IRL (Internet)	386	192
L (Local)	646	322
L (Internet)	595	324
NL (Local)	578	316
P (Local)	384	199
SWE (Local)	501	258
UK (Local)	1256	471
UK (Internet g4)	636	318
UK (Surftime g5)	318	191

Notes

Costs in euro, excluding VAT.

Minor exchange rate variations for countries outside the euro-zone affect the results.

400 calls of 1 hour each is assumed.

This table shows the PSTN call costs with the incumbent telecom operator. No ISP usage is included.

Several countries (e.g. Denmark) offer special access codes (free-phone or premium rate numbers) for access to the ISP. The use of such numbers may in some cases be combined with special discount packages. Free-phone numbers used to access the ISP will normally be combined with special ISP package rates.

“Friends and Family” type packages may in some countries also include an ISP number, providing reduced rates for ISP calls. The effects of such discounts have not been included in the comparison above, as they will be individual to each user.

7.2. ISP prices

The following table has been constructed through a survey of the most important Internet Service Providers in each EU country. In order to produce reasonably comparable costs for the different packages, the following elements are included:

1. One third of any nonrecurring charge, i.e. depreciated over 3 years
2. Annual rental (i.e. for 1 year) for the package in question
3. Any additional usage charges (normally given on a per hour basis) based on a total of 400 hours of usage in one year. This may not be applicable for all packages.

Please note: The usage charges mentioned here are related to the ISP, not the telecoms operator. These are charges paid for the time using the ISP services, beyond any included allowance. Not all ISPs have such additional usage charges.

The 400 hours is a general assumption of usage, which for businesses will mean slightly less than 2 hours peak time on-line usage per working day, and for residential users would mean 8 hours of usage (at off-peak hours) per week. The purpose of this traffic volume is not to suggest any specific usage profiles, but simply to produce ISP cost figures that are combinable with the call costs in the preceding section.

Packages are selected to be high user packages, with dial up modem access, with either unlimited access, or included hours close to the 400 hour volume. Most ISPs offer a range of packages, and not all of those can be represented here. Please see Appendix I for a full listing.

Warning: A direct comparison of the cost of Internet packages is very difficult, as the services included with each package vary a lot. This relates for example to amount of web-space (for web pages) and number of email addresses included in the package. It is difficult to obtain consistent information to satisfy a strict comparison.

Costs are given in euro, excluding VAT. Some of the packages appear in both the Business and Residential list, as they are offered to both customer groups.

A few of the entries have no cost assigned to them. These are "Free" services where the ISP normally generates revenue from either advertisements or from access call charges.

A number of so-called free Internet services are included. These are normally based on one of two principles:

- Call charges paid to the telecoms operator will also cover the ISP costs.
- Charges paid to the ISP, either a fixed monthly charges, or on a per minute basis, will cover a free-phone number for access in addition to the ISP costs.

The first of these types, where the ISP costs are paid through the dial up access charges, is becoming increasingly popular. Of the residential packages surveyed about 25% of the packages are now of this type.

In order to show the real costs for such services the dial up charges as listed in table 7.1 are included in the following comparison, where relevant. The local call charges, or special Internet access charges, provided by the incumbents are used for this purpose. *As it is not always clear from the ISP which call charges should be used, only those ISPs stating the use of special Internet access charges are assigned such charges.*

It is also worth noting that hardly any ISPs have non-recurring connection or registration charges any more, especially in the residential market.

101 ISPs are covered across the 15 EU Member Countries, with a total of 315 dial-up packages. Of these, 103 are relevant for business users, and 274 are relevant for residential users (some packages are relevant for both).

Table 7.2 Annual ISP costs for Business user packages (in euro excluding VAT)

Business, peak time usage								
Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
AUT	inode	inode Professional	0	170	0	170	480	650
AUT	Eunet	Business Pack light	41	400	0	441	499	940
AUT	inode	inode Professional Plus	0	480	0	480	480	960
AUT	Eunet	Business Pack gold	53	1188	0	1241	499	1741
B	Skynet	Net Free	0	0	0	0	845	845
B	Skynet	Net Comfort	0	61	0	61	845	906
B	Skynet	Net Addict	0	102	0	102	845	947
B	Tiscali	Business dial-up	0	79	0	79	869	948
B	xs4all	Standard Dial-up	8	124	0	132	845	977
D	Freenet.de	Aktion fur Business-Kunden	0	0	0	0	205	205
D	T-Online	T-Online surftime 30	0	179	0	179	38	218
D	AOL	Top	0	0	0	0	248	248
D	T-Online	By Day	0	90	0	90	192	282
D	AOL	Start	0	0	0	0	310	310
D	T-Online	T-Online surftime 60	0	335	0	335	0	335
D	T-Online	Eco	0	47	0	47	382	429
D	T-Online	By Call	0	0	0	0	478	478
D	T-Online	T-Online surftime 90	0	479	0	479	0	479
D	T-Online	T-Online surftime 120	0	599	0	599	0	599
DK	TDC Internet	NetTid 30	0	231	0	231	53	284
DK	TDC Internet	NetTid 80	0	386	0	386	0	386
DK	TDC Internet	NetTid 20	0	180	0	180	232	411
DK	TDC Internet	NetTid 10	0	102	0	102	442	544
DK	Telia	Internet Time	0	0	0	0	629	629
DK	Tele2	get2net gratis internet	0	0	0	0	631	631
DK	Tiscali	Net	0	0	0	0	631	631
DK	Tiscali	Net Plus	0	32	0	32	631	663
DK	TDC Internet	Opasia Plus	0	32	0	32	631	663
DK	TDC Internet	NetBasis	0	0	0	0	734	734
DK	TDC Internet	Opasia FavoritInternet	0	54	0	54	734	788
E	Tiscali	Tiscali Connect Pro	0	100	0	100	578	677
E	Telefonica online	Tarifa Plana Internet	0	198	0	198	576	774
E	Telefonica online	Tarifa Plana premium	0	239	0	239	578	817
EL	OTEnet	Office Gate Basic I	0	94	0	94	146	240
EL	Hellas Online	i-Connect Professional	0	200	0	200	152	352
EL	Forthnet	Small Office PSTN	0	689	0	689	146	835
EL	OTEnet	Office Gate Basic II	0	1690	0	1690	146	1836

Business, peak time usage (cont.)

Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
F	Club Internet	Forfait 30H	0	191	0	191	100	291
F	Wanadoo	Integrales pro 30	0	226	100	327	0	327
F	Tiscali	Professional 60h	0	360	0	360	0	360
F	Club Internet	Acces Direct	0	0	0	0	401	401
F	Club Internet	Forfait 20H	0	140	0	140	401	542
F	Wanadoo	Integrales pro 20	0	150	401	551	0	551
F	Club Internet	Forfait 10H	0	90	0	90	702	793
F	Wanadoo	Integrales pro 10	0	104	702	806	0	806
F	Club Internet	Forfait 5H	0	70	0	70	853	923
F	Wanadoo	Integrales pro 3	0	53	913	966	0	966
F	Tiscali	Professional 120h	0	502	0	502	691	1193
FIN	Sonera	Internet Fun	0	81	0	81	240	322
FIN	Sonera	Internet Active	0	167	0	167	240	407
FIN	Elisa - Kolumbus	Kolumbus +1	0	198	0	198	240	438
I	IOL / Infostrada	Libero@work Night	0	72	0	72	275	347
I	IOL / Infostrada	Libero@work Morning	0	120	0	120	275	395
I	IOL / Infostrada	Libero@work Afternoon	0	120	0	120	275	395
I	Tin.it	Pro	0	80	0	80	371	451
I	IOL / Infostrada	Libero@work Work Day	0	204	0	204	275	479
IRL	Esat BT	Officelink	21	190	0	211	405	616
IRL	Eircom net	Solo Analogue	0	183	0	183	456	639
IRL	Connect-Ireland	Corporate Account	0	254	0	254	386	640
IRL	Esat BT		0	21	698	719	1006	1725
L	Luxembourg Online	Forfait Freeland	0	207	0	207	78	284
L	Luxembourg Online	Forfait Freespace 50	0	336	0	336	0	336
L	Luxembourg Online	Forfait Freezone	0	77	0	77	543	621
L	P&T Luxembourg	Identified Access	15	23	0	39	595	634
L	Luxembourg Online	Internet Gratuit	0	0	0	0	646	646
L	P&T Luxembourg	Identified Access	4	47	0	51	595	647
L	Luxembourg Online	Forfait Freespace 100	0	672	0	672	0	672
L	Visual Online	Subscription	0	86	0	86	646	732
L	Visual Online	Time based	0	0	0	0	945	945
L	Luxembourg Online	Forfait Freespace 150	0	1008	0	1008	0	1008
L	Luxembourg Online	Forfait Freespace 200	0	1344	0	1344	0	1344
NL	Planet Internet	Plus	0	59	0	59	563	622
NL	Euronet Internet (Wanadoo)	Euronet Professional	0	120	0	120	686	806
NL	Planet Internet	Basic	0	30	329	358	500	858
NL	Euronet Internet (Wanadoo)	Euronet Multiple Internet Accounts	0	3000	0	3000	686	3686

Business, peak time usage (cont.)								
Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
P	Oninet	Internet Gratis	0	0	0	0	384	384
P	Clix	MyClix Day	0	0	0	0	415	415
P	Telepac	Net Power 50h	7	272	0	279	182	460
P	Oninet	Premium Usage	0	0	0	0	480	480
P	Telepac	Net Power	7	101	0	108	384	492
P	Telepac	Sapo Livre	0	0	0	0	517	517
P	IOL	dial-up	0	0	0	0	526	526
P	Oninet	Premium Subscription	0	167	0	167	384	551
P	Clix	MyClix 24hrs	0	0	0	0	631	631
P	Telepac	Net Power 100h	7	543	0	550	182	732
P	Telepac	Net Power 200	7	1026	0	1033	171	1204
P	Telepac	Sapo Pre-pago	0	0	0	0	1225	1225
P	Clix	MyClix Night	0	0	0	0	1591	1591
SWE	Tiscali	Free Internet	0	0	0	0	352	352
SWE	Utfors	Internet Bassurf	0	0	0	0	436	436
SWE	Telia	Telia Internet 020	0	25	0	25	501	526
UK	FreeServe	AnyTime	0	223	0	223	0	223
UK	BT Openworld	AnyTime	0	254	0	254	0	254
UK	Supanet	Supahighway	0	254	0	254	0	254
UK	Supanet	Supahighway Platinum	0	398	0	398	0	398
UK	Clara.net	Freetime anytime business	0	398	0	398	0	398
UK	Supanet	Supagold	0	159	0	159	318	477
UK	ntl:business	indirect access	0	0	0	0	530	530
UK	Supanet	Supavalue	0	79	0	79	636	716
UK	FreeServe	No Ties	0	0	0	0	1256	1256
UK	BT Openworld	Pay As You Go	0	0	0	0	1256	1256
UK	Supanet	Supanet Classic	0	0	0	0	1256	1256
UK	FreeServe	HomeTime	0	191	0	191	1069	1260

Notes to Business ISPs

Costs in euro, excluding VAT.

400 hours of ISP usage at peak hours (11:00) is assumed, including any PSTN usage.

No assessment of the suitability of the packages to the “usage profile” has been done.

Packages that seem awfully expensive may be more suitable for a different type of usage.

Packages where all ISP charges are zero are examples of so-called “free” packages where the ISP will get a share of the access call charges.

Table 7.3 Annual ISP costs for Residential user packages (in euro excluding VAT)

Residential, economy time usage								
Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
AUT	UTA Telekom AG	Happy Hours	0	182	0	182	0	182
AUT	Tiscali	Euro	0	0	0	0	200	200
AUT	UTA Telekom AG	Super Surf 30 (with Easy)	0	180	0	180	24	204
AUT	jet2web	aonflash 30	1	179	0	180	26	206
AUT	Tiscali	prime 10	0	70	0	70	140	210
AUT	Tiscali	prime 15	0	100	0	100	110	210
AUT	UTA Telekom AG	Super Surf 20 (with Easy)	0	120	0	120	96	216
AUT	jet2web	aonflash 20	1	125	0	126	104	230
AUT	UTA Telekom AG	Super Surf 10 (with Easy)	0	70	0	70	168	238
AUT	UTA Telekom AG	Easy Internet Lemon	0	0	0	0	240	240
AUT	T-Online.at	T-Online surtime 15	0	100	0	100	143	243
AUT	jet2web	aonflash 10	1	70	0	71	181	252
AUT	T-Online.at	T-Online eco	0	56	0	56	200	256
AUT	T-Online.at	T-Online by call	0	0	0	0	260	260
AUT	jet2web	aonflash easy	1	0	0	1	259	260
AUT	UTA Telekom AG	Super Surf 30 (with Unlimited)	0	240	0	240	24	264
AUT	UTA Telekom AG	Super Surf 20 (with Unlimited)	0	180	0	180	96	276
AUT	jet2web	aonflash 50	1	279	0	280	0	280
AUT	inode	inode Complete	0	99	0	99	195	294
AUT	UTA Telekom AG	Super Surf 10 (with Unlimited)	0	130	0	130	168	298
AUT	UTA Telekom AG	Internet Unlimited Lemon	0	60	0	60	240	300
AUT	inode	inode Low Budget	0	57	0	57	260	317
AUT	Eunet	SuperNet Gold	0	144	0	144	259	403
AUT	inode	inode unlimited	0	151	0	151	260	411
B	Tiscali	Complete	0	18	0	18	264	282
B	Wanadoo	Surfcard 30+5 pre-pay	0	0	0	0	286	286
B	Wanadoo	Surfcard 20+3 pre-pay	0	0	0	0	290	290
B	Wanadoo	Surfcard 10+1 pre-pay	0	0	0	0	303	303
B	Planet Internet	Freedom Premium	0	20	0	20	315	335
B	Planet Internet	Freedom Go	0	0	0	0	338	338
B	Skynet	Net Free	0	0	0	0	348	348
B	Wanadoo	Free	0	0	0	0	348	348
B	Tiscali	Free	0	0	0	0	348	348
B	EDPnet	EDPfree	0	0	0	0	348	348
B	EDPnet	Personal dialup+	0	20	0	20	348	368
B	Easynet	EasyAccess	0	41	0	41	348	389
B	Skynet	Net Comfort	0	61	0	61	348	409
B	Skynet	Net Addict	0	102	0	102	348	450
B	xs4all	Standard Dial-up	8	124	0	132	348	480
B	Easynet	Easynet Dial Office	0	372	0	372	348	720

Residential, economy time usage

Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
D	Freenet.de	Super Call-by-Call	0	0	0	0	184	110
D	Freenet.de	Sorglos	0	0	0	0	267	160
D	Freenet.de	Power	0	0	0	0	205	205
D	Arcor	Online Power	0	0	0	0	207	207
D	Arcor	Internet by call easy	0	0	0	0	217	217
D	T-Online	T-Online surftime 30	0	179	0	179	38	218
D	Arcor	Internet by call	0	0	0	0	228	228
D	AOL	Top	0	0	0	0	248	248
D	Tiscali	Online Get99	0	48	0	48	238	285
D	AOL	Start	0	0	0	0	310	310
D	Freenet.de	Standard	0	0	0	0	518	311
D	Tiscali	Online 20	0	180	0	180	137	317
D	T-Online	T-Online surftime 60	0	335	0	335	0	335
D	Tiscali	Online 10	0	96	0	96	240	336
D	Tiscali	Online Plus	0	0	0	0	343	343
D	Tiscali	Online	0	0	0	0	360	360
D	T-Online	Eco	0	47	0	47	382	429
D	T-Online	By Day	0	90	0	90	382	471
D	T-Online	By Call	0	0	0	0	478	478
D	T-Online	T-Online surftime 90	0	479	0	479	0	479
D	T-Online	T-Online surftime 120	0	599	0	599	0	599
DK	Tiscali	Super Surfer	0	146	0	146	32	178
DK	TDC Internet	Opasia Plus	0	32	0	32	217	250
DK	Tiscali	Surfer	0	81	0	81	176	258
DK	TDC Internet	NetTid 30	0	231	0	231	27	258
DK	Orange	Orange Internet	0	0	0	0	269	269
DK	Tiscali	Mega Surfer	0	280	0	280	0	280
DK	TDC Internet	NetTid 20	0	180	0	180	128	308
DK	Tiscali	Mini Surfer	0	38	0	38	279	317
DK	Telia	Internet Time	0	0	0	0	319	319
DK	Tele2	get2net gratis internet	0	0	0	0	321	321
DK	Tiscali	Net	0	0	0	0	321	321
DK	TDC Internet	Opasia FavoritInternet	0	54	0	54	269	323
DK	Tiscali	Net Plus	0	32	0	32	321	353
DK	TDC Internet	NetTid 10	0	102	0	102	261	363
DK	TDC Internet	NetBasis	0	0	0	0	373	373
DK	TDC Internet	NetTid 80	0	386	0	386	0	386

Residential, economy time usage

Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
E	Tiscali	Plana Premium	0	186	0	186	0	186
E	ya.com	Tarifa Plana	0	192	0	192	0	192
E	EresMas	Tarifa Plana	0	192	0	192	0	192
E	Telefonica online	Tarifa Plana Internet	0	198	0	198	0	198
E	Arrakis	Barra Libre	0	198	0	198	0	198
E	Wanadoo España	Connection Gratis	0	0	0	0	205	205
E	ya.com	Acceso Premium	0	0	0	0	223	223
E	ya.com	Jazzfree	0	0	0	0	238	238
E	Terra	Basic	0	0	0	0	252	252
E	EresMas	Internet Rapido	0	0	0	0	252	252
E	Tiscali	Free Internet	0	0	0	0	252	252
E	Telefonica online	Net Base	0	0	0	0	252	252
E	Wanadoo España	@ bono 30	0	237	0	237	43	280
E	Terra	Personal	0	34	0	34	252	286
E	Telefonica online	Net Premium	0	36	0	36	252	288
E	Tiscali	Premium	0	48	0	48	252	300
E	EresMas	Acceso Premium	0	60	0	60	252	312
E	Arrakis	Personal	0	60	0	60	252	312
E	Wanadoo España	@ bono 15	0	123	0	123	239	362
E	Wanadoo España	@ bono 7	0	61	0	61	343	404
E	Wanadoo España	@ bono 60	0	475	0	475	0	475
E	ONO	Tarifa Plana Internet	15	275	0	290	252	542
E	Wanadoo España	Tarifa Plana Integral	0	620	0	620	0	620
E	Wanadoo España	Tarifa Plana Profesional	0	206	0	206	1034	1240
EL	Compulink	e-Free Surf	0	102	0	102	73	174
EL	Compulink	e-Free Plus	0	144	0	144	73	216
EL	ACN	Standard dial-up	0	155	0	155	73	228
EL	Forthnet	Dial up	0	159	0	159	73	232
EL	Hellas Online	i-Connect	0	160	0	160	73	233
EL	Panafonet	Dynamic	0	161	0	161	73	234
EL	OTEnet	Easy Gate Basic	0	176	0	176	73	248
EL	Hellas Online	i-Connect Family	0	192	0	192	73	265
EL	OTEnet	Easy Gate Plus	0	194	0	194	73	266
EL	Forthnet	Dial up	0	310	0	310	73	382
EL	Panafonet	Static	0	352	0	352	73	425
EL	OTEnet	Easy Gate Exclusive	0	528	0	528	73	601

Residential, economy time usage

Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
F	Tiscali	Totale Liberte	0	0	0	0	0	0
F	Club Internet	Forfait 20H	0	140	0	140	401	140
F	Free Telecom	Forfait 50H	0	150	0	150	0	150
F	Wanadoo	Integrales 40H	0	201	0	201	0	201
F	Wanadoo	Integrales 40H Fidelite	0	201	0	201	0	201
F	Tiscali	Forfait 30H Fidelite	0	226	0	226	0	226
F	Club Internet	Acces Direct	0	0	0	0	401	241
F	Wanadoo	Integrales 60H	0	251	0	251	0	251
F	Wanadoo	Integrales 60H Fidelite	0	251	0	251	0	251
F	Club Internet	Forfait 30H	0	191	0	191	100	291
F	Tiscali	Forfait 30H	0	226	86	312	0	312
F	Tiscali	Forfait 20H Fidelite	0	145	242	387	0	387
F	Wanadoo	Integrales 20H Fidelite	0	151	281	431	0	431
F	Wanadoo	Acces Libre	0	0	0	0	437	437
F	Free Telecom	Acces Gratuit	0	0	0	0	437	437
F	Tiscali	Forfait 20H	0	145	345	491	0	491
F	Wanadoo	Integrales 20H	0	151	401	552	0	552
F	Tiscali	Forfait 10H Fidelite	0	95	552	648	0	648
F	Tiscali	Forfait 10H	0	95	604	699	0	699
F	Wanadoo	Integrales 10H Fidelite	0	100	642	742	0	742
F	Tiscali	Forfait 5H Fidelite	0	55	708	763	0	763
F	Tiscali	Forfait 5H	0	55	733	789	0	789
F	Club Internet	Forfait 10H	0	90	0	90	702	793
F	Wanadoo	Integrales 10H	0	100	702	803	0	803
F	Wanadoo	Integrales 5H Fidelite	0	80	823	903	0	903
F	Club Internet	Forfait 5H	0	70	0	70	853	923
F	Wanadoo	Integrales 5H	0	80	853	933	0	933
F	AOL	Forfait AOL Illimite	0	251	878	1129	0	1129
FIN	KPN / MTV3	MTV3 Internet	0	0	0	0	240	240
FIN	Saunalahti	KIT	0	0	0	0	240	240
FIN	Elisa - Kolumbus	Elisa Internet Free	0	0	0	0	240	240
FIN	SurfEU.fi	Surf Easy	0	0	0	0	240	240
FIN	Saunalahti	iGyM	0	69	0	69	240	309
FIN	Nettiportti	DNA Hyotynetti	0	79	0	79	240	319
FIN	Elisa - Kolumbus	Elisa Internet	0	81	0	81	240	321
FIN	Sonera	Internet Fun	0	81	0	81	240	322
FIN	Nettiportti	DNA Laatonetti	0	138	0	138	240	378
FIN	Sonera	Internet Active	0	167	0	167	240	407

Residential, economy time usage

Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
I	Wind.it	Family	0	0	0	0	192	192
I	IOL / Infostrada	Libero	0	0	0	0	223	223
I	Tin.it	Free	0	0	0	0	223	223
I	Tiscali	Tiscali 10 Abbonati Gratis	0	0	0	0	223	223
I	MC-Link	MC-Link.Net dial-up	0	0	0	0	223	223
I	Tiscali	Tutto Tiscali Time	0	22	0	22	211	232
I	Tiscali	Domino Web	0	22	0	22	223	244
I	Tiscali	Tutto Tiscali	0	56	0	56	216	271
I	Wind.it	24 Ore	0	0	0	0	271	271
I	Tin.it	Special	0	50	0	50	223	272
I	IOL / Infostrada	H-Net	0	52	0	52	223	274
I	Tin.it	Family	0	67	0	67	223	289
I	Tin.it	Pro	0	80	0	80	223	302
I	DADA	aziende.it Power	0	92	0	92	223	315
IRL	UTVip	Lite Flat Rate	10	109	0	119	20	139
IRL	Esat BT	NetSmart 40	0	149	0	149	0	149
IRL	Esat BT	IOL Free	0	0	0	0	211	211
IRL	Esat BT	NetSmart 80	0	248	0	248	0	248
IRL	Eircom net	Free	0	0	0	0	250	250
IRL	Ocean Free	Free	0	0	0	0	250	250
IRL	ntlworld	dial-up	0	0	0	0	261	261
IRL	Connect-Ireland	Personal	0	88	0	88	192	280
IRL	Connect-Ireland	Family	0	104	0	104	192	296
IRL	Esat BT	NetSmart 120	0	298	0	298	0	298
IRL	UTVip	Flat Rate	10	297	0	307	0	307
IRL	Esat BT	IOL Gold	0	126	0	126	192	318
IRL	Eircom net	Premium	0	151	0	151	192	343
L	Tele2	Acces Gratuit	0	0	0	0	255	153
L	Luxembourg Online	Forfait Freeland	0	207	0	207	39	207
L	Visual Online	Subscription	0	86	0	86	322	279
L	Crosscomm	Unlimited	0	300	0	300	0	300
L	Visual Online	Time based	0	0	0	0	534	321
L	Luxembourg Online	Internet Gratuit	0	0	0	0	322	322
L	Luxembourg Online	Forfait Freespace 50	0	336	0	336	0	336
L	Luxembourg Online	Forfait Freezone	0	77	0	77	272	349
L	P&T Luxembourg	Identified Access	15	23	0	39	324	363
L	P&T Luxembourg	Identified Access	4	47	0	51	324	375
L	Luxembourg Online	Forfait Freespace 100	0	672	0	672	0	672
L	Luxembourg Online	Forfait Freespace 150	0	1008	0	1008	0	1008
L	Luxembourg Online	Forfait Freespace 200	0	1344	0	1344	0	1344

Residential, economy time usage

Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
NL	KPN Het Net	Basis	0	20	0	20	292	195
NL	KPN Het Net	Frequent	0	70	0	70	249	202
NL	Tiscali	Gratis	0	0	0	0	347	208
NL	Wanadoo	Smartpack 30	0	212	0	212	31	243
NL	ZON	Zon2	0	50	0	50	205	256
NL	ZON	Inclusief 20H	0	141	0	141	127	268
NL	Freeler	Voordelig	0	50	0	50	222	271
NL	Wanadoo	Budget	1	0	0	1	283	283
NL	Wanadoo	Smartpack 15	0	111	0	111	173	284
NL	Wanadoo	Budget Plus	0	55	0	55	237	292
NL	KPN Het Net	Regular	0	40	0	40	255	295
NL	KPN Het Net	Standard	0	30	0	30	272	301
NL	ZON	Inclusief 10H	0	81	0	81	221	302
NL	Tiscali	Compleet	0	34	0	34	285	319
NL	12move	Gratis	0	0	0	0	347	347
NL	Freeler	Compleet	0	35	0	35	316	351
NL	Planet Internet	Basic	0	30	329	358	274	353
NL	Planet Internet	Plus	0	59	0	59	308	367
NL	ZON	Gratis	0	0	0	0	369	369
NL	Wanadoo	Free	0	0	0	0	371	371
NL	Freeler	Basis	0	0	0	0	371	371
NL	Compuserve	Standard dial-up	0	59	0	59	316	375
NL	Scarlet	Free Internet	0	0	0	0	387	387
NL	Cistron	Standard	0	116	0	116	316	432
P	Oninet	Internet Gratis	0	0	0	0	199	199
P	Telepac	Sapo Pre-pago	0	0	0	0	207	207
P	Clix	MyClix Night	0	0	0	0	208	208
P	Telepac	Sapo Livre	0	0	0	0	267	267
P	Clix	Clix minutix	0	0	0	0	296	296
P	Oninet	Premium Subscription	0	167	0	167	199	366
P	Clix	MyClix 24hrs	0	0	0	0	391	391
P	Oninet	Premium Usage	0	0	0	0	480	480
P	IOL	dial-up	0	0	0	0	526	526
P	Clix	MyClix Day	0	0	0	0	1231	1231
P	Telepac	Freedom @ Telepac	0	0	0	0	1351	1351

Residential, economy time usage								
Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
SWE	Tiscali	Free Internet	0	0	0	0	219	219
SWE	Utfors	Internet Bassurf	0	0	0	0	225	225
SWE	Spray	Fast price 30	0	206	0	206	26	231
SWE	Tiscali	Cash n' Surf	0	0	0	0	248	248
SWE	Utfors	Internet Storsurf	0	200	53	253	0	253
SWE	Spray	Fast price 20	0	153	0	153	103	256
SWE	Spray	Free internet	0	0	0	0	257	257
SWE	Tele2	Free2connect	0	0	0	0	257	257
SWE	Telenordia	Telenordia Internet Surf	0	0	0	0	258	258
SWE	Telia	Telia Internet För Alle	0	0	0	0	258	258
SWE	Spray	Fast price 50	0	264	0	264	0	264
SWE	Tele2	Tele2Internet	0	25	0	25	246	271
SWE	Telia	Telia Internet 020	0	25	0	25	258	284
SWE	Telenordia	Telenordia Internet	0	26	0	26	258	285
SWE	Spray	Fast price 70	0	315	0	315	0	315

Residential, economy time usage								
Country	Provider	Package	ISP charges				Including access cost	
			euro, excl. VAT				400h access	Total cost
			Connect	Annual	400 h usage	Total		
UK	BT Internet	SurfTime Eve&WE	0	111	0	111	0	111
UK	Breathe	Breathe at Home	0	159	0	159	0	159
UK	Clara.net	Freetime Unlimited	0	159	0	159	0	159
UK	CharityDAYS	Donate@home Lite	0	159	0	159	0	159
UK	ntl:home	Unlimited	0	159	0	159	0	159
UK	FreeServe	HomeTime	0	191	0	191	0	191
UK	Tiscali	Off-peak	0	191	0	191	0	191
UK	FreeServe	AnyTime	0	223	0	223	0	223
UK	Breathe	Breathe Unlimited	0	223	0	223	0	223
UK	Tiscali	Anytime	0	238	0	238	0	238
UK	Clara.net	Freetime Anytime	0	238	0	238	0	238
UK	Clara.net	Freetime 35 Account	0	238	0	238	0	238
UK	Madasafish	Un-metered	0	238	0	238	0	238
UK	AOL	Flat Rate	0	254	0	254	0	254
UK	BT Openworld	AnyTime	0	254	0	254	0	254
UK	Supanet	Supahighway	0	254	0	254	0	254
UK	CharityDAYS	Donate@home Standard	0	270	0	270	0	270
UK	Clara.net	Freetime 12 Account	0	53	0	53	241	294
UK	ntl:home	Pay As You Go	0	0	0	0	345	345
UK	Supanet	Supahighway Platinum	0	398	0	398	0	398
UK	Supanet	Supavalue	0	79	0	79	318	398
UK	BT Internet	SurfTime Anytime	0	398	0	398	0	398
UK	FreeServe	No Ties	0	0	0	0	471	471
UK	Tiscali	Pay As You Go	0	0	0	0	471	471
UK	BT Openworld	Pay As You Go	0	0	0	0	471	471
UK	Supanet	Supanet Classic	0	0	0	0	471	471
UK	Madasafish	Metered	0	0	0	0	471	471
UK	CharityDAYS	Donate@home Free	0	0	0	0	471	471
UK	Supanet	Supagold	0	159	0	159	318	477
UK	Clara.net	Freetime 80 Account	0	477	0	477	0	477
UK	MSN	FreeWeb PAYG	0	0	0	0	477	477
UK	Tiscali	Daytime	0	95	0	95	401	496
UK	CharityDAYS	Donate@home Heavy	0	557	0	557	0	557

Notes to Residential ISPs

Costs in euro, excluding VAT.

400 hours of ISP usage at off-peak hours is assumed, including any PSTN usage.

No assessment of the suitability of the packages to the “usage profile” has been done. Packages that seem awfully expensive may be more suitable for a different type of usage.

Packages where all ISP charges are zero are examples of so-called “free” packages where the ISP will get a share of the access call charges.

Packages where both the “400h usage” and the “400h access” columns are zero are effectively flat rate packages where off-peak usage is untimed. Please see Appendix I of this report for more details.

7.3. Prices for ADSL services

ADSL services are now offered in most of the EU Member States.

The ADSL service may be offered by the telecom operator owning the local access network (normally the incumbent operator). But in many countries there is a range of resellers, normally the ISPs, who also offer the ADSL service. In such cases the ADSL service may be offered as part of a package including Internet access and other services. *This study reflects prices for ADSL services as offered by the incumbent operators, without any additional services.*

In most cases the user will incur these costs:

- An existing PSTN or ISDN line must be in place, or a new one installed
- A connection charge is paid for the ADSL service. This normally also includes the cost of the ADSL modem
- A recurring rental charge (e.g. per month) for the ADSL service. This may or may not include the cost of the PSTN/ISDN line.

The tables 7.4 and 7.5 show the prices for connection and monthly rental of ADSL services at different bitrates. They also indicate which bitrates are offered as basic services in the different countries by the incumbent operators or their ISP.

Table 7.4 Connection charges for ADSL

	Bitrate	64/128	64/256	64/512	128/256	128/512	128/640	128/750	128/1024	192/3008	256/256
B	Belgacom							92.19		92.19	
DK	Tele Danmark				53.30	53.30					53.30
D	Deutsche Telekom							74.95			
EL	-										
E	Terra				96.16						
F	France Telecom	126.19				126.19			126.19		
IRL	Eircom					165.00					
I	Telecom Italia				129.00		129.00				
L	P&T		130.00	130.00					130.00		
NL	Planet Internet		200.03			200.03					
AUT	Telekom			109.00							
P	IP					99.76		99.76			
FIN	Sonera										105.74
SWE	Telia										
UK	BT										

Note: All prices are in euro, excluding VAT

Table 7.5 Monthly rental charges for ADSL

	Bitrate	64/128	64/256	64/512	128/256	128/512	128/640	128/750	128/1024	192/3008	256/256	256/512
	Belgacom							25.09		32.77		
	Tele Danmark				51.57	60.19					55.88	
	Deutsche Telekom							41.27				
	-											
	Terra				42.04							83.94
	France Telecom	25.08				37.98			66.89			
	Eircom					89.00						
	Telecom Italia				30.80		41.63					
	P&T		43.00	57.00					91.00			
	Planet Internet		29.32			43.91						
	Telekom			27.95								
	IP					38.00		68.00				
	Sonera										41.50	
	Telia											
	BT											39.75

Note: All prices are in euro, excluding VAT

The cheapest offering in each of the 15 countries is listed below, along with the bitrate of each offering. This gives an indication of the price levels, but does not provide a consistent comparison across countries or the two years.

Table 7.6 Best prices in each country

		2001			2002		
		Bitrate	Installation	Rental	Bitrate	Installation	Rental
B	Belgacom	128/1024	92.22	32.78	128/750	92.19	25.09
DK	Tele Danmark	128/256	37.53	37.53	128/256	53.30	51.57
D	Deutsche Telekom	128/750	44.46	30.75	128/750	74.95	41.27
EL							
E	Terra	128/256	96.16	42.04	128/256	96.16	42.04
F	France Telecom	128/512	97.97	25.24	64/128	126.19	25.08
IRL	Eircom				128/512	165.00	89.00
I	Telecom Italia	128/512	129.11	77.47	128/256	129.00	30.80
L	P&T	64/256	130.00	43.01	64/256	130.00	43.00
NL	Planet Internet	64/512	209.73	37.75	64/256	200.03	29.32
AUT	Telekom	64/512	109.01	33.85	64/512	109.00	27.95
P	IP	64/256	117.22	64.34	128/512	99.76	38.00
FIN	Sonera	256/256	137.86	27.57	256/256	105.74	41.50
SWE	Telia	128/512	125.00	27.54	512/512	43.52	32.97
UK	BT	256/512	102.94	54.89	256/512	83.05	39.75

Note: All prices are in euro, excluding VAT

7.4. Special prices or arrangements for Schools and Libraries

7.4.1. Austria

Telekom Austria and Education Ministry upgrade Austria's science network. From December 14 2001 all 100 Austria's universities are now connected via a gigabit Ethernet solution. This network came about through a partnership between the Ministry of Education and Telekom Austria and joined together the science network AConet (Austrian Academic Computer Network) with the optical backbone network of Telekom Austria, the Jet2Web Stream. AConet offers approximately 300,000 students complete Internet connectivity as well as access to broadband Internet.

7.4.2. Belgium

Skynet Discount for Schools

Skynet offers annual subscription to Net Addict and Net Customer packages at a discounted rate to schools. Schools pay the full amount for 12 months, and receive 15 months of service. Net Addict costs €123.70 annually while Net Comfort costs €74.11 annually. For details of services and price comparison, please see section A.2.1.1.

Eduline

Skynet also have a 'joint venture' with Eduline who run Explorian, Kidcity and Planet Nemo. This suite comprises various educational and support magazines and classes for teachers and pupils in what is referred to as a 'virtual education community'. Sent live in 1999, Eduline now service classes in France, Luxembourg, The Netherlands, Switzerland, Italy, Canada and various other countries whom have all joined the community. Interactive tools are provided through this portal, intergrating different teaching and learning methods within the single environment. An educational search engine is also provided in the form of 'Indexplorian', allowing pupils to run searches in a controlled, indexed, classified environment, governed and guided by the Explorian team made up of teachers and educators. It is aimed at the ages of 8 – 14 years and sites are listed in French and/or Dutch.

7.4.3. Denmark

Tele Danmark Internet does not provide any special Internet packages for schools, colleges or libraries.

7.4.4. Finland

Sonera iNet does not offer any special package or discount for Internet access in schools and libraries.

7.4.5. France

Wanadoo

Wanadoo Scol@gora

This service offers dedicated access to schools on the basis of the Numéris connection customers can choose their own access and tariff.

Dial-up access with a Intégrales Wanadoo Scol@gora or Wanadoo Ecole annuel Scol@gora

ADSL access with Wanadoo ADSL 1 or 2 (with either La Ligne ADSL or La Ligne ADSL Pro) or eXtense Pro de Wanadoo.

Offre pour les enseignants et documentalistes

Teachers and librarians also qualify for reduced Internet access rates at home, subject to proof of profession. This consists of 2 month's free access, and two basic (Illimitée) subscriptions for the price of one.

7.4.6. Germany

Schulen ans Netz (Deutsche Telekom & BMbF)

On 18th April 1996 a joint initiative of the Federal Ministry of Education, Science, Research and Technology (BMbF) and Deutsche Telekom was launched which set itself the initial aim of connecting 10,000 schools to the Network of networks within three years, i.e. by mid-1999. Deutsche Telekom provided a total of DM 36 million for the project; the Federal Ministry of Education, Science, Research and Technology (BMbF) contributed DM 23 million.

“Schools OnLine” quickly became a success, and the two sponsors increased their funding with an additional DM 100 million: Deutsche Telekom contributed an extra DM 60 million, and the BMbF provided an additional DM 40 million. This funding was used during 1999 to connect all schools in Germany to the Net in the following years. The organisers plan to gain additional sponsors to support the project.

Thanks to support from numerous sponsors, the first year of the project (1996/97) showed “Schools Online” to be a clear success. Initially, around 3,500 schools were supported in the project’s start-up and model areas for one year. In the second year (1997/98) 2,700 projects were added. Between 1998/99, 2000 more schools came aboard, bringing the total (at August 1998) to about 8,500 schools. By the end of 1999, 14,500 schools were connected to the Internet. *In October 2001, thanks to T@Schools, all ca. 34,000 schools in Germany had a free Internet connection based on T-ISDN. Furthermore, since 2001 DT has offered a free T-DSL to schools, that is where that is technologically possible. Since then 20,000 schools have got DSL connections. By the end of 2003 the plan is for all schools to have a DSL connection where that is possible.*

The support provides different types of technical equipment for schools: Primary schools receive an Internet access, a fully equipped multimedia computer and prepaid online time. In secondary schools, existing LAN environments are connected to the Net via servers and routers and upgraded with multimedia workstations. InfoSCHUL projects (usage of electronic & multimedia information sources in schools) -supported by the BMbF receive funding of DM 20,000 each

Schools Online offers working support for teachers and pupils alike. There are now various websites aimed at specific areas of all schools:

<http://www.schulen-ans-netz.de/>

www.lehrer-online.de For all Teachers

www.leanet.de For Female Teachers

<http://helpdesk.san-ev.de> For technical questions of any kind which may arise from teaching

www.lizzynet.de Aimed specifically at young women in schools offering discussion groups and learning platforms

7.4.7. Greece

OTEnet

Schools

There is no subscription package specifically aimed at schools, but all OTEnet single user dial-up subscriptions held by schools, up to a maximum of ten, are eligible for a 10% discount on subscription charges.

Libraries

There is no OTEnet discount for Internet access in libraries.

7.4.8. Ireland

Eircom

During 1998, Eircom launched its "Information Age" initiative, which aimed to have at least one multi-media PC connected to the Internet in every state supported primary and secondary school in Ireland. This goal was achieved by March 1999, with each of the 4,100 schools equipped by Telecom Eireann as follows:

- a free multi-media PC
- a telephone or data line free of rental charges for two years
- free Internet access for two years
- a usage (local calls) credit of one hour of every school day for two years, up to a maximum of 183 days per year

Phase 2 of the Information Age project began in mid 1999, with the focus on technology applications, ensuring that all schools benefit from the implementation of basic IT equipment. This involves identifying 'best practice' and developing applications with schools and the community.

The Information Age School Scheme for Internet Access has been extended and every school will be provided with the following for the academic year 2002/2003:

- *Free line rental to schools on one specified telephone line for Internet access*
- *Two hours credit per day for access to the Internet at 1891 Internet Dial Up rates. That means 30 free hours per week and 330 hours in the year.*
- *The annual subscription to the Internet Service Provider used by the school will be paid by the Department of Education and Science.*

In November 1999, the Department of Education & Science launched the “Schools Integration Project” (SIP), titled ‘Learning Together - Startech’ in Baltimore, West Cork. SIP, which is partly sponsored by Eircom, is one of the major initiatives of the Department of Education & Science’s “IT2000” Program. The aim of this program is to develop the whole area of Information and Communication Technology (ICT) in schools.

‘Learning Together - Startech’ initially consisted of a network of 17 rural schools spread throughout remote areas of West Cork, and is developing links between schools with a view to using video conferencing in the primary school curriculum. Provisions are still in progress for supporting this service on a national-scale network.

7.4.9. Italy

TIN

Telecom Italia offers Internet services to schools and libraries with Webscuola an initiative set up in 1997 in collaboration with the Ministry for Education. The service is free and offers many forums and educational tools for schools at all levels.

*As a result of a new agreement signed with the Public Education Ministry in January 2001, in addition to its consolidated on-line teaching activities, Webscuola.it is now offering schools advanced e-learning and specialised Internet service solutions such as safe navigation incorporating the filtering out of unsuitable content, fast Internet access using “ADSL 640” and “Easy SelfSite Plus”, a personalised development environment for straightforward school site development. The Webscuola.it portal offers dedicated content and services specifically designed for schools through two sections, **Aulaperta** (the site for classes) and **Professione Scuola** (the site for teachers)*

Libraries

TIN does not offer any discounts for Internet access in libraries.

7.4.10. Luxembourg

Restena

P&T Luxembourg does not offer special Internet services to schools and libraries.

A special Internet service providing a backbone of communication and research links for schools, colleges and libraries is provided through the Restena Company. This network gives free Internet access to all Luxembourg schools, universities and libraries. Teachers and students are also eligible for free connection and access to Restena at their home addresses. However, all users are still liable for usage charges via P&T Luxembourg.

<http://www.restena.lu/restena/>

7.4.11. Netherlands

Kennisnet is implemented by The Dutch Ministry of Education, Culture and Science in all schools (primary, secondary, adult and vocational education). The project consists of a large intranet for students and teachers, protected by a firewall, which gives access to the Internet and all other schools connected to the network.

The pilot scheme for Kennisnet began in November 1998 with 450 schools, and as of January 2000, the network was available to all primary, secondary and adult education schools in the Netherlands (about 12,000 in total). The Ministry of Education, Culture and Science pay the cost of developing, maintaining and connecting the schools to the network. Schools are not obliged to use the network, and are free to choose any other provider.

<http://www.kennisnet.nl/portal/home/index.html>

7.4.12. Portugal

Telepac

Telepac offers special ADSL Internet access packages to students registered in a university course.

7.4.13. Spain

Telefonica

Telefonica offers 40% discount off the monthly rental for retail ADSL in state schools or centres where compulsory education is taught, the same offer applies to the public libraries.

7.4.14. Sweden

Telia

Telia has removed the Pro-Lane offer from the ITiS project and has not replaced it with another offering.

7.4.15. United Kingdom

British Telecom

Schools Internet Caller

Since April 1998, more than one in six schools have signed up to BT's Schools Internet Caller, which provides unlimited access via a standard phone or ISDN line between 8am and 6pm on weekdays during the school term, for a set annual fee (payable quarterly). PSTN connections via a modem are charged at an annual fee of £445 (excluding VAT), while schools with ISDN access are charged at flat rate of £790 per year (excluding VAT). Calls made to other server numbers or outside the timebands shown above are charged at normal rates. BT Schools Internet Caller is a significant step towards the realisation of the Government's pledge of getting all of the UK's primary and secondary schools connected to the Internet National Grid for Learning by 2002. Rental charges differ depending on the number-range. Schools are required to sign up with a participating ISP.

<http://www.serviceview.bt.com/list/current/docs/Learning/1187.htm>

Schools Internet Caller (Primary)

During 1999, British Telecom launched a new version of the Schools Internet Caller service targeted specifically at primary and middle schools. The new Schools Internet Caller (Primary) service was created specifically to meet the needs of primary and middle schools, which often have fewer pupils than secondary schools, and therefore make more occasional use of online services. The lower priced service, called Schools Internet Caller Primary, gives eligible schools access to online services, such as the Internet, for up to 15 hours per week during term time, for £290 a year (standard telephone line), or £450 per year (ISDN2e line). Connection and rental fees are dependent on the connection media; prices exclude VAT.

Schools Internet Caller is available to all schools in the UK, with Schools Internet Caller (Primary) only being available to primary and middle schools. Both services allow schools to choose any participating online or Internet Service Provider, and the price for the ISDN2e service includes connection.

<http://www.bteducation.com/prodsols/products/sicprim.htm>

<http://www.serviceview.bt.com/list/current/docs/Learning/1187.htm>

Talk21e

Talk21e is a free web-based email service, tailored specifically to meet the needs of school children and teachers. There are a series of security levels available, controlled by individual schools, which ensure that children are protected from receiving unsuitable information.

As talk21e is web-based, children and teachers can use their email at school, at home or anywhere they have Internet access. The service includes:

- a range of e-mail services, enabling users to incorporate attachments such as drawings, photographs, video clips and sound files

-
- a personal e-mail address
 - a mailbox size of 10Mb for teachers and 5Mb for children
 - a private electronic address book
 - a group mailing facility allowing teachers to send messages to 50 addresses simultaneously and children to 20 addresses

<http://www.talk21.com>

AOL

AOL Schools Offer - Direct Debit Un-metered Schools and Charity account. Single Access dial-up account.

Under this scheme schools or charities can go online with AOL UK, without having to use a credit card. Schools have to show a letter of reference from their local authority or education authority. Customers will dial in using a 0845 number, they will be charged at a local rate per minute and not be charged a subscription fee. However, they have the option of accessing AOL's flat rate Internet access price plan at £15.99 per month with no additional charges. More than 4000 ICT library centres will be up and running by the end of 2002.

<http://www.aol.co.uk/info/responsibility/schools.html>

People's Network

During 1999, the UK government announced that GBP 270 million of money generated by the National Lottery would be invested in a 'People's Network' during 2000. This scheme aimed to ensure that every one of Britain's 4,160 public libraries is connected to each other and to the Internet. It is anticipated that the smallest libraries will have 3 or 4 public computer terminals, while larger libraries could have at least 40. The government expects the scheme to cost £730 million over 6 years and the project is on going.

The government is committed to providing Internet access to all those who would like it by 2005. The People's Network is key to making this happen. The investment in public libraries will benefit everyone because they are popular and trusted services that are found in every community.

<http://www.peoplesnetwork.gov.uk/>