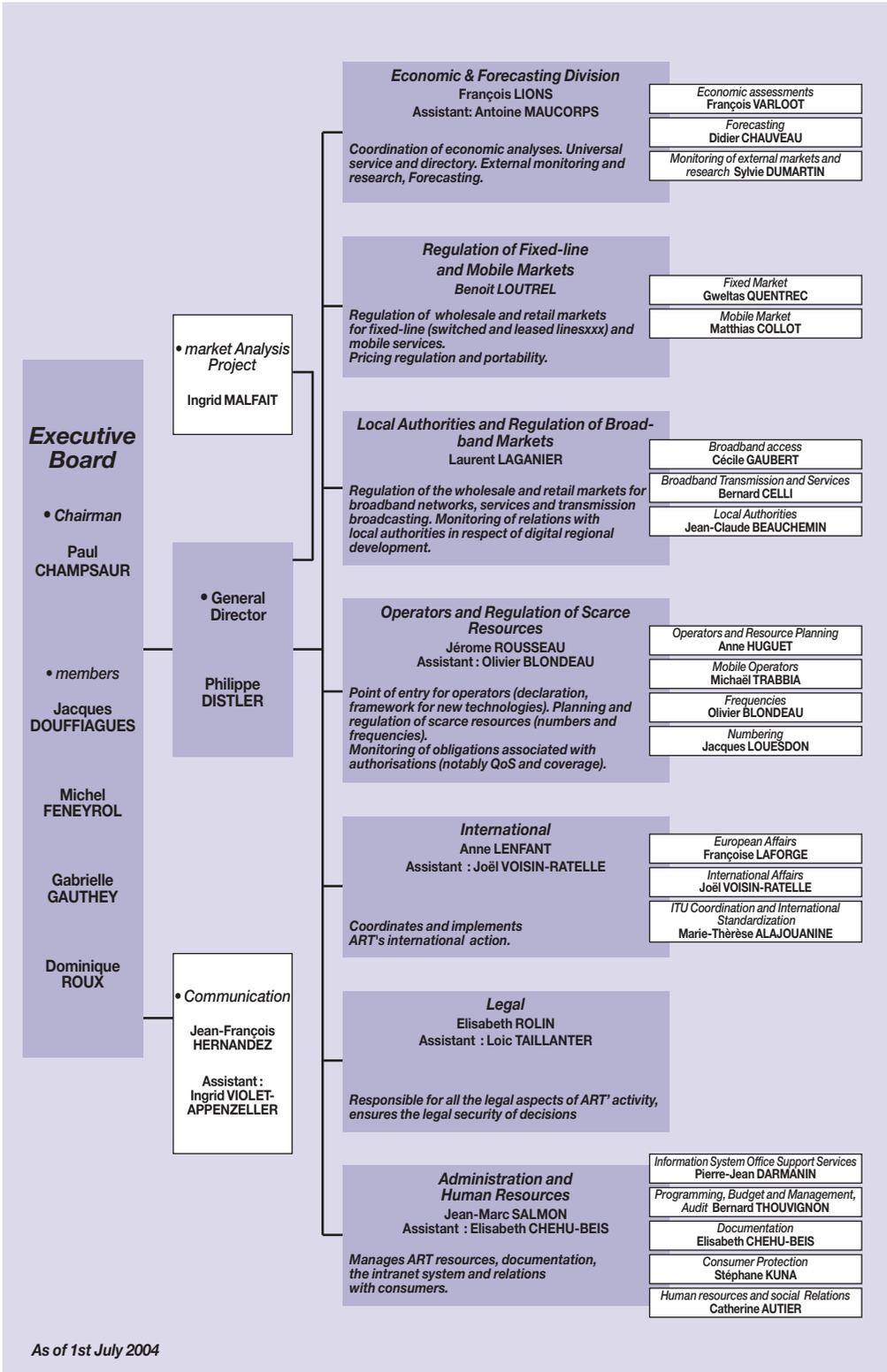


Annual Report
2003

Article L. 36-14 of the Post and Telecommunications Code under the Telecommunications Act no. 96-659 dated 26 July 1996, provides that:

"The telecommunications regulatory authority shall draw up and publish an annual report on the performance of its functions and application of the legislative and regulatory provisions for telecommunications before 30 June each year. This report shall be submitted to the government and the Parliament. It shall also be submitted to the CSSPPT (public service commission for posts and telecommunications). In the report, the telecommunications regulatory authority may suggest legislative or regulatory amendments which appear to be called for due to changes in the telecommunications sector and the development of competition".

Pursuant to this provision, the French Telecommunications Regulatory Authority (ART) has prepared this annual report, which comprises five parts. The first part reports on the situation of the electronic communications market in 2003, giving the main indications for assessing market development and major trends since 1997. It also includes an international comparison showing France's position with respect to the other European Union countries. The second part is devoted to the new legal framework, with a status report on transposition of directives in the different member states. It also lists the priority issues for regulation. ART's powers are described in the third part, which explains the philosophy and methods used by the regulator. The fourth part analyses ART's activities in 2003, while the fifth part describes its resources.



Executive Board

- May 2004 -



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Editorial

The most noteworthy development in 2003 was the amendment of the legal and regulatory framework covering electronic communications. Indeed, 2003 was the first year in which this comprehensive change in the legal system following the transposition of European directives into French law came into effect. Due to the complexity of the process, there were delays in implementing the timetable for the official deadline of 24 July 2003. The first concrete milestone was achieved in the summer of 2003, with the implementation of a transitional framework allowing some of the main principles of the directives to be applied before being transposed into French law. The first changes concerned the freedom for any operator to deploy a network and provide public services. This change from a system of individual licences to one of general authorisation guarantees greater freedom of action and hence encourages competition to the benefit of consumers, both individuals and business users. Approval by Parliament of the Act of 31 December 2003 transposing the "universal service" directive was the second concrete milestone in this change in the legal system. Transposition will be complete once Parliament has adopted the law on electronic communications and audiovisual communication services and the digital economy law.

With this new framework, regulation takes another step forward. By analysing the different market segments identified by the Commission, it can adapt to the competitive situation as it exists in the marketplace. This process of analysis commenced in 2003 and will continue in 2004. Sector regulation is adopting the principles and methods of competition law and will therefore be more effective in the fields in which it intervenes, in particular the wholesale markets, even if this means playing a less important role in other areas.

Two major developments occurred in the telecommunications services sector in 2003, a year in which new applications took over from traditional fixed-telephony services.

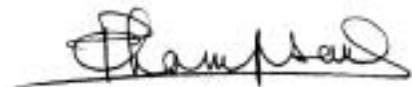
First, in the fourth quarter of 2003, mobile-telephony revenues overtook fixed-line revenues, which fell in most European countries. This trend towards replacement of fixed by mobile telephony has gathered pace, as confirmed by the fall in the overall fixed-line installed base. Mobile telephony is driving growth and now represents one-third of voice calls

compared to less than one-quarter in 2000. Growth in subscriber numbers resumed in the fourth quarter, demonstrating the dynamism of this market. This reserve of growth is supplemented by consumer take-up of the new mobile multimedia services, which rose by 50%, suggesting that users will give a warm reception to the UMTS services launched in 2004.

Another major development in 2003 was the confirmation of sharp growth in broadband, with over 3.5 million subscribers. This represents a doubling of user volumes in one year, with 3 million connected via ADSL. Local loop unbundling has become a reality and France is one of the European leaders in this process. ART believes that it is as vital in 2004 as in 2003 to preserve competition between Internet service providers in the retail market and between operators in the intermediate wholesale markets, primarily through unbundling, to guarantee service diversity and innovation.

However, competition in broadband must not be confined to urban areas. ART has set itself a 2004 target of extending the unbundling process to less densely populated areas. It will pursue the efforts initiated in December 2003 to encourage unbundling of small sites. Likewise, ART will support local authority projects to improve local provision of digital services as authorised by the new article L.1425-1 of the Local Authority General Code. ART will take care to ensure that local authority initiatives reconcile, as far as possible, public action and the principles of competition.

In 2004, the fall in operator debt, the refocusing on core businesses, restored margins and easier access to the financial markets should consolidate the improvement in the situation observed at the end of 2003. Working with market players under conditions of total transparency, ART will pursue its actions to foster competition, which means ensuring that there is adequate economic scope for intervention by alternative operators. This will benefit consumers, both business users and individuals alike: indeed, the stimulus of competition is the best way to guarantee that operators will improve performance to satisfy users' needs.



Paul Champsaur

Recommendations and decisions

I. ART'S WORK

The legislator has given ART a number of responsibilities. It must:

- foster “real and fair competition to the benefit of users”. Competition is not an end in itself; rather, its aim is to provide consumers with improved quality of service at the best possible cost.
- monitor the “provision and financing of all the components making up the public telecommunications service”; this principle, reaffirmed by the law, must be implemented in a competitive environment. Competition must be compatible with equal access to the telephone service for all. The Act of December 2003 transposing the “universal service” directive dated 7 March 2002, stipulates that ART must “determine the principles and methods formulated under the conditions set forth in article L.35-3 of the Post and Telecommunications Code, the contributions payable for funding the universal service obligation and is responsible for monitoring funding mechanisms”. In addition, the operator or operators responsible for providing universal service are now designated after a call for candidates.
- monitor “development of employment, innovation and competitiveness in the telecommunications sector”. Competition is only worthwhile if it contributes to market development.
- take into account “the interests of regions and users in terms of access to services and equipment”.

ART has been given various powers in order to meet these responsibilities. It exercises these powers by issuing recommendations and decisions. For instance, ART is consulted on draft laws, orders and regulations concerning the telecommunications sector and participates in implementing

these instruments¹. The Competition Authority requests ART to make recommendations in the event of legal proceedings concerning the sector. Up until July 2003, one of ART's tasks was to assess licence applications², on behalf of the Minister responsible for Telecommunications. It must also designate operators with significant power on a given market (SMP operators). ART approves France Telecom's standard interconnect offer and its unbundling offer. Within the framework of market regulation, it issues recommendations on pricing decisions submitted to it by France Telecom³. One of its essential activities, which gives rise to a decision, involves allocation of scarce resources to operators i.e. numbering resources and frequencies. In addition, ART is responsible for settling any disputes referred to it in the fields of access and interconnection.

II. THE FIGURES IN 2003

ART issued 1340 recommendations and decisions in 2003

	1997	1998	1999	2000	2001	2002	2003
Recommendations and decisions	458	1047	1159	1365	1299	1200	1340

III. BREAKDOWN OF RECOMMENDATIONS AND DECISIONS

Guidelines

ART issued:

- 1 decision concerning guidelines in respect of public network trials using WLAN technology (wireless local area networks WiFi)

Recommendations

ART issued 101 recommendations, of which:

- 11 concerned draft statutes and regulations
- 85 related to France Telecom tariff decisions
- 5 were addressed to the Competition Authority.

Decisions taken on the basis of ART's shared jurisdiction

ART issued 51 decisions on matters falling under its shared jurisdiction with the Minister responsible for Telecommunications. These decisions fall into the following categories:

¹ article L.36-5 of the Post and Telecommunications Code

² article L.36-7 1° of the Post and Telecommunications Code

³ article L.36-7 5° of the Post and Telecommunications Code

- 44 decisions pertaining to review of applications for licences or modification or revocation of licences to establish and operate a public network or provide a telephone service.
- 4 decisions concerning calculation of the cost of universal service
- 3 decisions submitted to the Minister for approval.

Decisions taken on the basis of ART's own authority

ART issued 11 69 decisions on matters falling under its own authority:

- 20 decisions with general consequences, classified according to their scope:
 - 1 decision on numbering
 - 16 decisions on frequency resources
 - 3 decisions on ART's organisation and operation
- 1149 individual decisions, classified according to their scope:
 - 12 decisions on interconnection and network access
 - 2 decisions concerning the accounts of France Telecom
 - 1 decision establishing the list of operators with significant power in a telecommunications market
 - 19 decisions concerning settlement of disputes (of which 9 related to the investigation period)
 - 177 decisions concerning numbering resources
 - 503 decisions concerning frequency resources, of which 405 related to public networks
 - 435 decisions concerning licences for independent networks (including decisions allocating frequencies at the same time as the licence).

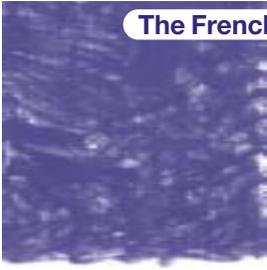
18 recommendations and decisions were cancelled in 2003.

The electronic communications market

CHAPTER 1

The French market in 2003

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The French market in 2003

I. THE MARKET IN VALUE

Growth in telecommunications service revenues (not including interconnection and operator-to-operator services) was virtually stable in 2003 at almost 35 billion euros, reflecting growth of 3.3% versus 3% in 2002. Up until 2001, the overall market growth rate was closer to 10%.

Change in revenues

(€ millions)	2000	2001	2002	2003* (%)	Change
Fixed-line telephony	14 631	14 375	14 030	13 448	-4,1 %
Internet	731	1 119	1 186	1 329	+12,1 %
Mobile services	7 789	10 028	11 788	13 269	+12,6 %
Total telephony	23 151	25 522	27 003	28 046	+ 3,9 %
Advanced services	1 842	1 810	1 862	1 803	-3,2 %
Leased lines	2 011	2 328	2 261	2 273	+0,5 %
Data transport	530	676	506	536	+ 5,9 %
Directory services and related income	319	342	344	358	+ 4,1 %
terminals (sale and lease)	1 760	2 072	1 753	1 817	+ 3,7 %
Hosting and call-centres	20	43	34	32	-5,9 %
All telecommunications services	29 633	32 793	33 763	34 866	+ 3,3 %

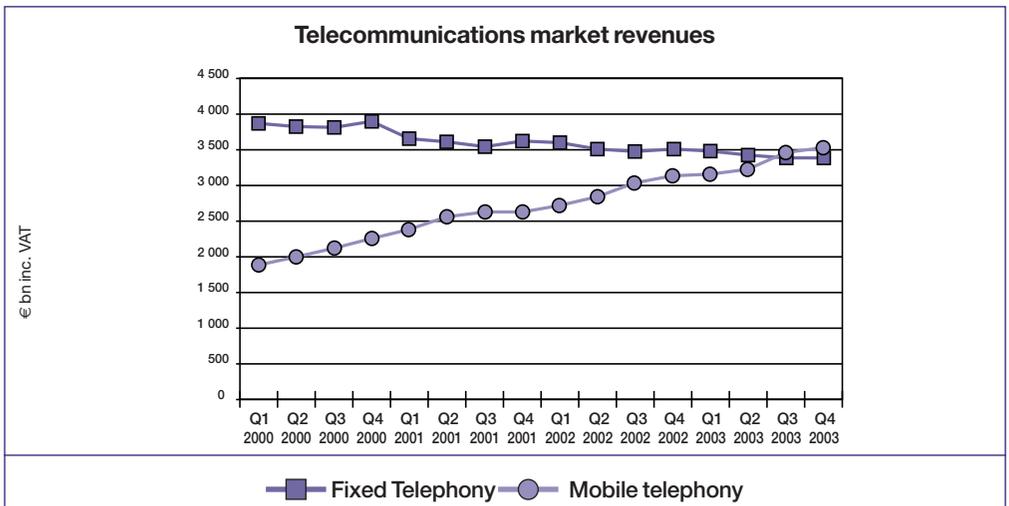
**Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q2005
Source: ART, Market Observatory*

N.B.:

- Internet revenues only include declared-operator revenues, but include sales to end customers and sales to undeclared Internet service providers (ISPs). Hence, they are understated compared to total market revenues, since the added value generated by undeclared ISPs is not included. According to the INSEE survey covering all companies in the telecommunications sector, including undeclared ISPs, Internet access provision in France generated sales of 2.5 billion euros in 2002.
- Mobile services include mobile telephony (including SMS revenues), radio paging and professional mobile networks.
- Advanced services (shared cost and revenue services, audiotel kiosk and telematics, etc) are stated before repayments, i.e., they include the portion of sales passed on by operators to the companies providing the service.
- Data transport is understated since undeclared companies (i.e. companies that do not hold a licence, such as Transpac in the France Telecom group, for instance) generate a significant share of their revenues from data transport. As a guide, declared companies generated only one-quarter of total revenues in 2002, for a total amount of 2.2 billion euros (not including data transport on mobile networks).

The major structural trends observed over the last few years in the telecommunications market were confirmed and their scope broadened in 2003. The steady fall in the fixed-line telephony market since 1998 was confirmed in 2003, with a 4.1% fall in value and 4.2% in volume (expressed in millions of minutes). However, growth of around 12% in value in the mobile telephony and Internet business easily offset the structural decline in the fixed-line market.

Mobile telephony revenues overtook fixed-line revenues in the 3rd quarter of 2003



Source : ART

The fall in fixed-line revenues in France, as in other European countries, looks to be an underlying trend whose major beneficiary is mobile telephony. Increasing numbers of subscribers are using their mobile rather than their fixed line to make calls: some subscribers have even chosen to cancel their fixed line. The global installed base of fixed lines fell in 2003.

Mobile telephony was definitely the driver of growth in the telecommunications market in 2003. Revenues rose 12.6% on 2002 and are now on a level with fixed telephony revenues (13 billion euros each). Mobile network call volumes continue to grow sharply (+21.2% in 2003), at a similar rate to previous years. These calls now account for more than a third of voice calls, versus less than a quarter in 2000. This sector still has reserves of growth associated with the new multimedia services (access to mobile Internet, SMS, MMS, high added-value or interpersonal services, etc).

The Internet market, which grew 12% in value overall during the period, was stimulated by the development of broadband access. Competition between operators is particularly strong in this segment, which led in 2003 to a wide diversification of offers and substantial reductions in prices to consumers. It has become more difficult to measure Internet call volumes in call minutes, which is not a relevant yardstick for assessing the very fast-growing field of broadband Internet subscriptions. Call volumes via narrowband Internet, which again rose by 6.3% in 2003, now account for an increasingly small share of this activity. At the end of 2003, the narrowband Internet market had 7 million active customers, i.e. almost 500,000 less than the previous year, while broadband Internet had 3.5 million subscribers, i.e. almost two million more than at the end of 2002

Fixed

The fall in fixed-line revenues in France looks to be an underlying trend.

Mobile

Mobile telephony was definitely the driver of growth in the telecommunications market in 2003.

Internet

The Internet market, which grew 12% in value during the period, was stimulated by development of broadband access.

II. THE MARKET IN VOLUME

A. Introduction

One of the main characteristics of the telecommunications sector is the very diversified range of services which it offers, both to the general public and professional and business users. In addition, the speed of technology development is spearheading sharp growth in new services, particularly in the Internet and mobile telephony markets. For this reason, it is difficult to establish an indicator that is clearly representative of volume growth in the market as a whole.

However, it is possible to identify some usage indicators for the major applications. They are:

- calls originating on fixed-line or mobile networks;
- the Internet
- interpersonal messaging, particularly SMS messages originating on mobile networks.

B. Analysis by major service category

This analysis is still rather sketchy. It does not take in the essentially professional or even intermediate uses corresponding to leased lines and professional data transmission. This field is still poorly apprehended, partly because ART's surveys, which at this stage cover only licensed operators, do not include the production of all players, and partly because it is intrinsically complex: huge variations in bit rates for leased lines, the lack of a clear unit of measurement for data transmission applications, etc.

1. Telephony

A major indicator of consumption of telephony services is the volume of calls originating from networks. The table below summarises these trends:

- for fixed networks, the figure shown corresponds to calls from a fixed network to a fixed, mobile or international network along with calls from public payphones and using pre-paid cards
- for mobile networks, the figure shown corresponds to all telephone calls made from a mobile network.

Volume of calls originating from networks

	2000	2001	2002	2003	Units
From fixed networks	121 949	118 481	112 456	107 778	millions of minutes
% change		-2.8%	-5.1%	-4.2%	%
From mobile networks	35 437	44 419	51 844	62 821	millions of minutes
% change		25.3%	16.7%	21.2%	%
Total	157 386	162 900	164 300	170 599	millions of minutes
% change		3.5%	0.9%	3.8%	%

Source : ART

This table shows continued moderate growth in the telephony market as a whole (around 2.7% a year on average between 2000 and 2003), but with a definite shift in usage from fixed networks towards mobile networks.

2. Internet

Internet development falls into two categories:

- narrowband Internet corresponding to telephone calls made primarily from a fixed network to connect to an Internet access service. This category grew sharply at the end of the 1990s.
- broadband Internet, i.e. access to the Internet using cable networks and ADSL, a more recent and faster-growing technology which is likely to replace narrowband Internet.

The table below summarises the key figures.

	2000	2001	2002	2003	Units
<i>Narrowband Internet</i>					
Number of subscribers	5 263	6 385	7 469	7 000	thousands
Volumes	28 903	52 446	66 831	71 072	millions of minutes
Volume trends (% change)		81.5%	27.4%	6.3%	%
<i>Broadband Internet</i>					
Number of subscribers	197.9	601.5	1 591.0	3 524.7	thousands
Volume trends (% change)		203.9%	164.5%	121.5%	%

Source : ART

The number of narrowband subscribers gives an indication of Internet penetration rates but is not very representative of Internet usage overall. Conversely, call volumes provide a reliable indicator of narrowband Internet use. We note that after a period of sharp growth, this indicator grew only moderately, by 6.3%, in 2003. Nevertheless, call volumes are still substantial: narrowband Internet calls accounted for almost 2/3 of fixed-network telephony minutes in 2003.

The comparative stabilisation of narrowband Internet volumes finds a natural explanation in the greater take-up of broadband offerings, driven primarily by the specific properties of these offerings: ease of use and flat-rate packages.

Constructing a composite indicator is not easy. One way of comparing the respective weight of the two technologies is to assess network bandwidth i.e. to measure the capacity required to satisfy demand.

Narrowband Internet calls accounted for almost 2/3 of fixed-network telephony minutes in 2003.

Based on the information available to ART, we might consider that:

- for narrowband Internet, traffic volumes of one million minutes correspond to around 5 Erlangs, or 0.5 mbps
- for broadband Internet, operators evaluate the capacity required to satisfy the demand of 1,000 subscribers at 23 mbps.

The table below shows the estimates that can be calculated on the basis of these indications.

	2000	2001	2002	2003	Units
<i>Bandwidth ratios</i>					
for 1 million narrowband minutes	0.48	0.48	0.48	0.48	mbps
for 1,000 broadband subscribers	23.00	23.00	23.00	23.00	mbps
<i>Bandwidth indicators</i>					
narrowband bandwidth	13 758	24 964	31 812	33 830	mbps
broadband bandwidth	2 756	9 064	25 795	58 434	mbps
total bandwidth	16 514	34 028	57 607	92 264	mbps
% change		228.9%	184.6%	126.5%	%

Source : ART

This table gives an indication of composite growth in Internet use and highlights the much greater weight of broadband Internet.

Two important remarks should be made:

- The bandwidth indicator does not provide a full picture of the capacity tied up in telephone networks. For narrowband Internet, dedicated capacities in telephone networks are significantly lower than shown in this table. This is because the time-of-day traffic loading for Internet and conventional telephone traffic is different, resulting in more efficient network use. In other words, a significant proportion of Internet traffic occurs during hours when the telephone network is not operating at peak levels, thereby reducing capacity-expansion requirements. This has given rise to an incremental interconnection pricing offer beneficial to the Internet, in the form of a flat-rate Internet interconnection package (IFI).
- The bandwidth indicator only partly reflects real consumer usage in terms of the number of transactions or volumes of data transmitted, unless we assume that the usage to bandwidth ratio is the same in both cases.

3. Mobiles

Leaving aside the number of subscribers, two usage indicators appear to be particularly relevant for mobile telephony:

- outgoing telephony minutes from mobile networks, which can also be considered as a specific segment of telephony overall
- numbers of interpersonal messages (SMS messages), an indicator that is specific to the mobile sector so far.

These indicators are shown in the table below:

	2000	2001	2002	2003	Units
Mobile telephony subscriber base	29 645	36 997	38 593	41 684	thousands
% change		24.8%	4.3%	8.0%	%
Calls from mobiles	35 437	44 419	51 844	62 821	millions of minutes
% change		25.3%	16.7%	21.2%	%
Number of SMS messages	1 471	3 508	5 523	8 490	Millions
% change		138.5%	57.4%	53.7%	%

Source : ART

C. Conclusion

The empirical analysis above allows us to identify three significant volume factors for assessing the different applications in the telecommunications sector:

- number of minutes for telephony
- bandwidth for the Internet
- number of messages for interpersonal messaging

These indicators and trends for the last few years are shown in the table below

	2000	2001	2002	2003	Units
Telephony (number of minutes)	157 386	162 900	164 300	170 599	millions of minutes
% change		3.5%	0.9%	3.8%	%
Internet (bandwidth)	16 514	34 028	57 607	92 264	mbps
% change		106.1%	69.3%	60.2%	%
SMS (number of messages)	1 471	3 508	5 523	8 490	mbps
% change		138.5%	57.4%	53.7%	%

Source : ART

However, we must stress the partial and exploratory nature of this approach:

- the indicators do not give a complete picture of all applications in the telecommunication sector; notably, they exclude applications associated with leased lines and professional data transmission.
- while the physical indicators given for telephony and interpersonal messaging appear to be quite meaningful, the Internet indicator is still speculative.

III. THE ECONOMIC WEIGHT OF THE SECTOR

A. Telecommunications revenues and gross domestic product (GDP)

2003 figures again show growth in telecommunications revenues outstripping GDP growth (3.3% versus 2%).

Telecommunications revenues in France rose twice as sharply as French gross domestic product in the three years from 1999 to 2001. Trends in 2002 were relatively less favourable to the sector (3% growth in revenues vs. 3.5% growth in GDP). Conversely, 2003 figures again show growth in telecommunications revenues outstripping GDP growth (3.3% versus 2%). Telecommunications revenues rose sharply between 1998 and 2001 as a proportion of GDP (from 1.83% to 2.22%), but have stabilised since 2001 (2.24 in 2003).

Telecoms revenue as a percentage of GDP

	1998	1999	2000	2001	2002	2003*
Telecommunications revenues (billions of euros)**	23.957	26.537	29.633	32.793	33.763	34.866
Gross domestic product (billions of euros)***	1305.9	1355.1	1420.1	1475.6	1526.8	1557.2
Percentage	1.83	1.96	2.09	2.22	2.21	2.24

* Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q 2005

**Source: ART

*** Source: Insee, national accounts, updated on 27 April 2004

Comparative trends in telecom revenues and GDP (%)

	1999	2000	2001	2002	2003*
Telecommunications revenues**	+10.8	+11.7	+10.7	+3.0	+3.3
Gross domestic product (in unadjusted euros)***	+3.8	+4.8	+3.9	+3.5	+2.0

* Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released in 1Q 2005

**Source: ART

***Source: Insee, national accounts, updated on 27 April 2004

B. Investment

Telecommunications investment fell by over one third in 2002 and again in 2003, whereas total French investment (GFCF - gross fixed capital formation) stabilised (-0.4% in 2002, +1% in 2003). The sector's share of total investment, which rose every year between 1998 and 2001, fell from 3.09% in 2001 to just 1.28% in 2003, well below the 1998 figure.

Telecoms operator investment compared to total French investment

	1998	1999	2000	2001	2002	2003*
Telecommunications investment (€ bn)**	5.538	5.909	7.841	9.182	5.699	3.837
Total French investment (€ bn)***	240.6	260.4	286.9	296.9	295.8	298.7
Percentage	2.30	2.27	2.73	3.09	1.93	1.28

* Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released in 1Q 2005

**Source: ART

***Source: Insee, national accounts, updated on 27 April 2004

Comparative trends in telecommunications investment and total French investment (%)

	1999	2000	2001	2002	2003*
Telecommunications investment**	+6.7	+32.7	+17.1	-37.9	-32.7
Total French investment (unadjusted euros)***	+8.2	+10.2	+3.5	-0.4	+1.0

* Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released in 1Q 2005.

** Source: ART

*** Source: Insee, national accounts, updated on 27 April 2004

C. Employment (operators, not including ISPs)

Operator employee numbers (direct employees), which have been falling for several years, fell by another 5.5% in 2003. Trends in sector employment were closer to trends in the capital goods industry (-3.3% in 2003) than the market services sector to which the telecoms sector belongs, where employment stabilised in 2003.

Declared operator employee numbers at year-end

	1998	1999	2000	2001	2002	2003*
Number of employees	155 992	155 297	154 522	151 191	145 487	137 414
% change		-0.4%	-0.5%	-2.2%	-2.9%	-5.5%

* Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released in 1Q 2005

Source: ART

Note, however, that the four main Internet service providers (ISPs) together employed approximately 10,000 people at end 2003.

Employee numbers at year-end

	Employee numbers ('000)			% change		
	2001	2002	2003	2001	2002	2003*
Salaried employees in primarily market service sectors	15 438	15 472	15 420	+1.6	+0.2	-0.3
. of which capital goods industries	836	814	787	-0.3	-2.6	-3.3
. of which market services	5 302	5 376	5 377	+2.0	+1.4	0.0
. of which telecommunications **	151	145	137	-2.2	-2.9	-5.5
Total (salaried & non-salaried)	24 552	24 658	24 589	+0.9	+0.4	-0.3

* Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released in 1Q 2005 ** Source: ART

Source: Insee, employment estimates, March 2004 market survey.

IV. SPENDING ON TELECOMMUNICATIONS SERVICES

A. Household spending (INSEE statistics)

Trends in household communications expenditure

Volume index base 100 for the preceding year

	1998	1999	2000	2001	2002
Communications	114.7	124.1	120.8	112.0	105.3
. of which telecommunications services	116.1	126.0	123.7	113.5	106.1
Total household spending	103.4	103.2	102.7	102.6	101.2

Source: Insee, National accounts 2002

Total household spending rose by 2.6% in 2001 compared to the previous year (by 1.2% in 2002).

The "communications" heading includes purchase of telephone equipment and consumption of postal and telecommunications

services. However, telecommunications services accounts for the lion's share of the "communications" budget: 89% of the total in 2002 (i.e. 17.4 billion euros out of 19.5 billion euros).

Growth in household spending on telecommunication services rose very sharply in the preceding period: +26% in 1999, +23.7% in 2000, +13.5% in 2001, compared to growth of 2% to 3% in total household spending over the same period. Growth slowed to 6.1% in 2002, but the total "communications" budget made the largest contribution to growth in overall household spending, along with health (+5.3%) and ahead of leisure and culture (+4.5%).

Structure of real household communications expenditure

Budget coefficients at current prices (%)

	1998	1999	2000	2001	2002
Communications	1.52	1.66	1.75	1.82	1.85
. of which telecommunications services	1.31	1.43	1.54	1.61	1.65

Source: Insee, National accounts 2002

Household spending on communications goods and services accounted for 1.85% of total real household expenditure in 2002.

Telecommunications services accounted for 1.31% of household spending in 1998, 1.54% in 2000 and 1.65% in 2002. This growth in the share of household spending devoted to telecommunications services, very sharp in 1999 and 2000 (+0.12 points followed by +0.09) but slower thereafter (+0.04 points in 2002), occurred despite an across-the-board fall in prices, and primarily reflects an increase in household mobile telephone ownership rates.

According to ART's Market Observatory report, the revenues of licensed operators in the "consumer" market can be broken down in 2002 between 45% for fixed-line telephony (including advanced services and directory services), 51% for mobile telephony and 4% for the Internet, bearing in mind that the Internet figure is understated, since the survey does not include the added value generated by service providers not required to apply for a licence. In the last three years, the share of "consumer" revenues generated by fixed-line telephony has fallen appreciably, to the benefit of mobile telephony.

Comparative share of operators' consumer revenues generated by fixed-line telephony, mobile telephony and the Internet

	2000	2001	2002
Fixed telephony	57%	51%	45%
Mobile telephony	40%	45%	51%
Internet	3%	4%	4%
Total	100%	100%	100%

Source : ART

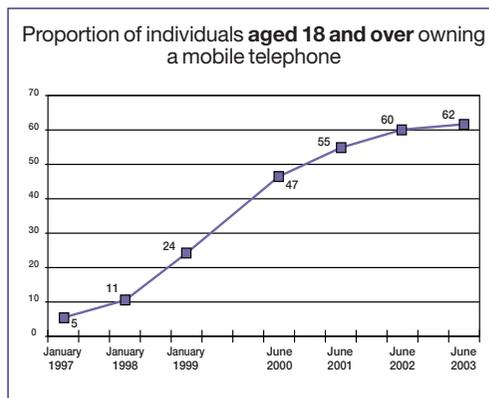
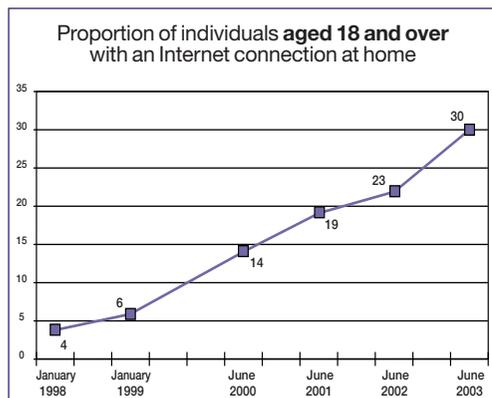
B. Household equipment

Mobile phone ownership rates grew very sharply between 1998 and 2002, but slowed thereafter, according to the Credoc survey carried out for CGTI and ART in June 2003. Slower growth in 2002 was confirmed by the findings of ART's Mobile Observatory. It was followed at the end of 2003-early 2004 by a further surge in growth of the installed base.

Growth in the number of people connected to the Internet from their homes is comparable to growth in computer ownership: 30% of people over 18 and 40% of 12-17 year-olds were able to surf the web from home in June 2003. Public demand for broadband connection is evident: it accounts for over one-third of domestic connections.

In view of trends in household ownership rates in the last few years, we can assume that the proportion of household budgets devoted to telecommunications services will continue to grow, and that its breakdown will gradually evolve in favour of mobile telephony and the Internet.

Fixed-line telephony is losing subscribers: 14% of French people no longer have a fixed telephone line installed in their homes, although the rate of decrease is fairly slow (around one point a year).



Source: Credoc, June 2003

V. PRICING TRENDS FOR TELECOMMUNICATIONS SERVICES

A. Spending baskets¹

According to the spending baskets calculated by ART, prices of France Telecom's fixed-line services (subscription, national calls to geographical numbers and mobiles, not including special pricing options) continued to fall in 2003 at about the same rate as observed in 2002, although at a slower pace than during the first phase of total opening up the market to competition.

Residential customer index

Residential	1998	1999	2000	2001	2002	2003
% change (annual)	-5.4%	2.0%	-3.3%	-2.8%	-1.1%	-1.2%
base 100 in 1997	94.6	96.4	93.3	90.7	89.7	88.6

Source: ART

Professional and business users index

Professional and business users	1998	1999	2000	2001	2002	2003
% change (annual)	-8.5%	-2.5%	-7.3%	-7.1%	-1.7%	-1.8%
base 100 in 1997	91.5	89.2	82.6	76.8	75.4	74.1

Source: ART

Between 1997 and 2003, we note that:

- all categories of users benefited from price reductions
- prices fell more substantially, by around 26%, for professional users, compared to just 11% for residential users.

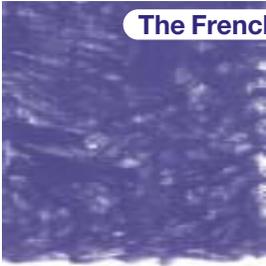
In addition, based on the volumes declared by operators in quarterly surveys in 2003, the telephone subscription now accounts for a substantial share of the invoice for all user categories:

- around 45% for residential subscribers versus 35% in 1997
- around 39% for professional subscribers versus 23% in 1997.

The share of calls to mobiles rose with the increase in volumes, then started to move down with the fall in tariffs.

Prices fell more substantially, by around 26%, for professional subscribers, compared to just 11% for residential subscribers.

¹ For the methodology used, see part three, chapter 5, II.



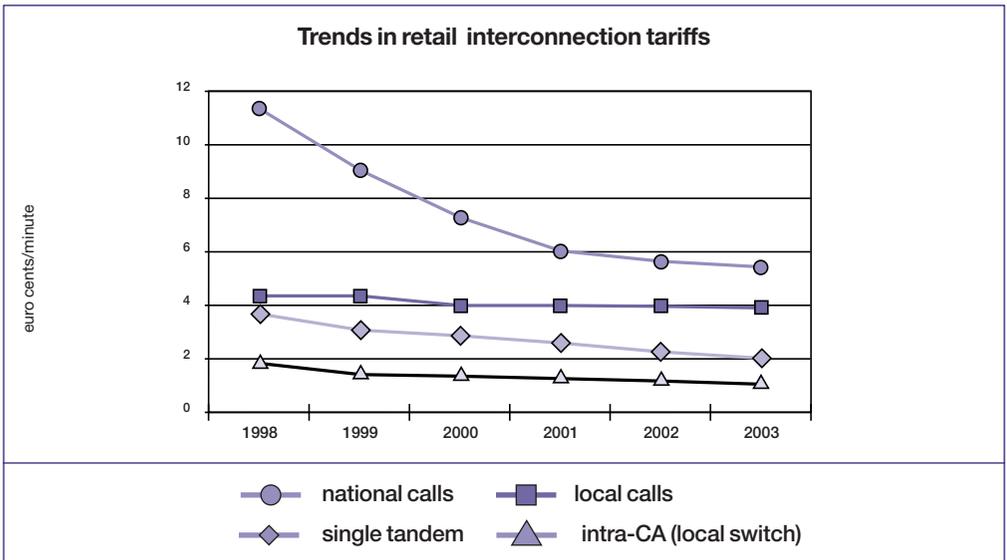
This share rose:

- from 7% in 1997 to 17% in 2003, with a peak of 19% for residential subscribers
- from 20% in 1997 to 24% in 2003, with a peak of 28% for business subscribers.

B. Trends in interconnection tariffs

Just as retail prices for long-distance and local calls have fallen over the years, interconnection tariffs, i.e. the prices of services purchased by new operators from the incumbent operator, have also moved downwards.

This is true no matter what point of entry is chosen by the alternative operator: whether single-tandem for regional points of entry or "intra CA" for connection at the subscriber switch, the closest point to the end user (see part three, chapter II).



NB: The trends in consumer baskets indicated above, which take into account primarily the rise in the subscription charge, only partly reflect the sharp drop in the price of national calls between 1998 and 2001).

C. Household "telecoms" budgets

ART was keen to understand consumer perception of the telecommunications sector and for this reason commissioned a survey from Cabinet CSA in 2003 (see part three, chapter 5, IV). This study shows that the declared budget devoted to electronic communications correlates strongly with household income.

Monthly declared budget devoted to telecommunications expenditure

	Monthly household income (euros)						
	Total	under 900	900 à 1200	1200 à 1500	1500 à 2300	2300 à 3000	3000 and over
Less than 15 euros	1%	3%	1%	2%	1%	0%	1%
15 - 30 euros	9%	25%	15%	12%	8%	4%	1%
30 - 60 euros	33%	40%	49%	41%	34%	26%	11%
60 - 100 euros	27%	21%	21%	28%	34%	32%	20%
100 - 160 euros	19%	4%	9%	13%	19%	27%	40%
160 - 320 euros	7%	2%	2%	3%	4%	8%	22%
320 euros and over	1%	1%	0%	0%	1%	0%	3%
NSP	2%	4%	1%	1%	0%	3%	2%

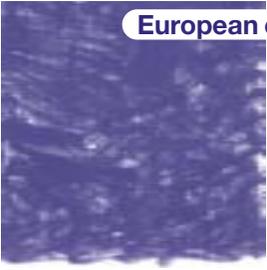
Source : CSA for ART

The electronic communications market

CHAPTER 2

European comparisons

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European comparisons

If we compare the French market with the other European markets, we see that France is in an acceptable position regarding consumer services and the state of competition.

Fixed-line market (not including the Internet)

- Telephony: the price of long-distance calls is within the European average; local call prices are higher than the average but the telephone subscription charge is lower, one reason probably being that France is the only country that has set up a compensatory mechanism for universal service. The incumbent operator's call-market share, in value, is around 75%, which is higher than the average for comparably-sized countries (Germany, United Kingdom, Italy). Interconnection prices are within the European average at regional level and lower at local level, which provides favourable conditions for roll-out of alternative networks.
- Leased lines: retail prices are, conversely, higher than the European average. This weakness can also be observed in leased line tariffs for interconnection, which are higher than the ceiling recommended by the European Commission.
- All in all, the situation of the fixed-line market is acceptable for consumers but competition is still not vigorous enough, despite satisfactory conditions of entry, except for leased lines.

Mobile market (not including the Internet):

- The structure of the French market is similar to that of the other European markets, albeit with only three operators. However, we note that growth in subscriber numbers, at 8%, is within the European average.

Finally, while from the consumer viewpoint this market is still dynamic, it is not easy to establish a reliable European comparison in respect of prices for the end-user.

The Internet market

- Narrowband is definitely stabilising (albeit still at a high level) and growth is driven by broadband. We might emphasize the dynamism of this market and the fact that in terms of penetration rates, France is now at the same level as comparably sized countries and above the European average. One of the main features of this market today is fiercer competition, as shown primarily by an unbundled line rate that is one of the highest in Europe whereas average prices of access to the local loop are within the European average. From the consumer viewpoint, this trend, which was particularly evident in 2003, has resulted in a substantial fall in prices and a rise in bit rates.

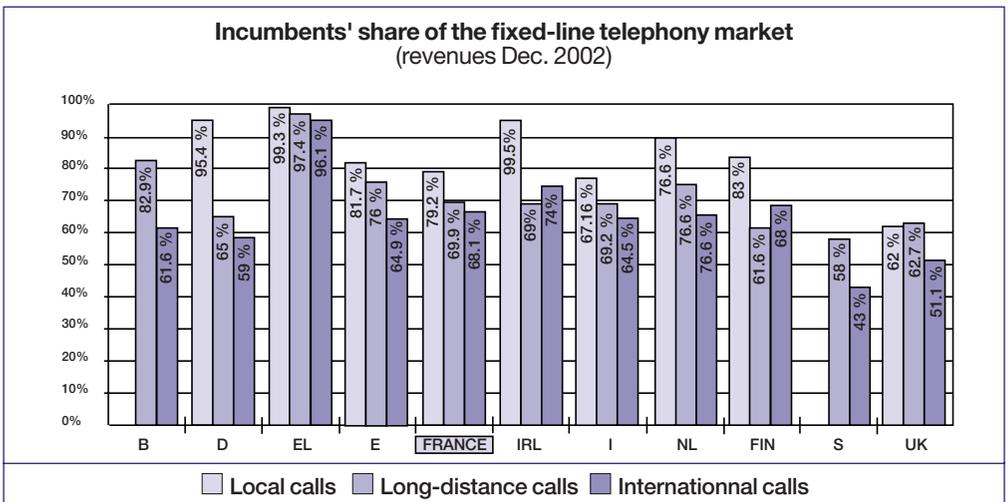
I. THE FIXED-LINE TELEPHONY MARKET

A. State of competition

1. Incumbent operators' market share

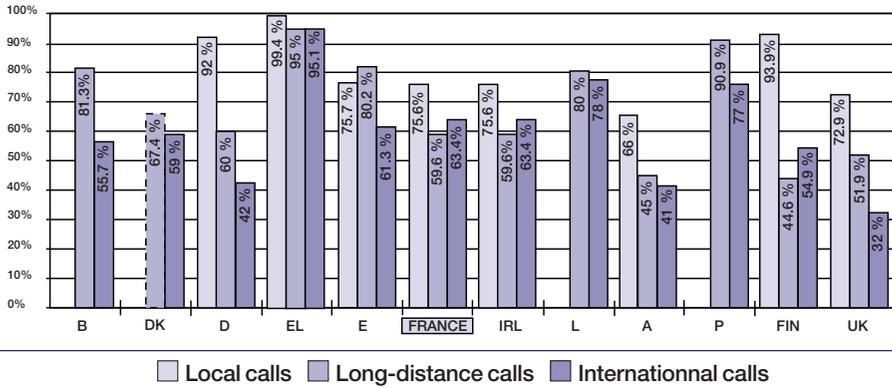
The incumbent operators still have a large share of the public fixed-line telephony market in both value and volume, and for local, long-distance and international calls.

In the following graphs, local calls includes telephone calls and narrow-band Internet connection.



Source: 9th European Commission report, December 2002 data

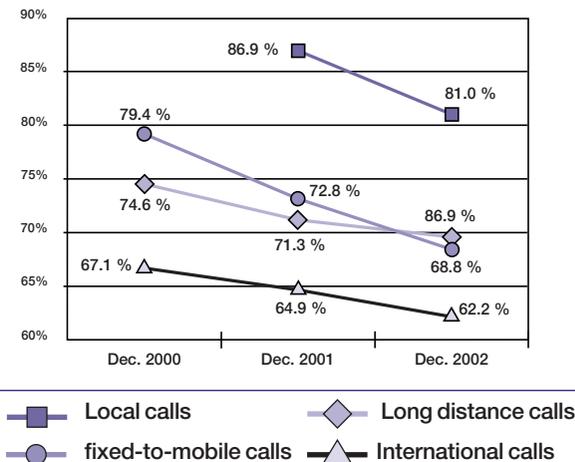
Incumbents' market share of fixed voice telephony market (Volumes Dec. 2002)



Source: 9th European Commission report, December 2002 data

However, trends in the European average for incumbent operators' market share in the main segments of fixed-line telephony show that competition is improving. Hence, new operators now hold around 40% of the international call market, 30% of the long-distance market and 20% of the local call market (the percentage is lower since this market was opened up to competition more recently).

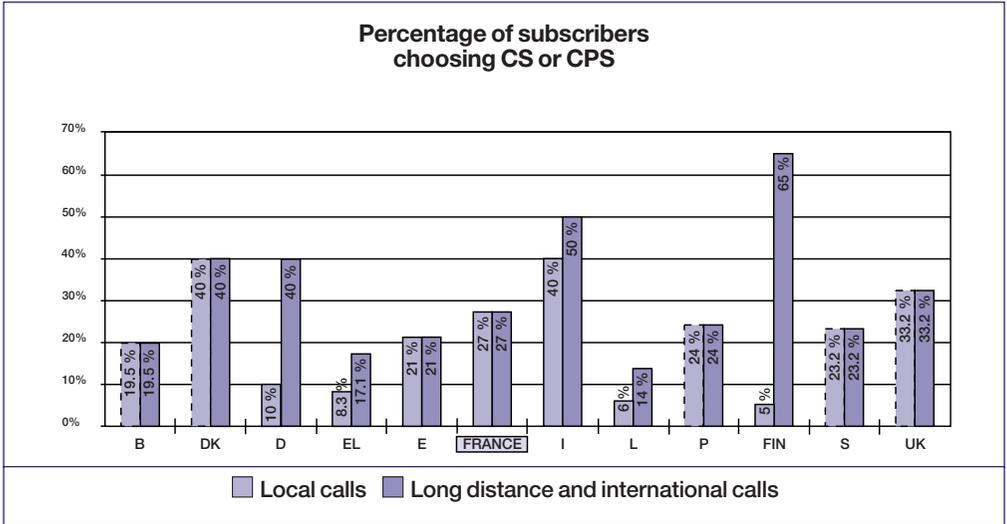
Incumbents' market share, in value: European average



Source: 9th European Commission report, August 2003 data

2. Carrier selection and pre-selection

Selection (call-by-call prefix dialling) or pre-selection (automatic routing to an alternative operator) of the call-carrier by residential or business users is the main mechanism of competition in the fixed-line telephony market. This market continues to grow: in 2003, 33% of European consumers used an alternative operator for long-distance calls (versus 30% in 2002) and 25% them for local calls (versus 18% in 2002).

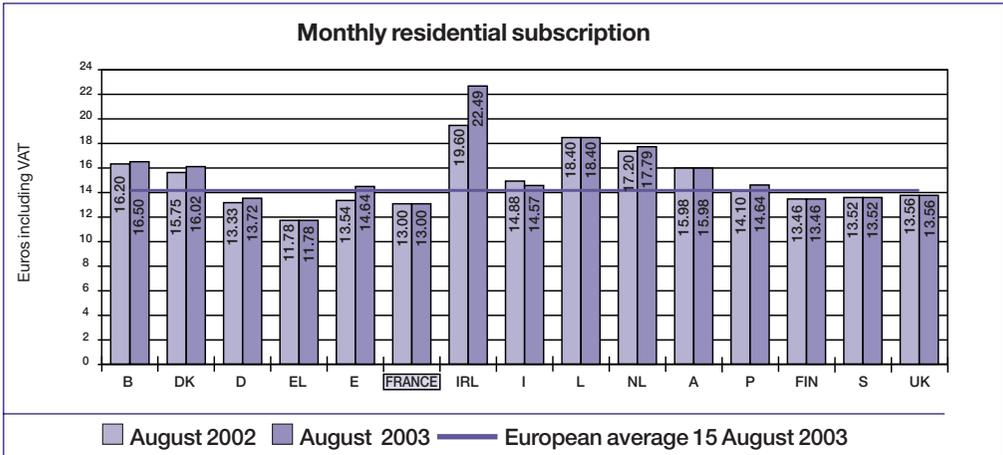


Source: 9th European Commission report, August 2003 data

B. Call prices

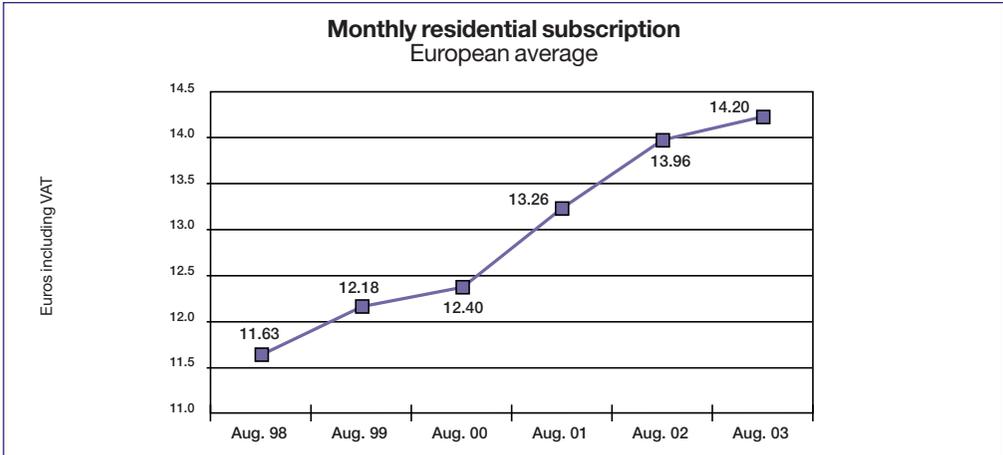
1. Residential subscription

The monthly subscription charged by the incumbent operator is still lower in France than in most other European countries. The Greek incumbent operator charges the lowest subscription (although the trend is rising), while the Irish incumbent operator charges the highest.



Source: 9th European Commission report, August 2003 data

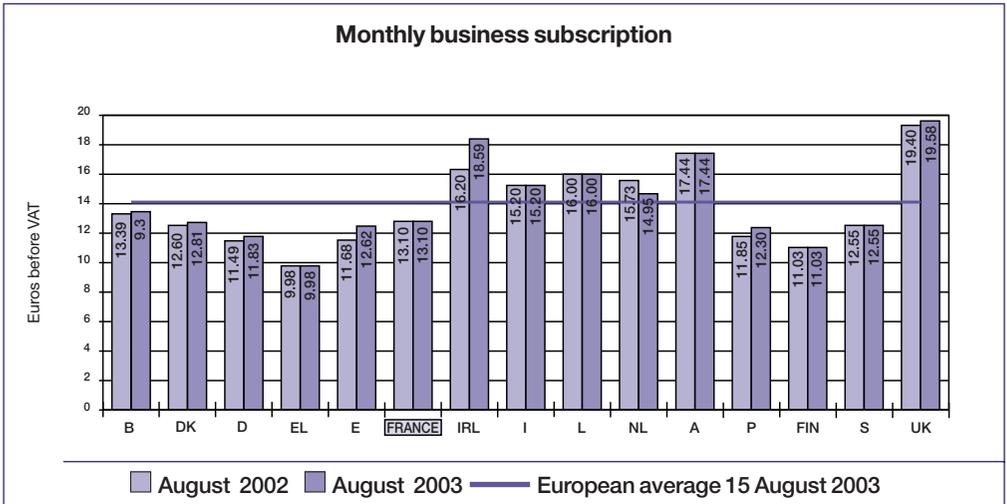
Overall, the price of the monthly residential subscription, including taxes, has been rising in Europe since 1998. The nominal value increased by 2.57 euros including VAT between 1998 and 2003. However, this trend is slowing, mainly because the phase of price adjustment after the fixed-line market was opened up to competition has now come to an end.



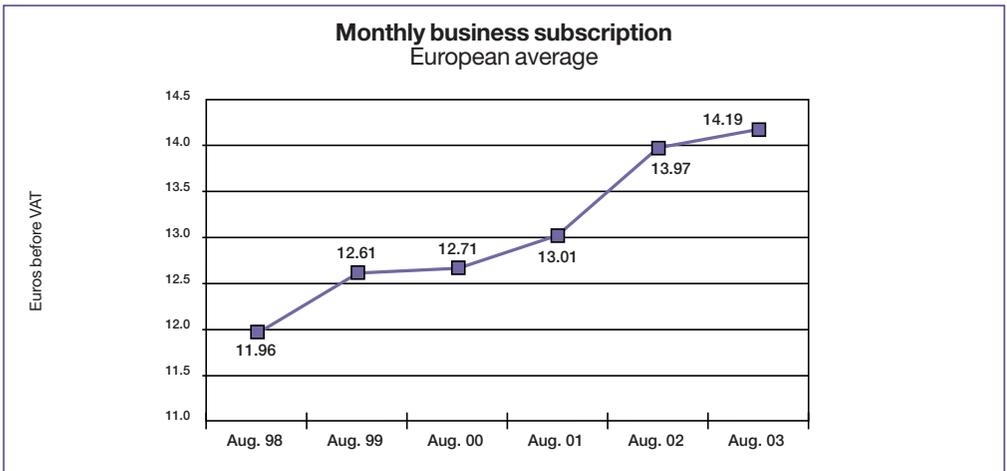
Source: 9th European Commission report, August 2003 data

2. Business subscription

Monthly business subscription prices (we have stripped out VAT to facilitate the comparison) are as disparate as residential prices (twice as high in the UK as in Greece, for instance). Generally speaking, these prices are also rising (by 2.23 euros before VAT between 1998 and 2003).



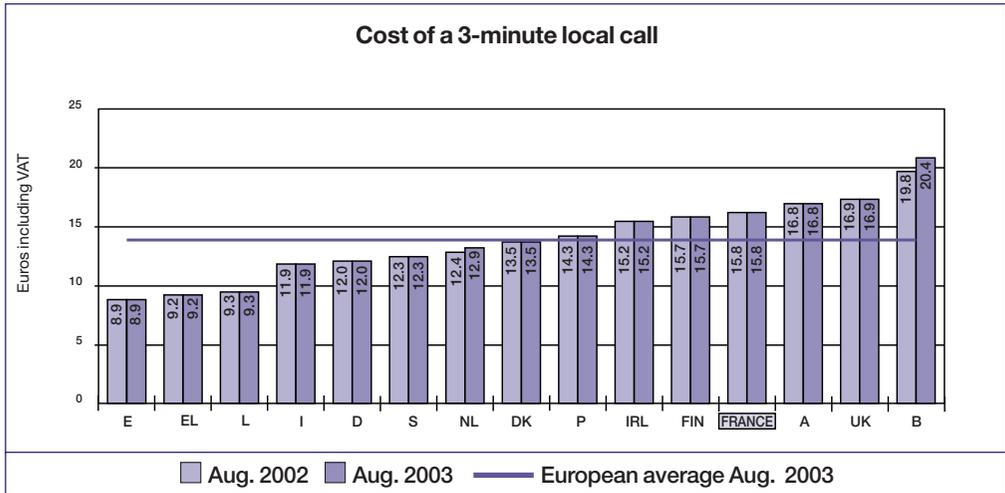
Source: 9th European Commission report, August 2003 data



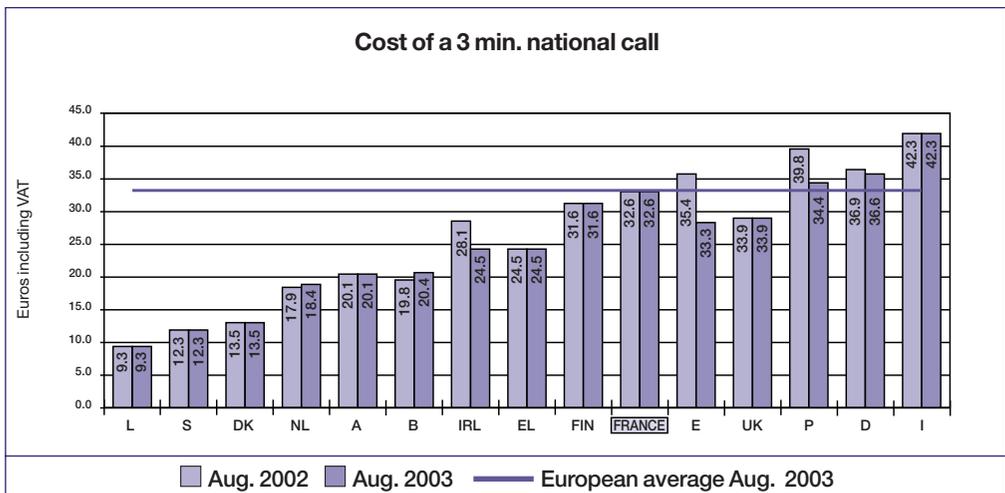
Source: 9th European Commission report, August 2003 data

3. Call prices

Comparison of the price of a three-minute local and national call in 2002 and 2003 shows that prices have levelled off in virtually all European countries.



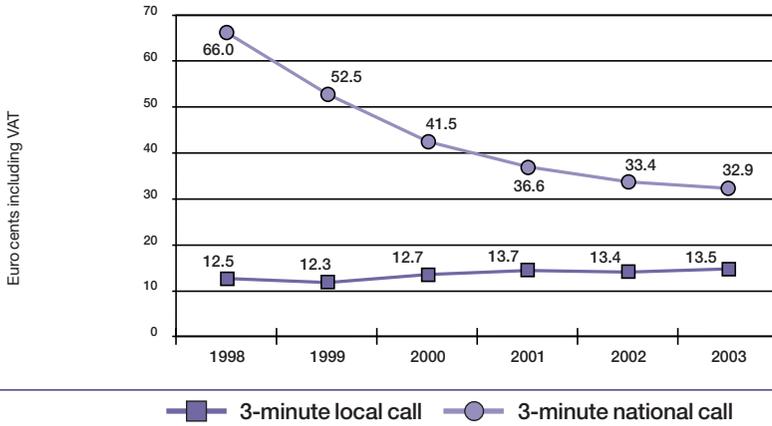
Source: 9th European Commission report, August 2003 data



Source: 9th European Commission report, August 2003 data

Local call prices in France are above the European average, while national call prices are within the average. Europe-wide trends show that the cost of a three-minute national call has fallen significantly since 1998 (by around 33.1 euro cents) whereas the cost of a three-minute local call has levelled off or risen slightly.

Trends in the cost of local and national calls in Europe
(euro-cents, including VAT)



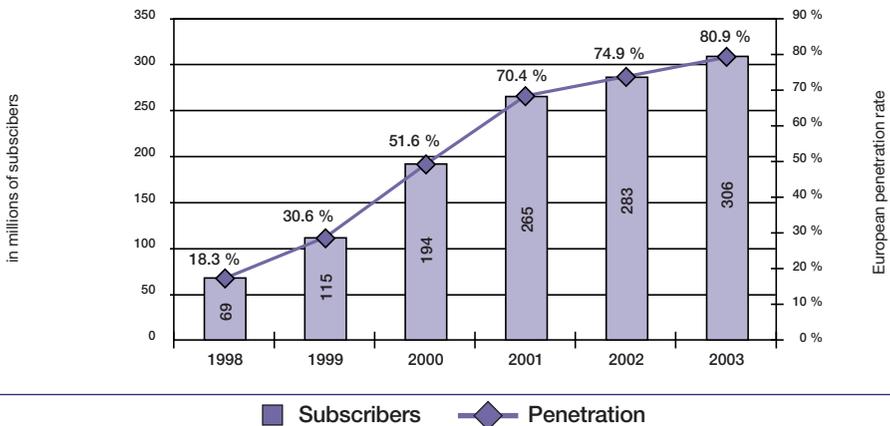
Source: 9th European Commission report, August 2003 data

II. THE MOBILE MARKET

A. Continued growth in the market

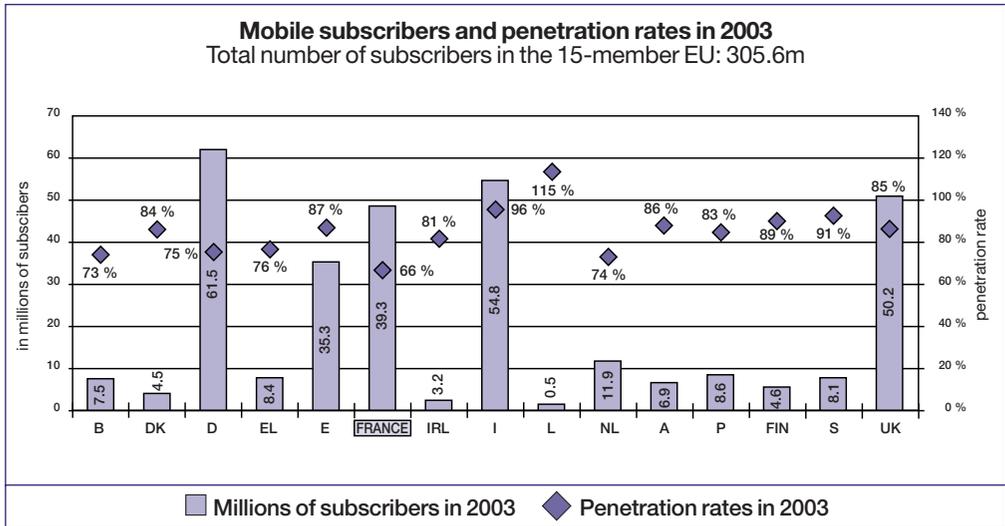
The European GSM market is continuing to grow. The European penetration rate rose to over 80% in 2003, which represents approximately 306 million users.

Trends in user numbers and penetration rates in the 15-member EU (1998 - 2003)



Source: 9th European Commission report, August 2003 data

The data collected by the Commission in August 2003 and presented in its 9th report shows that penetration rates and subscriber bases are only partly indicative of the real situation. While France looks to be the "worst pupil", with a penetration rate of 66%, and Luxembourg the best, with a penetration rate of 115%, the rules for counting customers are not harmonised and vary from one country to another. In some member states, notably Italy, GSM users have several SIM cards in their mobile phone to take advantage of the different service offers, which artificially inflates penetration rates. Moreover, the data gathered from operators is not always adjusted to winnow out inactive users, as is the case in France.



Source: 9th European Commission report, August 2003 data

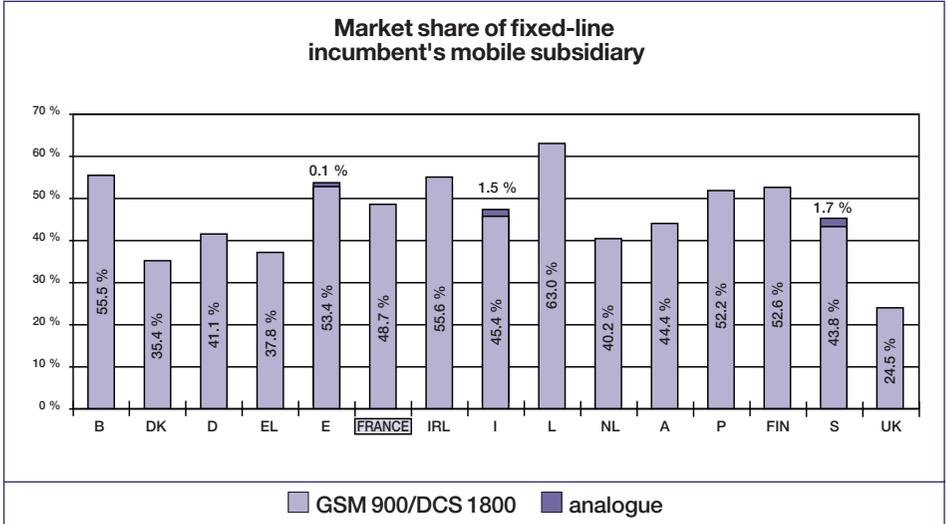
A strong point of differentiation in the French and German markets is the fact that a majority of customers have taken up flat-rate subscription packages (60% in France). Conversely, a high proportion of Italian customers use pre-paid services. We might point out that flat-rate subscribers generate higher revenues than customers choosing a pre-paid option (respectively _50 and _35/month in France at end 2003, by way of example).

B. State of competition

1. The incumbent operators' market share

The market share (in numbers of customers) held by the mobile subsidiary of the incumbent operator is close to 50% in most European countries (Orange France has 48.7% of the French market).

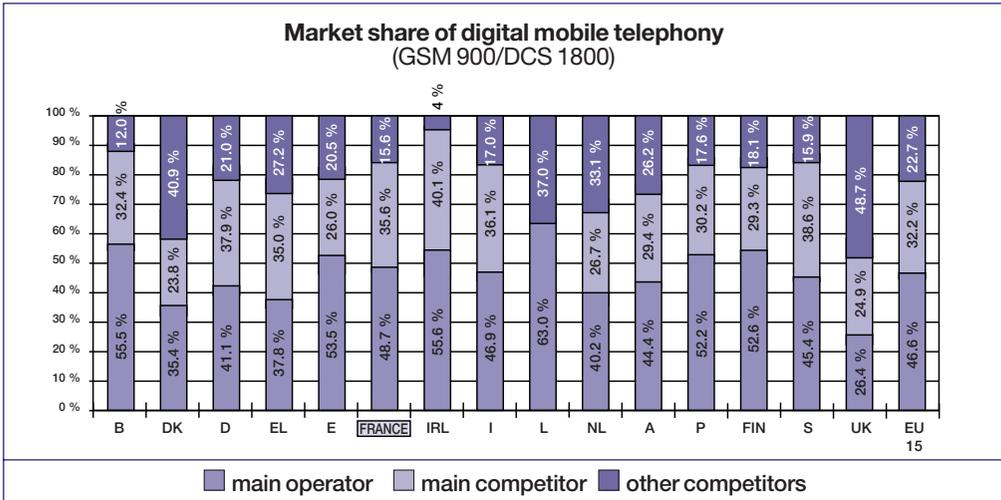
The UK, and to a lesser extent, Denmark, stand out in this respect, with a lower market share (under 40%) than their European peers.



Source: 9th European Commission report, August 2003 data

2. Market concentration

The structure of the market is similar in all European countries, i.e. the leading operator and its main rival together have a market share of over 70% in most cases, except the UK (51.3%), Denmark (59.2%) and the Netherlands (66.9%). This reflects high concentration in the European mobile market, especially since in most cases, the national market is shared between only three operators (notably in France with Orange France, SFR and Bouygues Telecom).



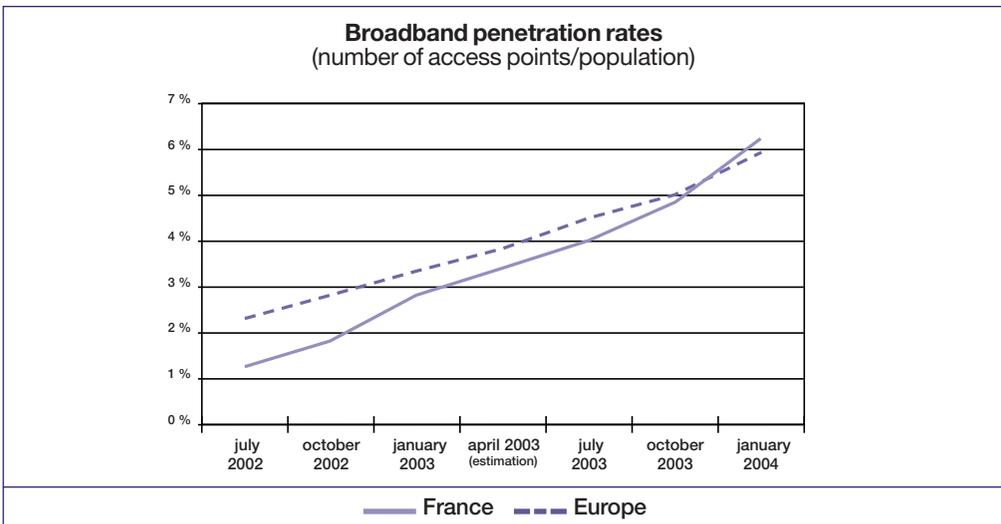
Source: 9th European Commission report, August 2003 data

III. THE BROADBAND INTERNET MARKET

A. A growing market

Broadband continued to grow rapidly in most European countries in 2003. The French market looks to be particularly dynamic, with the sharpest growth in the installed base over the last six months (1,243,000 additional lines), ahead of Italy, which installed an additional 1,109,000 lines.

In terms of penetration rate, France is within the European average and actually rose above the average for the first time in 2003.

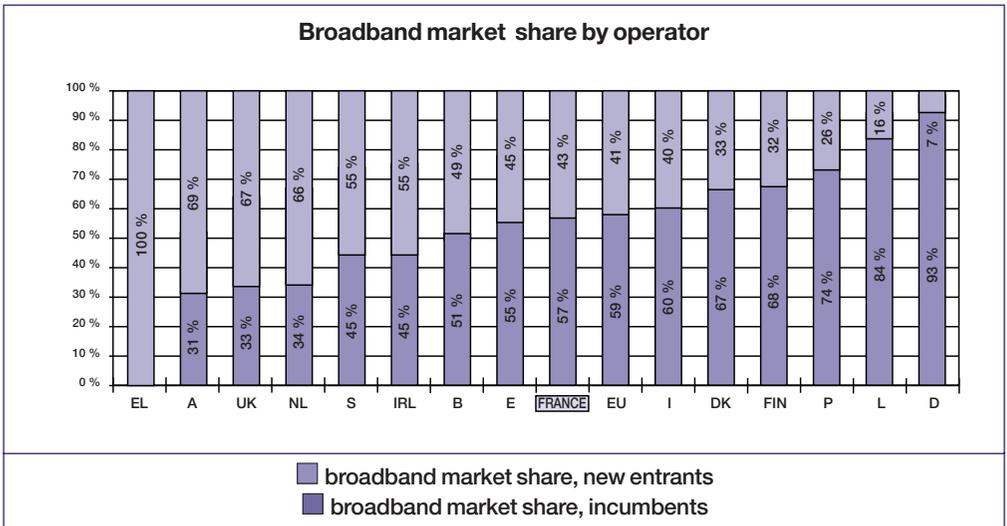


Source : European commission, march 2004

B. State of competition

1. The incumbent operators' market share

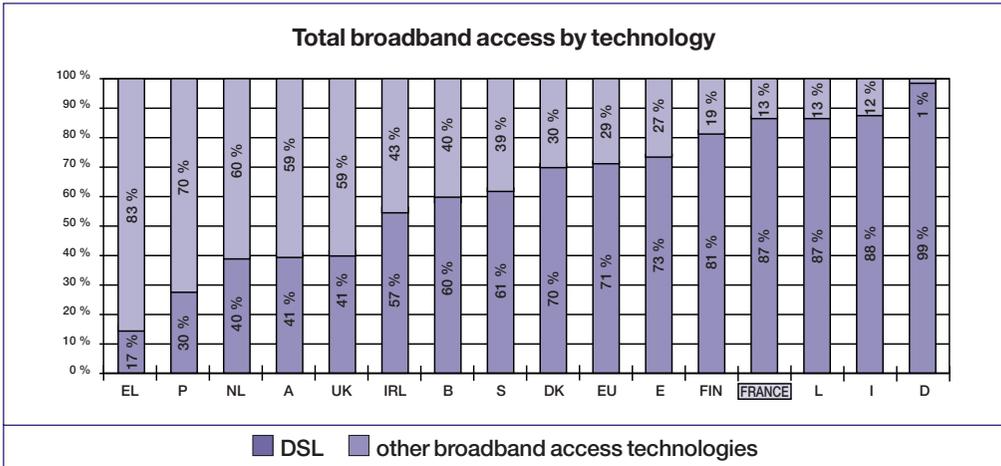
The incumbent operators' share of the retail market on 1 July 2003, calculated as a function of the number of broadband access points, all technologies taken together, varies widely from one country to another. In Greece, the historic operator is not active in the broadband market, whereas in Germany it has 93% of the market. In France, France Telecom and its Internet service provider, Wanadoo, had 57% of total broadband access points, all technologies taken together, in 2003.



Sources: 9th European Commission report, July 2003 data

2. Competing with infrastructure

Broadband Internet can be provided via different networks, although the most common access technologies are ADSL networks, initially offered by the incumbent operator, followed by cable networks and satellite. In France, as in half the European countries, technologies other than ADSL still account for a very low share.



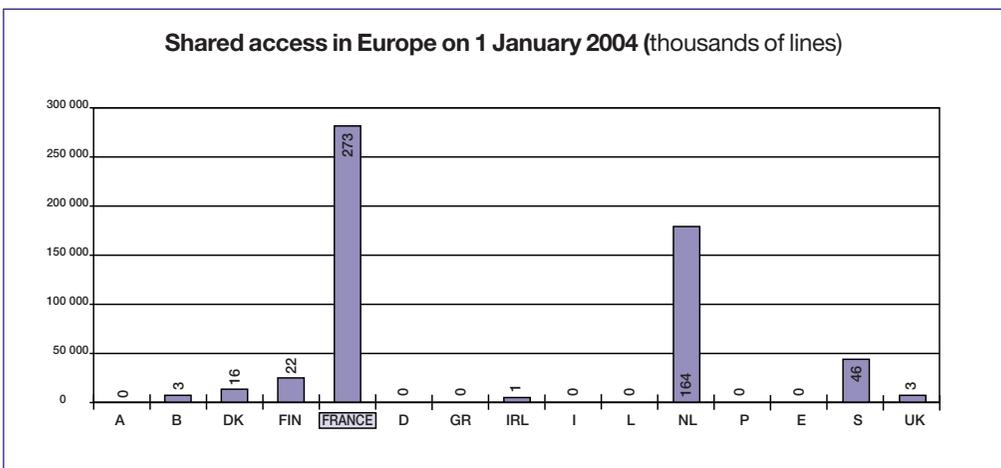
Source: 9th European Commission report, July 2003 data

C. Unbundling data

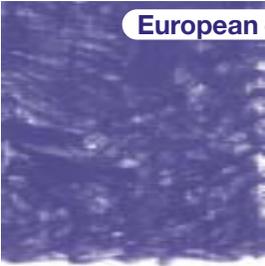
The state of unbundling in Europe varies widely from one country to another.

1. The number of shared access and fully unbundled lines

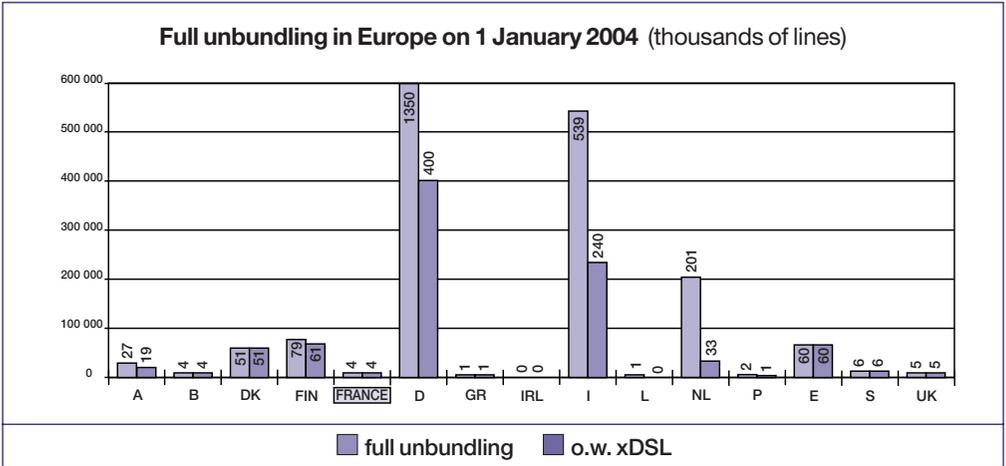
The rapid development of broadband Internet in France in 2003 (see European comparisons, part 4, chapter 5), is primarily due to development of shared access, which is also growing in the Netherlands and the Scandinavian countries.



Source: Ecta, 1 January 2004



Full unbundling is more advanced in Germany (over 13 million lines at the end of 2003), Italy (540,000 lines), Denmark and Finland than in France, which has just a few thousand fully unbundled lines. However, the high number of fully unbundled lines in Germany does not represent broadband unbundling in the strict sense but changing the digital telephone line over from the incumbent operator to an alternative operator. In Italy, operators have mostly chosen full unbundling over shared access.



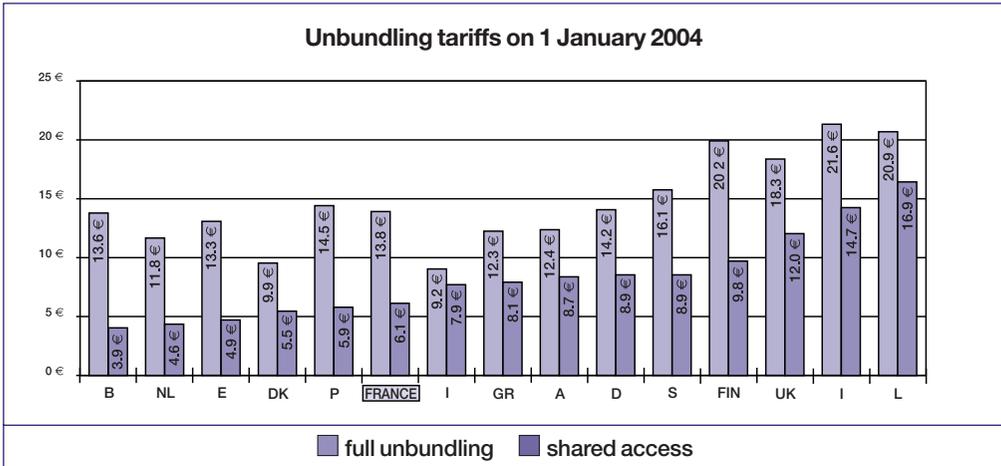
Source : Ecta, 1 January 2004

2. Unbundling tariffs

Providing unbundled access implies ordering the access, leasing it for a certain period and then cancelling it. The monthly cost of shared access in France comes to €6.1/month, i.e. €2.85 for the monthly rental charge plus $(€78 + €40) / 361 = €3.25$, which corresponds to the cost of installing then disconnecting the copper pair.

Shared access requires installation of a physical filter to separate voice frequencies from the frequencies used by the unbundled local loop operator. In France, this filter is included in the monthly shared access tariff. To make a valid comparison, the cost of this filter must be added to the unbundling tariff in countries where it is not provided. This cost can be estimated at €0.2/month.

1 : 36 months



Source : ART, 1 January 2004

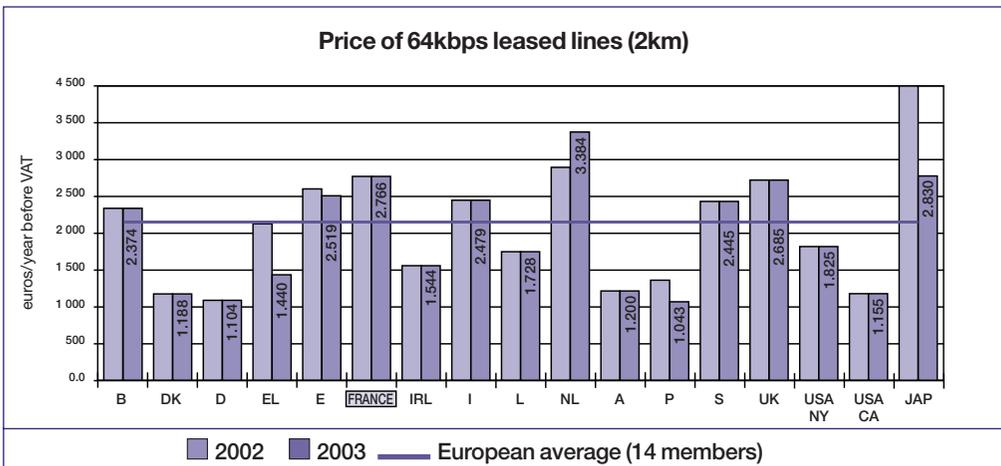
IV. THE INTERMEDIATE MARKETS

A. The leased line market

After dropping sharply (by around 20% for 64 kbps leased lines and around 30% for 2 mbps lines) between 1998 and 2001, when numerous alternative operators moved into the European markets, leased line prices tended to stabilise between 2001 and 2003 due to market consolidation, with some marginal price reductions.

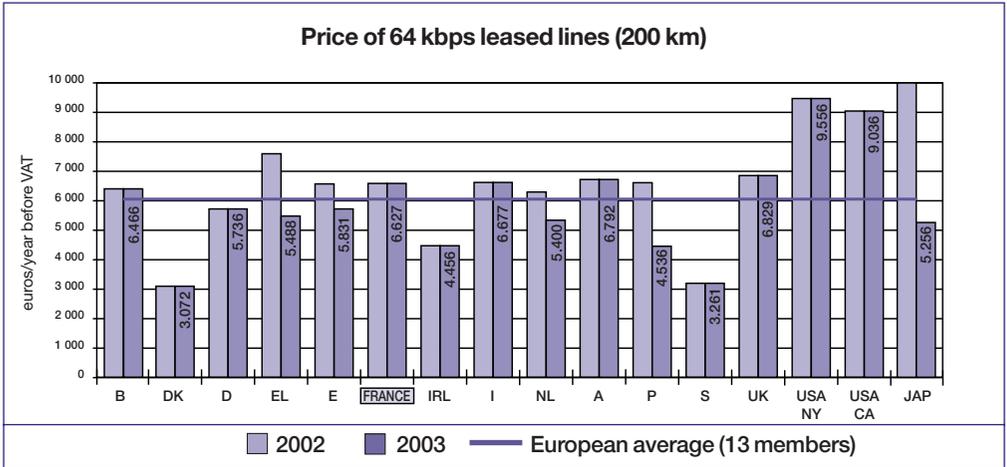
1. Prices of 64 kbps lines

■ 2 kilometre circuit :



Source : 9th European Commission report, August 2003 data

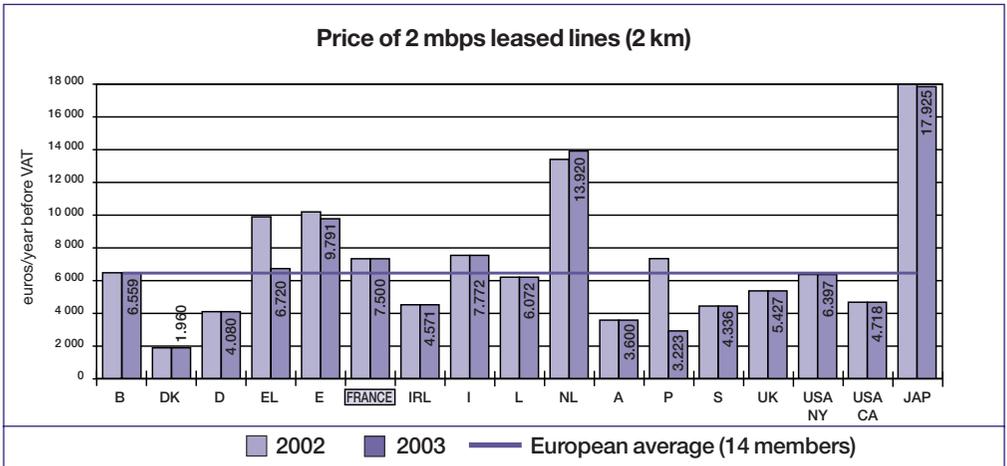
■ 200 kilometre circuit :



Source: 9th European Commission report, August 2003 data

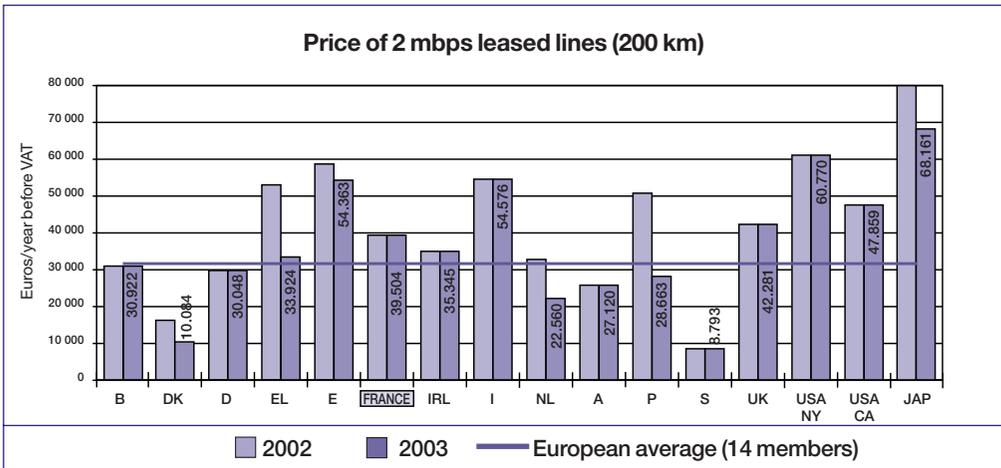
2. Prices of 2 mbps leased lines:

■ 2 kilometre circuit :



Source: 9th European Commission report, August 2003 data

■ 200 kilometre lines :

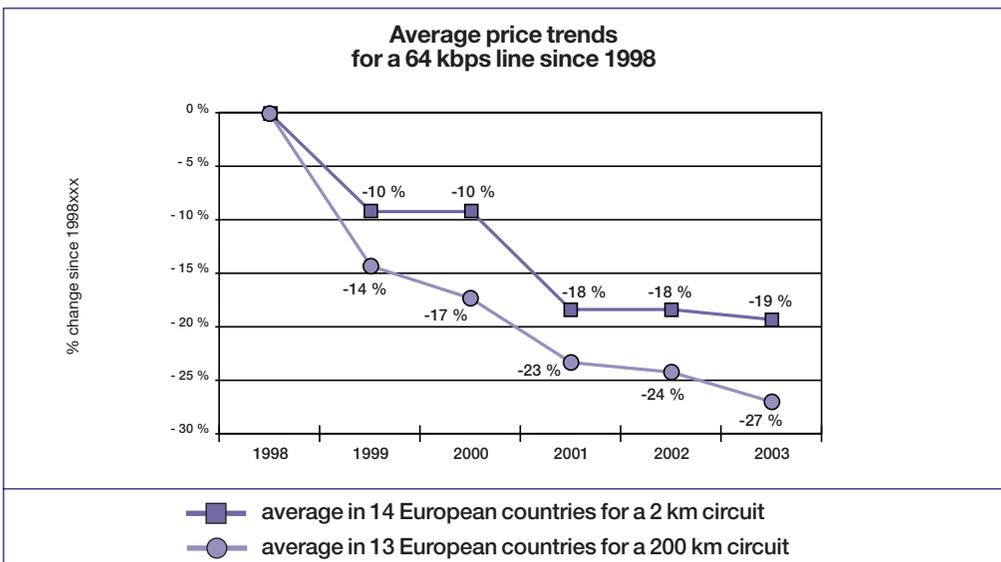


/Source: 9th European Commission report, August 2003 data

Retail prices for 64 kbps and 2 mbps leased lines in France were higher than the European average in 2003, both for 2 kilometre and 200 kilometre circuits.

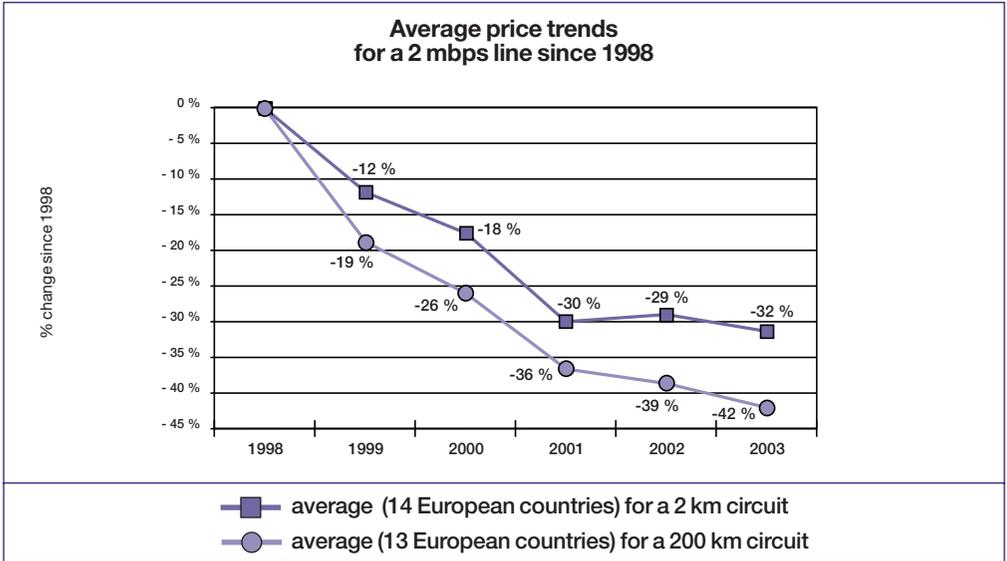
3. Trends in average prices since 1998

■ 64 kbps circuits



/Source: 9th European Commission report, August 2003 data

■ 2 mbps lines



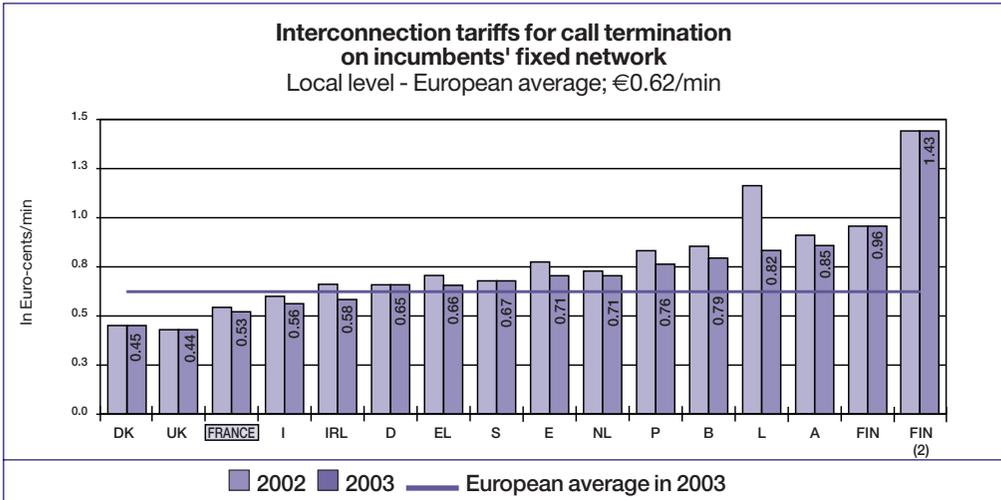
Source: 9th European Commission report, August 2003 data

Prices of 2 mbps leased lines have fallen more sharply than 64 kbps lines, due to sharper competition in high bit rates, the market segment in which the alternative operators are positioned and in which they are attempting to differentiate their offer from that of the incumbent operator.

B. The interconnection market

1. Interconnection at local level

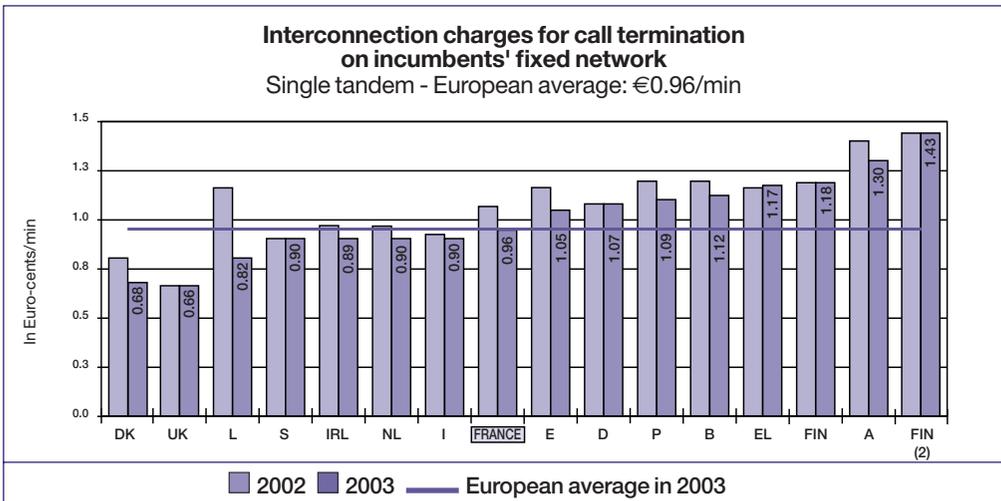
Local interconnection prices fell quite sharply throughout Europe.



Source: 9th European Commission report, August 2003 data

NB: There are almost 50 SMP operators in Finland. The table only includes the two main operators, Sonera - FIN and Elisa - FIN (2)

2. Single tandem

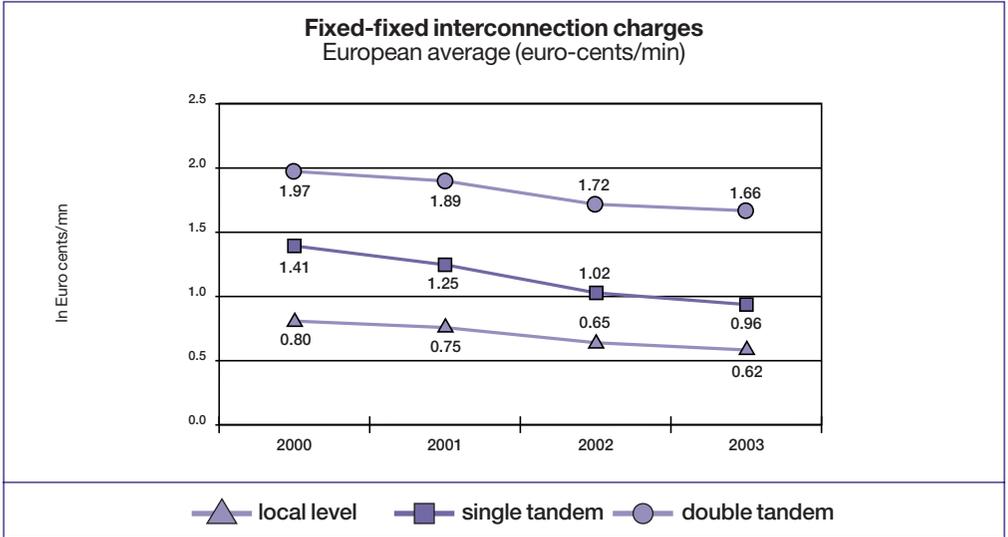


Source: 9th European Commission report, August 2003 data

NB: There are almost 50 SMP operators in Finland. The table only includes the two main operators, Sonera - FIN and Elisa - FIN (2)

French local interconnection prices (intra-CA) are below the weighted European average, while regional interconnection (single tandem) prices are slightly above the average. The countries with the lowest prices are the UK and Denmark.

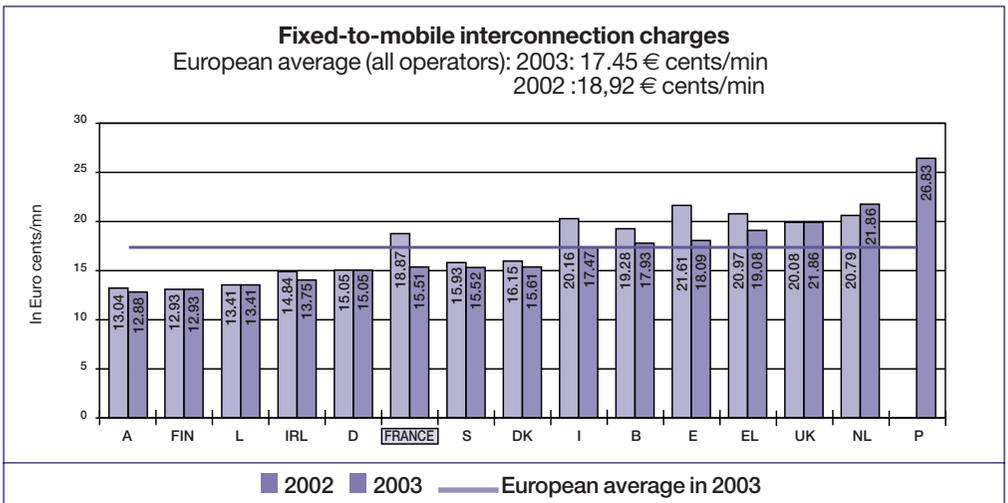
3. European trends in fixed-to-fixed interconnection charges



Source: 9th European Commission report, August 2003 data

After falling quite sharply between 2000 and 2002, interconnection prices tended to level off in 2003.

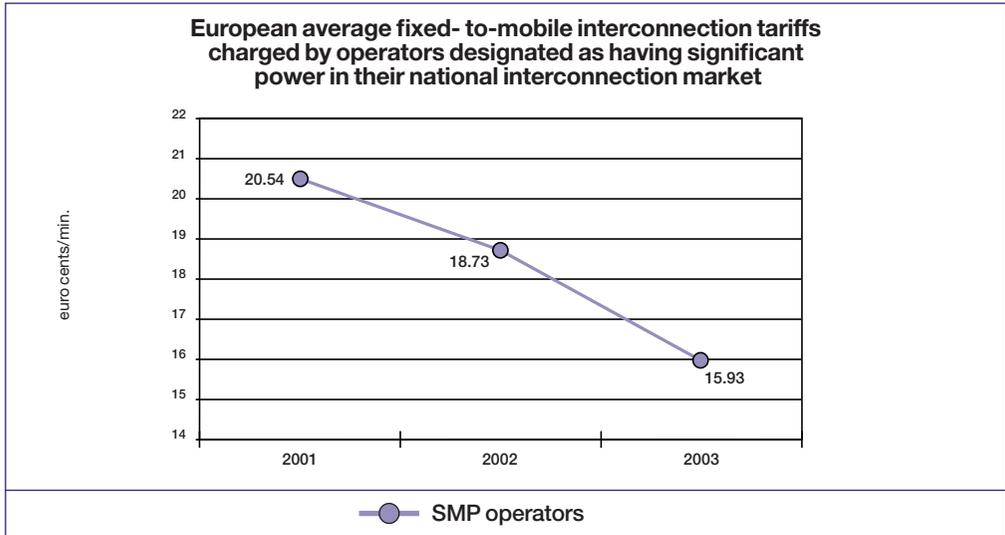
4. Fixed-to-mobile call termination charges



Source: 9th European Commission report, August 2003 data

Mobile network call termination prices were lower than the European Union average in France in 2003. The countries with the lowest prices are Austria and Finland.

5. European trends in fixed to mobile interconnection charges

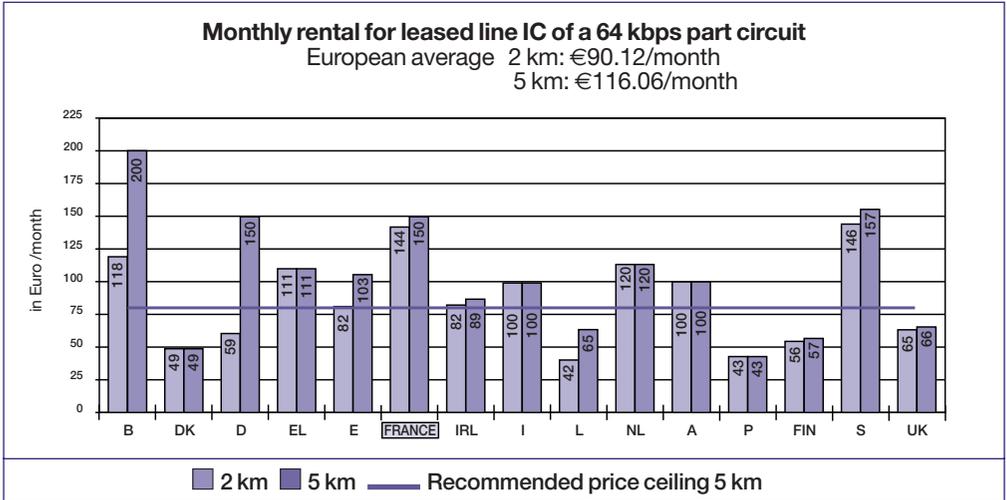


Source : 9th European Commission report, August 2003 data

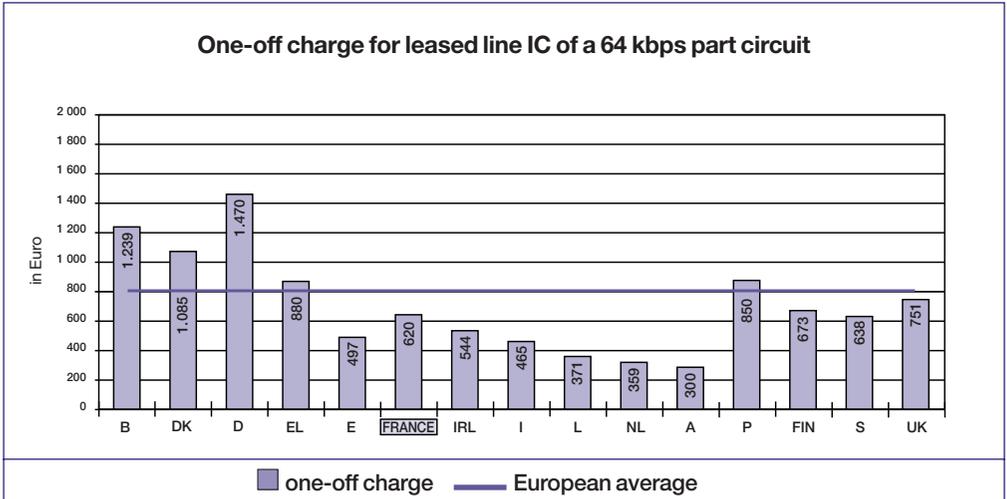
The tariffs charged by SMP operators on the mobile call termination market tended to fall sharply between 2001 and 2003. The prices of mobile operators not designated as having significant market power disconnected from this trend between 2002 and 2003, with an average of 18.60 euro cents/minute, given that they are not subject to the same cost-based tariff constraints.

6. Tariffs for 64 kbps leased line interconnection

■ 64 kbps circuits

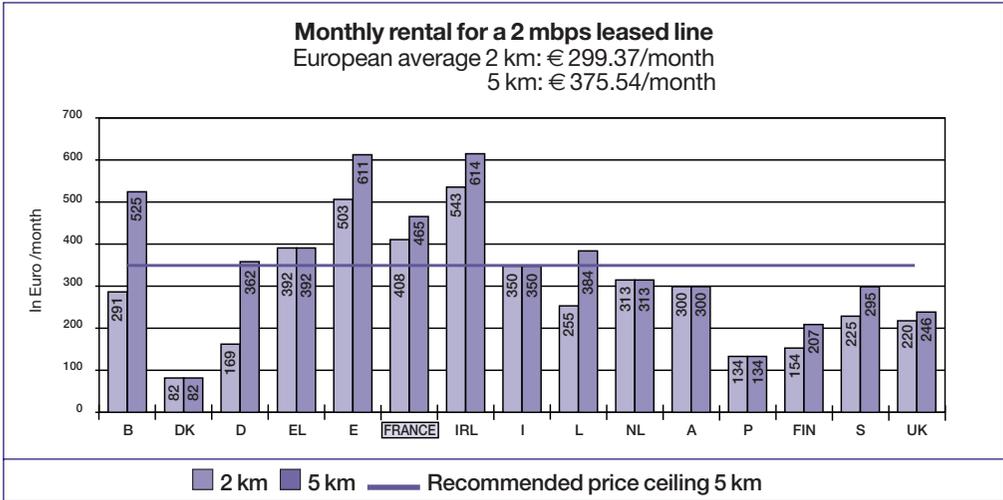


Source: 9th European Commission report, August 2003 data

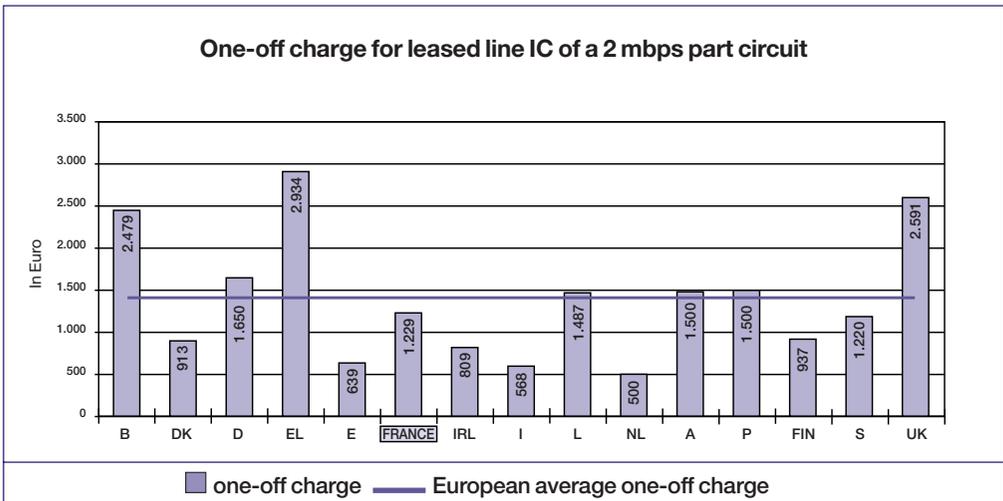


Source: 9th European Commission report, August 2003 data

■ 2 mbps leased lines



Source: 9th European Commission report, August 2003 data



Source: 9th European Commission report, August 2003 data

The French one-off charge for 64 kbps and 2 mbps leased line interconnection is below the European average. Conversely, it is above the European Commission's recommended ceiling price for variable subscription charges.

V. IMPROVEMENT IN EUROPEAN OPERATORS' BALANCE SHEETS

The European incumbent operators' balance sheets deteriorated very sharply between 2000 and 2002, due, successively, to the collapse of the Internet bubble, the severe correction in the financial markets (all sectors combined), and, in some countries, the high prices paid for 3G licences, all occurring against a backdrop of sluggish economic growth worldwide. This led to an increase in the cost of credit exacerbated by a crisis in financial sector confidence in the telecommunications sector. Hence, in 2003, the operators were obliged to clean up their balance sheets by writing down goodwill and, in some cases, calling on shareholders to re-capitalise their business. They also attempted to free up room for manoeuvre by implementing cost-cutting programmes and postponing investment, using the money thus released to cut debt.

The result of these programmes is clearly evident in 2003, with the reappearance of the word "investor" in operators' financial communication. The financial community has acknowledged and rewarded the success of this restructuring of the telecommunications industry, as we can see from the reversal of trends in the market ratings of European operators in 2003 (see table). This trend should gather pace in 2004, leading to a reduction in the cost of credit for operators, who will recover some room for manoeuvre in terms of investment.

Trends in market ratings for the main telecommunications operators

	1999	2000	2001	2002	2003
Number of downgrades	4	29	30	12	8
Number of upgrades	1	0	1	1	5

Source : S&P, Moody's

Priority issues for the regulator

CHAPTER 1

The new legal framework

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The new legal framework

I. THE REGULATOR'S SPHERE OF ACTION

The new legal framework created by the European directives (the so-called "telecoms package"), defines the general objectives and regulatory principles that should guide the action of member states and the national regulatory authorities (NRAs). The goal is to foster and consolidate competition in the different electronic communications sector markets, to develop the domestic market in the interests of consumers and to take technological convergence into consideration.

To perform this task, regulation must adapt to changes in each of the markets using the tools and concepts of competition law. Hence, while maintaining sector-specific regulation, this new framework lays the groundwork for the transition towards gradual application of competition law as the sole authority governing the sector. Once a market has become competitive, a priori sector regulation will be replaced by a posteriori competition law.

Some of the work of transposing the new directives has already been done, with promulgation of Act no. 2003-1365 of 31 December 2003 concerning public telecommunications service obligations and France Telecom. Other directives will be transposed shortly, with the draft legislation on electronic communications and audiovisual communications services, i.e. the "electronic communications" draft legislation.

When this report went to press, the "electronic communications" draft legislation, which the government had declared to be a matter of urgency, had been read in each of the two chambers of the French Parliament and was still to be examined by the Commission mixte paritaire (joint committee) before final adoption. The text and observations below are based on the draft legislation as adopted by the Senate on 15 April 2003, before

the meeting of the joint committee. They do not prejudice the final content of the law that will be adopted afterwards.

A. The main tasks

1. Regulation of relevant markets

Pursuant to the directives and the draft "electronic communications" legislation, the NRAs, in compliance with the Commission's recommendation as set forth in article 14 of the "framework" directive, draw up a list of "relevant" markets whose characteristics justify the imposition of specific regulation. They must then designate, where applicable, the operator(s) exercising significant influence in each of these markets. An operator is considered to exercise significant influence in a market when it enjoys a position equivalent to dominance within the meaning of competition law. It is then designated as an SMP (significant market power) operator. The NRAs must then decide whether to maintain, eliminate or modify the obligations incumbent on these operators so as to remedy failures of competition in the market. A priori regulation is confined to those sectors where competition is not yet sufficiently well established and concerns primarily the wholesale markets; the retail markets are only subject to regulation at a later stage if regulation of the wholesale markets upstream is not sufficient to ensure competition in the downstream retail markets. The logic governing the directives is gradually to ease control of the retail markets.

The retail markets are only subject to regulation at a later stage if regulation of the wholesale markets upstream is not sufficient to ensure competition in the downstream retail markets.

At the current stage of the "electronic communications" draft law, ART has full responsibility for these tasks, after approval by the Competition Authority as concerns definition of the markets and designation of SMP operators. The draft legislation also stipulates that "emerging retail markets" must not be subjected to a priori control except in the case of a breach of regulation objectives, as defined in article L. 32-1 of the Post and Telecommunications Code. In this case, ART must make a decision within three weeks following the recommendation of the Competition Authority.

Pursuant to the "framework" directive, ART must launch a public consultation for any new measure envisaged that may have important consequences for a relevant market. ART has already undertaken this process with regard to market analysis (see the following chapter).

2. Authorisation system and management of scarce resources

The old system required candidates to obtain an individual licence to establish a public network and provide a public telecommunications service. The new directives have eliminated this procedure and replaced it with a system of general authorisation for these activities, subject to simple notification to ART.

Moreover, in accordance with the objective of the "telecoms package", which is to take technological convergence into consideration, establishment of a public network and supply of a public electronic communications service, regardless of the technical platform used (cable, microwave, wireline) are subject to the same notification procedure.

Hence, since 25 July 2003, the system of individual licences has been replaced by a system of notification to ART (see the guidelines published jointly by the Minister responsible for Telecommunications and ART on 17 July 2003).

The directives provide for the possibility of maintaining a system of individual licences for management of scarce resources, in compliance with the principles of transparency, objectivity and non-discrimination. As in the old framework, ART will be responsible for management and allocation of scarce resources, i.e. frequencies and numbers. The directives also provide for member states to allow operators to transfer frequencies between themselves, which was not the case before. The draft transposition legislation has chosen to adopt this possibility.

3. Provision and funding of universal service

The "universal service" directive provides for member states to monitor provision of universal service and for compensatory payment to be made to the operators designated to provide its components, in accordance with an objective, transparent and non-discriminatory procedure that does not exclude any player in advance. Conversely, it does not modify the content of universal service. Finally, universal service must be provided at affordable prices.

The Act of 31 December 2003 concerning public telecommunications service obligations and France Telecom has therefore modified the legal framework applicable to universal service, which now includes four components:

- provision of a telephone service at an affordable price and of an equivalent level throughout the country, along with social tariffs

- provision of public payphones on the public thoroughfare
- provision of a universal subscriber directory and a directory enquiry service, in printed and electronic form
- provision of an offer suited to the needs of disabled people.

The Minister responsible for Telecommunications designates the operators responsible for providing the different components of universal service, after a call for candidates for each component. However, ART is responsible for calculating the net cost of universal service obligations and determining the share each operator has to pay as a proportion of its revenues rather than on the basis of traffic volumes, as before (see part 3, chapter 5).

B. ART's means

ART has various tools to carry out these tasks. Some of these tools will be modified by the "electronic communications" draft legislation.

1. Settlement of disputes

Pursuant to the "framework" directive, the NRAs are authorised to settle disputes between players in respect of the obligations provided for in the different directives. The "electronic communications" draft legislation takes this provision into account and has widened ART's powers, which were previously limited to specific disputes, notably those concerning interconnection and access, specifying that the list presented in article L. 36-8 of the code was no longer limitative. Moreover, in the current state of the draft legislation, ART is free to carry out technical, legal or economic consultations within the framework of this procedure.

2. Collecting information and powers of enquiry

The "framework" directive stipulates that the NRAs must be able to obtain the information necessary to carry out their tasks with respect to the operators. The "electronic communications" draft law confirms the provisions relative to collecting information. As concerns powers of administrative enquiry, ART's prerogatives have been clarified and aligned on those given to the CRE (Energy Regulation Committee).

3. Power to impose penalties

Pursuant to the "authorisation" directive, the NRAs monitor the obligations that may be associated with general or individual authorisations and, in the event of failure to respect these obligations, have the power to impose penalties (suspension or withdrawal of rights of use, financial penalty) throughout the entire period for which the operator holds such authorisation.

ART's power to impose penalties has been modified to take this directive into account: the draft "electronic communications" legislation provides for a simplified penalty procedure in cases of emergency and the possibility of taking interim measures. Moreover, as in the case of existing provisions for the CSA (broadcasting authority), ART may apply to the urgent applications judge of the Conseil d'Etat to impose a penalty on an operator in breach of its obligations.

C. Control of the regulator's action

On the national level, the regulator exercises its responsibilities under the control of the public authorities. Every year, ART delivers an annual report to the government and Parliament to allow them to evaluate its activity. It also participates in hearings, on request, before competent parliamentary committees. The draft "electronic communications" legislation reinforces this control mechanism by stipulating that ART must report on its activities, and notably on the progress made in respect of the objectives mentioned in article L. 32-1 of the Post and Telecommunications Code to permanent parliamentary committees, at their request.

Moreover, the new framework confirms the right of any user or any company or undertaking that is affected by an ART decision to lodge an appeal with the Paris Court of Appeal (for decisions relating to settlement of disputes) or the Conseil d'Etat.

At the Community level, any measure concerning definition of a relevant market, designation of a player exercising significant power, or any imposition or withdrawal of obligations, must be notified to the Commission and the other NRAs which are free to comment. This procedure helps ensure that decisions taken on the national level do not create a barrier to the single market and ensure harmonisation of European regulations. The Commission has a right of veto over measures relating to definition of relevant markets and designation of SMP operators.

II. MARKET ANALYSIS

A. The market analysis process

In accordance with the Community directives now being transposed, the market analysis process consists of:

- drawing up a list of sector markets whose characteristics, in terms of the state of competition, justify the imposition of specific regulation
- designating, where applicable, operators enjoying significant power on these markets
- setting appropriate obligations for these operators commensurate with the state of competition as observed.

Article 15 of the "framework" directive provides for the Commission to issue a recommendation on "relevant markets", i.e. *"those product and service markets within the electronic communications sector, the characteristics of which may be such as to justify the imposition of regulatory obligations set out in the (...) directives", and for it to issue "guidelines for market analysis and the assessment of significant market power (...) which shall be in accordance with the principles of competition law"*. These two documents were published under the following references: Commission guidelines on market analysis and the assessment of significant market power dated 11 July¹ and the Commission recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation dated 11 February 2003².

Article 16 of the "framework" directive provides that *"as soon as possible after the adoption of the recommendation or any updating thereof, the national regulatory authorities shall carry out an analysis of the relevant markets, taking the utmost account of the guidelines. Member States shall ensure that this analysis is carried out, where appropriate, in collaboration with the national competition authorities."*

Pursuant to this same article 16, this analysis aims to assess the actual state of competition in the markets and identify the resulting consequences in terms of regulatory obligations. In the event that the analysis concludes that the market is effectively competitive, it shall withdraw any previous obligations. In the opposite case, the national regulatory authority (NRA) shall identify undertakings with significant market power - i.e. in the definition of article 14, companies enjoying a position equivalent to dominance within the meaning of competition law - and impose specific and appropriate regulatory conditions.

1 OJEC no C165 dated 11 July 2002

2 OJEC no L114/45 dated 8 May 2003

The directives also provide for the corresponding draft measures to be made available, before adoption, to the Commission and the NRAs of the other member states. The NRAs and the Commission have a period of one month from notification to make any comments, pursuant to article 7§3 of the "framework" directive.

Moreover, in compliance with article 7§4 of the "framework" directive, where an intended measure aims at *"defining a relevant market which differs from those defined in the recommendation or deciding whether or not to designate an undertaking as having (...) significant market power"* and where this measure *"would affect trade between member states and the Commission has indicated to the national regulatory authority that it considers that the draft measure would create a barrier to the single market or if it has serious doubts as to its compatibility with Community law and notably with the general objectives of the directive, then the draft measure shall not be adopted for a further two months"*. In this case, the Commission may take a decision requiring the national regulatory authority concerned to withdraw the draft measure.

B. Markets, SMP operators, obligations: principles and methods

1. Definition and identification of the markets

This definition and identification exercise aims to define the contours, in terms of services and in geographical terms, of markets likely to be subjected to *ex-ante* regulation. In accordance with the provisions of the "framework" directive, this procedure is governed by the principles arising from competition law.

1.1. Principles arising from competition law

1.1.1. Definition and identification of the markets in terms of products and services

Definition and identification of the markets from the viewpoint of services is based on the analysis of:

- **demand-side substitutability:** two products are considered to belong to a given market if they are sufficiently interchangeable from the users' point of view, i.e. in terms of the use made of products and services, their characteristics, price and conditions of distribution, the cost of "migrating" from one product to another, etc.
- **supply-side substitutability:** this exists where an operator that is not currently active in a given market is likely to take positions rapidly in this market in response to an increase in the price of products sold in this market.

To assess the existence of demand-side or supply-side substitutability, it is possible to apply the so-called "hypothetical monopolist test" as suggested in the Commission guidelines. Under this test, an NRA should ask what would be the impact on demand of a small but significant, lasting increase in the price of a given product or service (5% to 10% for example), so as to determine whether there are services which consumers consider to be interchangeable, and to which they might be likely to migrate. As mentioned in the guidelines, the essential utility of this tool is its conceptual nature; use of this method does not imply any systematic and detailed econometric study.

1.1.2. Defining market scope in geographical terms

According to established case law, from the geographical viewpoint a relevant market is "an area in which the undertakings concerned are involved in the supply and demand of the relevant products or services, in which area the conditions of competition are similar or sufficiently homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different."

In concrete terms, and according to the Commission guidelines, two major criteria can be used to define the geographical scope of telecommunications markets: first, the area effectively covered by the networks, and secondly, the existence of legal instruments which in practice have the effect of distinguishing a given geographical area from another or, on the contrary, considering that the market is a national market.

ART is aware of the structuring nature of geographical segmentation, as well as the associated practical considerations (clarity, sustainability, cost of regulation). This is why it will in most cases seek to develop a prospective or forward-looking rather than a contingent analysis.

It should be noted that a prospective analysis of the market cannot be independent of the obligations that might be imposed on it during the period under consideration.

1.2. *The three criteria for defining and identifying relevant markets in the meaning of the directives*

The Commission's recommendation on relevant markets defines three criteria that should be used to identify a market as being relevant in the meaning of the directives, while at the same time respecting the principles mentioned above:

- the first criterion is the presence of high and non-temporary entry barriers, whether structural, legal or regulatory in nature
- the second is the lack of foreseeable competition
- the third is that application of competition law alone would not adequately remedy the failure of competition in the market.

As indicated in the recommendation, the Commission used these three criteria to draw up its list of 18 relevant markets. Therefore, the NRAs are not obliged to verify these three criteria again for the markets included in the recommendation. Conversely, if a NRA wishes to define a market other than those listed in the recommendation, it must first verify that these three criteria do indeed apply, as well as applying the principles of competition law as mentioned above.

2. Designation of SMP operators

Once the relevant markets have been identified in technical and geographical terms, the NRAs are responsible for analysing the state of competition on these markets and, where applicable, identifying SMP operator(s).

In the wording of the "framework" directive, *"an undertaking shall be deemed to have significant market power if either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers"*.

Pursuant to the principles arising from case law, the market share of a company or undertaking is an essential, although not exclusive, criterion. Jurisprudence considers that the existence of high market share -- above 50% -- allows a player to establish a dominant position, except in unusual circumstances. An additional criterion is trends in the respective market share of a company and its competitors, over an appropriate time period.

Market share can be evaluated on the basis of volumes or revenues -- the most relevant indicator is defined as a function of the specific characteristics of each market. Moreover, in accordance with the Commission guidelines, the dynamic and forward-looking dimension of the analyses implies that the information requested must cover an appropriate time period.

However the criterion of market share is not enough in itself to establish the existence of a dominant position. Pursuant to case law and the Commission guidelines on market analysis, other, more qualitative factors must be taken into account, including, notably:

- the size of the undertaking
- control of infrastructure not easily duplicated
- technological advantages or superiority
- absence of or low countervailing buying power
- diversification of products or services
- vertical integration of the undertaking
- the existence of a highly developed distribution and sales network
- absence of potential competition
- the existence of price competition
- other criteria such as privileged access to the capital markets or the existence of economies of scope or scale.

The "framework" directive also specifies the criteria that appear to be the most relevant in determining the possible existence of joint or collective dominance on a given market.

ART will do its best to implement the criteria that appear to be the most appropriate for designating SMP operators in the markets under consideration.

3. Obligations

The end purpose of carrying out the market analyses, over and above the designation of SMP operators, is to decide on the specific obligations which, in accordance with the directive, look to be, "justified, proportionate and based on the nature of the problem identified". Concretely, this might mean either imposing new obligations or maintaining existing obligations or withdrawing obligations if the competitive situation so warrants. In practice, the directive stipulates that the NRAs are responsible for imposing at least one obligation on a designated SMP operator.

The obligations that may be imposed in respect of market analysis result from two main texts: the "access" directive and the "universal service" directive.

3.1. Obligations resulting from the "access" directive

The obligations listed in the "access" directive are likely to be applied to the access and interconnection services provided by an operator designated as having significant power in a given market. These obligations are listed in articles 9 to 13 of the directive:

- transparency
- publication of a reference offer
- non-discrimination
- access to, and use of, specific network facilities
- price control and cost accounting obligations
- accounting separation.

Article 8 of the directive also stipulates that “in exceptional circumstances, a NRA may impose an obligation other than those listed above. In this case, it must request authorisation from the Commission.

Below, we have listed each of these obligations along with the original wording of the directives.

3.1.1. Obligation of transparency

Article 9 stipulates that *“National Regulatory Authorities may, in accordance with the provisions of Article 8, impose obligations for transparency in relation to interconnection and/or access, requiring operators to make public specified information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices. (...) National regulatory authorities may specify the precise information to be made available, the level of detail required and the manner of publication”*.

3.1.2. Obligation of non-discrimination

Article 10 stipulates that, *“A national regulatory authority may, in accordance with Article 8, impose obligations of non-discrimination in relation to interconnection and/or access. (...) Obligations of non-discrimination shall ensure, in particular, that the operator applies equivalent conditions in equivalent circumstances to other undertakings providing equivalent services, and provides services and information to others under the same conditions and of the same quality as it provides for its own services, or those of its subsidiaries or partners”*.

Recital 17 in the preamble to this directive provides more specific details as to justification of this obligation by indicating that *“the principle of non-discrimination ensures that undertakings with market power do not*

distort competition, in particular where they are vertically integrated undertakings providing services to undertakings with which they are in competition on downstream markets”

3.1.3. Publication of a reference offer

Article 9 of the "access" directive (transparency) stipulates that *“where an operator has obligations of non-discrimination, national regulatory authorities may require the operator to publish a reference offer, which shall be sufficiently unbundled to ensure that undertakings are not required to pay for facilities which are not necessary for the service requested, giving a description of the relevant offerings broken down into components according to market needs, and the associated terms and conditions including prices. The national regulatory authority shall, inter alia, be able to impose changes to reference offers to give effect to obligations imposed under this directive”*.

Hence, if a SMP operator is subject to the obligation of non-discrimination, the NRA may impose publication of a reference offer in the interests of transparency.

Note that the obligation to publish a reference offer is specifically imposed in respect of unbundling (article 9 of the "access" directive) along with the minimum content of this offer (annex II of the "access" directive).

3.1.4. Obligations relating to access

We note that the "access" directive contains a broad definition of the concept of access (*“the making available of facilities and/or services (...) for the purpose of providing electronic communications services”*). *Interconnection is a particular type of access defined as “the physical and logical linking of public communications networks...”*. The directive stipulates that all network operators negotiate interconnection between themselves. Two types of provision apply to access and/or interconnection obligations:

- 1) Article 5 of the "access" directive stipulates that the NRAs shall be able to impose *“to the extent that is necessary to ensure end-to-end connectivity, obligations on undertakings that control access to end-users, including in justified cases the obligation to interconnect their networks where this is not already the case.”* Such obligations are imposed independently of market analysis but under similar procedural conditions (public consultation and notification to the Commission.
- 2) Article 12 gives the NRA the right to impose on a SMP operator, within the framework of market analysis, the obligation to meet reasonable requests for access. This article stipulates that: *“a national regulatory*

authority may, in accordance with the provisions of Article 8, impose obligations on operators to meet reasonable requests for access to, and use of, specific network elements and associated facilities, inter alia, in situations where the national regulatory authority considers that denial of access or unreasonable terms and conditions having a similar effect would hinder the emergence of a sustainable competitive market at the retail level, or would not be in the end-user's interest”.

This definition is followed by a non-exhaustive list of the access obligations that may be imposed, including, for example, resale, co-location, unbundling and interconnection, strictly speaking. Moreover, this article specifies that *“national regulatory authorities may attach to those obligations conditions covering fairness, reasonableness and timeliness.”*

Finally, in order to verify the proportionate nature of the obligation, the NRA must take a number of considerations into account, including:

- the technical and economic viability of using or installing competing facilities
- the feasibility of providing access in relation to the capacity available
- the initial investment by the facility owner
- the need to safeguard competition in the long term.

3.1.5. Obligations relating to price control and cost accounting

Article 13 of the "access" directive stipulates in particular that *“a national regulatory authority may, in accordance with the provisions of article 8, impose obligations relating to cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of interconnection and/or access, in situations where a market analysis indicates that a lack of effective competition means that the operator concerned might sustain prices at an excessively high level, or apply a price squeeze, to the detriment of end-users. National regulatory authorities shall take into account the investment made by the operator and allow it a reasonable rate of return on adequate capital employed, taking into account the risks involved”.*

This article also specifies that the burden of proof that prices are cost-oriented shall lie with the operator concerned and that the NRA may require an operator to give full justification of its costs.

Finally, it stipulates that *“national regulatory authorities shall ensure that, where implementation of a cost accounting system is mandated in order to support price controls, a description of the cost accounting system is made publicly available (...)”.*

3.1.6. Obligations relating to accounting separation

Article 11 of the directive indicates that "A national regulatory authority may, in accordance with the provisions of Article 8, impose obligations for accounting separation in relation to specified activities related to interconnection and/or access. (...) In particular, a national regulatory authority may require a vertically integrated company to make transparent its wholesale prices and its internal transfer prices, inter alia, to ensure compliance where there is a requirement for non-discrimination under Article 10, or, where necessary, to prevent unfair cross-subsidy. National regulatory authorities may specify the format and accounting methodology to be used."

Other accounting obligations may also be imposed in respect of analysis of the retail markets, as provided for in article 17 of the "universal service" directive, and in conjunction with tariff control.

3.2. Obligations resulting from the "universal service" directive

This directive specifies primarily the obligations that may be imposed on the retail markets. It also sets the conditions under which the NRAs may impose obligations relative to a minimum set of leased lines, on the one hand, and carrier selection, on the other. As concerns the retail markets, article 17 of the directive stipulates that, where a NRA concludes that a given retail market is not competitive and that the obligations imposed under the "access" directive or article 19 of the "universal service" directive (carrier selection) would not result in achievement of the general objectives of the directive, it shall impose appropriate regulatory obligations on the SMP operator(s) in this market.

As for the obligations mentioned above in respect of interconnection and access, these obligations must be "based on the nature of the problem identified and be proportionate and justified in the light of the objectives laid down in Article 8 of the "framework" directive".

As concerns the content of the obligations, Article 17 stipulates that these obligations "may include requirements that the identified undertakings do not charge excessive prices, inhibit market entry or restrict competition by setting predatory prices, show undue preference to specific end-users or unreasonably bundle services. National regulatory authorities may apply to such undertakings appropriate retail price cap measures, measures to control individual tariffs, or measures to orient tariffs towards costs or prices on comparable markets in order to protect end-user interests whilst promoting effective competition".

Hence, the obligations that may be imposed concern:

- excessive or predatory prices;
- non-discrimination between end-users (where unfair);
- unreasonable bundling of offers.

Moreover, the "universal service" directive provides specific provisions for the minimum set of leased lines. Article 18 provides that if the NRA, after analysis, determines that "the market for the provision of part or all of the minimum set of leased lines" is not effectively competitive, it shall designate the SMP operator(s) "in all or part of its territory". The obligations to be imposed on such operators are already set forth in Annex VII of the directive. They include non-discrimination, cost-oriented tariffs and transparency.

Finally, as concerns the carrier selection obligation, Article 19 of the "universal service" directive specifies that "national regulatory authorities shall require undertakings notified as having significant market power for the provision of connection to and use of the public telephone network at a fixed location (...) to enable their subscribers to access the services of any interconnected provider of publicly available telephone services:

- on a call-by-call basis by dialling a carrier selection code
- by means of pre-selection, with a facility to override any pre-selected choice on a call-by-call basis by dialling a carrier selection code".

This article also specifies:

- that in respect of the other networks, this obligation might eventually be imposed on SMP operators within the framework of the market analysis process
- that pricing for provision of carrier selection and pre-selection services must be calculated on a cost basis and that any direct charges payable by the end-user must not act as a disincentive.

C. 2003: launch of the market analysis process

2003 was the year in which ART launched the market analysis process, after publication of the European Commission's recommendation.

In March 2003, following a meeting bringing together some one hundred people, ART launched its first call for comments on the national application of this recommendation, i.e. on the preliminary definition and identification of the markets listed by the recommendation in France. More than fifteen detailed contributions were sent in response to this consultation, and brought together in a summary made public on 9 May 2003.

In addition, in accordance with the Commission's guidelines concerning market analysis, it is ART's responsibility to gather the information required to carry out the analyses. To this end, ART carried out in-depth investigations involving market players, in two phases. The first phase involved gathering quantitative information about operators' activity over an appropriate period of time; the second used qualitative questionnaires to enable these players to express their opinions on a number of subjects concerning the competitive situation in the markets.

The information gathered in the second half of 2003 constitutes an essential source, supplementing ART's own knowledge of the markets, for successful conduct of the market analyses throughout the entire process. In 2004, this procedure is going ahead under the following conditions: in accordance with the Community guidelines described above, ART is launching a public consultation for each market, covering definition of the markets, identification of SMP operators and definition of the specific attached obligations. These three aspects form a consistent whole and should be tackled simultaneously, along the same lines as regulators in other countries, which have already launched their own consultations.

On completion of each of these public consultations, which will be staggered throughout the year, ART will request a recommendation from the Competition Authority, which will, in principle, rule on the definition of the markets and the designation of SMP operators. The information given to the Competition Authority on the specific obligations envisaged for these operators will, of course, throw additional light on the question.

Finally, the corresponding draft measures will, after taking into consideration the Competition Authority's remarks, be notified to the Commission and the other regulatory authorities under the conditions set forth in article 7 of the "framework" directive.

We should indicate that this market analysis process is carried out in parallel with the transposition of the directives. This reflects the logic behind the "framework" directive, which stipulates that the NRAs embark on the process as soon as the recommendation is adopted.

However, notification of draft measures and, a fortiori, adoption of the corresponding decisions may not take place until after transposition of the directives. ART may therefore in certain cases find itself in the position of having to adapt its draft measures to take account of the provisions arising from the transposition process.

In this way, ART will do its best not to delay the effective implementation of the new Community framework, while at the same time ensuring compliance with the national provisions for transposition of this framework.

III. TRANSPOSITION OF THE DIRECTIVES IN EUROPE

A. Transposition deadlines

Transposition of the major provisions of the European directives known as the "telecoms package" into national legislation should have been completed by 24 July 2003. On 6 October 2003, seven countries had transposed the "framework", "authorisation", "access" and "universal service" directives into their national legislation. For various reasons, notably to do with very heavy parliamentary schedules, several member States were unable to transpose this new regulatory framework within the deadlines provided. Hence, on 8 October 2003, the Commission instigated infringement procedures against eight countries failing to meet the deadline, i.e. Germany, Belgium, Spain, France, Greece, Luxembourg, the Netherlands and Portugal.

"The member states, meeting in the Council and supported by the European Parliament, set the deadline of 24 July 2003 for transposition of the major clauses of this new regulatory framework. This timetable was thus chosen by the member states themselves and a number of them have shown that it was a realistic timetable. For those who have not yet adopted the transposition measures, our concern focuses more particularly on the slowness of the legislative process or the fact that projects were tabled too late and that the legislative process has not yet been completed."

Interview with Fabio Colasanti, DG for the Information Society, ART's newsletter (Lettre de l'Autorité), February 2004.

On 1 April 2004, the Commission initiated a second phase in the infringement procedures against eight member states (Germany, Belgium, Finland, France, Greece, Luxembourg, the Netherlands, Portugal) for failure to notify measures transposing into national law the directive on "privacy and electronic communications".

Current status of transposition of the new Community regulatory framework for electronic communications

The situation on 10 March 2004

Belgium	The transposition process is under way. Art. 13 (on unsolicited communications) of the "privacy and electronic communications" directive has already been transposed.
Denmark	All the directives have been transposed.
Germany	The transposition process is under way. Adoption is scheduled for May 2004 (including the "privacy and electronic communications" directive).
Spain	All the directives have been transposed, except for the "privacy and electronic communications" directive (under way)
France	The transposition process is under way. The "universal service" directive was adopted on 31 December 2003. Transposition of the other "telecoms package" directives was scheduled to May 2004.
Ireland	All the directives have been transposed.
Italy	All the directives have been transposed.
Luxembourg	The transposition process is under way.
Netherlands	The transposition process is under way. Adoption is scheduled for April.
Austria	All the directives have been transposed.
Portugal	All the directives have been transposed, except the "privacy and electronic communications" directive, now before Parliament.
Finland	All the directives have been transposed, except the "privacy and electronic communications" directive (under way).
Sweden	All the directives have been transposed, except the "privacy and electronic communications" directive (under way).
Greece	The transposition procedure is under way.
Cyprus	The transposition procedure is under way; adoption is scheduled for April.
United Kingdom	All the directives have been transposed
Czech Republic	The transposition process is under way and adoption is scheduled for April. The "privacy and electronic communications" directive should be adopted in May.
Estonia	The transposition process is under way; adoption is scheduled for the end of this summer.
Hungary	All the directives have been transposed.
Lithuania	The transposition process is under way.
Poland	The transposition process is under way.
Malta	The transposition process is under way.
Slovakia	The transposition process is under way.
Slovenia	The transposition process is under way

B. Notification of decisions

According to Article 7 of the "framework" directive, draft measures envisaged by the NRAs in respect of market analyses must be submitted to the European Commission and the other national regulatory authorities. As of 16 April 2004, five countries (Austria, Finland, Ireland, the United Kingdom and the Netherlands) had already notified certain decisions made in connection with the market analyses.

		Report on notifications (as of 16/04/2004)				
		The different markets	Austria	Finland	Ireland	UK
Retail and fixed telephony services	Market 1: Access to the public telephone network for residential customers		21/11/03			<u>28/11/03</u>
	Market 2: Access to the telephone network for non-residential customers		21/11/03			<u>28/11/03</u>
	Market 3: Publicly available local and/or national telephone services for residential customers		21/11/03			<u>28/11/03</u>
	Market 4: Publicly available international telephone services for residential customers			Commission veto of measures on 20/02/04		<u>28/11/03</u>
	Market 5: Publicly available local and/or national telephone services for non-residential customers			21/05/03		<u>28/11/03</u>
	Market 6: Publicly available international telephone services for non-residential customers			Commission veto of measures on 20/02/04		<u>28/11/03</u>
Leased lines	Market 7: Minimum set of leased lines					<u>18/02/03</u>
	Market 8: Call origination on the public telephone network		21/11/03			<u>28/11/03</u>
Interconnection	Market 9: Call termination on individual public telephone networks		21/11/03			<u>28/11/03</u>
	Market 10: Transit services in the fixed public telephone network					<u>28/11/03</u>
Unbundling	Market 11: Wholesale unbundled access (including shared access) to metallic loops and sub-loops for the purpose of providing broadband and voice services		21/11/03	16/04/04		
Broadband DSL access	Market 12: Wholesale broadband access					<u>28/11/03</u>
Leased lines	Market 13: Wholesale terminating segments of leased lines					18/12/03
	Market 14: Wholesale trunk segments of leased lines					18/11/03
Mobile access and origination	Market 15: Access and call origination on public mobile telephone networks					<u>03/10/03</u>
Mobile call termination	Market 16: Voice call termination on individual mobile networks		21/11/03			
International roaming	Market 17: The wholesale national market for international roaming on public mobile telephone networks					
Broadcast services	Market 18: Broadcasting transmission, services to deliver broadcast content to end-users		<u>22/01/04</u>		03/02/04	14/11/03
Other Markets						Yes*
Notification Art.5 "access directive"				Interconnection agreement between Tele2 (MVNO) & Telekom Austria*		Interoperability order notified 05/11/03

*Wholesale market for unlimited narrowband Internet call termination/Wholesale market for international services at network termination points/Wholesale access and broadband collection market

Notification date
Adoption date

Priority issues for the regulator

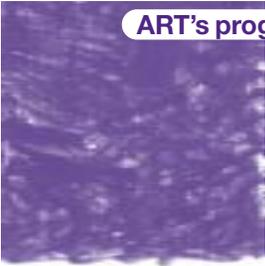


Priority issues for the regulator

CHAPTER 2

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ART's programme

I. CONSOLIDATING COMPETITION

Today, the telecommunications sector is completely open to competition, although this liberalisation, which took effect on 1 January 1998, covers a number of contrasting situations. Analysis of the different markets making up the sector, which is the centre-point of the new regulatory framework created by the European directives, aims primarily to assess the degree of competition between the different players in each of these segments.

A. Fixed telephony

Without prejudice to the findings of the analyses now under way, we are forced to admit that market structures in fixed telephony are not sufficiently competitive and that the incumbent operator's competitors are still in a weak position. As of 31 December 2003, 7.5 million customers had switched to an operator other than the incumbent to route their local and/or long-distance calls, via call-by-call selection or pre-selection. The alternative operators had thus won 38.2% of the long-distance call market and 24.2% of the local call market. However, expressed in terms of value, after payment of the interconnection services provided by the incumbent, their market share is much smaller.

The comparative weakness of new entrants justifies the application of ex-ante regulation to France Telecom to create sufficient economic scope for competitors to carry out their business under satisfactory conditions. This sector regulation will gradually be phased out as the market becomes more competitive.

To consolidate their position in fixed telephony, alternative operators must be able to operate in other market segments that they have either not yet penetrated or where their market share is still small.

1. Subscription resale

We note that France Telecom retains a predominant position in the telephone service access market, that is, all the technical access services invoiced via the telephone subscription (services not included in carrier selection, such as routing of special services, call diversion, caller identification, etc.). This tends to prevent development of innovative pricing or service offers bundling calls and subscription by the operators. This includes France Telecom, which is not allowed to propose bundled offers.

Under the old legal framework, France Telecom could not be forced to resell subscriptions on a wholesale basis to its rivals. This is why ART publicly expressed its desire to see a compromise between the parties in the framework of commercial negotiations pending implementation of the new legal and regulatory framework created by the directives. At the same time, a working group bringing together the players concerned was asked to look into possible changes and the technical and operating methods for implementing subscription resale. ART was concerned, however, to ensure that a wholesale subscription resale offer would not create an economic disincentive to investment in alternative access infrastructures on the part of alternative operators, either on their own account or through full unbundling.

Under the new legal framework, and in the wording of article 12 of the "access" directive, the NRAs may impose on SMP operators the obligation to "provide specified services on a wholesale basis for resale by third parties". This provision should make it possible to impose and control provision of a subscription resale offer differing from the commercial agreement already entered into by the incumbent operator and an alternative operator, which comprised simple consolidation of the invoice.

It will of course be necessary, at the time of the market analysis process, to prove that this subscription resale obligation is both necessary and proportionate

It will of course be necessary, at the time of the market analysis process, proportionate, after having verified that the current conditions of competition to prove that this subscription resale obligation is both necessary and in the fixed-telephony access market are inadequate, and that the obligations already imposed are insufficient to remedy these problems.

2. Innovative services

The main justification for implementing a new legal framework at European level is to take into account trends in competition in the different markets and, also, the latest technological developments modifying the boundaries between telecommunications, information technology and the media. This phenomenon of convergence is the reason why the term telecommunications has been replaced by that of electronic communications.

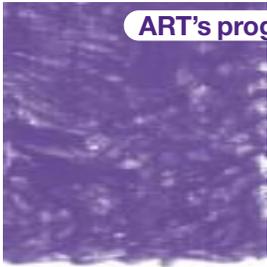
Convergence and innovation, whether in services or networks, are very real phenomena in this sector. Developments at the end of 2003 provide some concrete examples, with the emergence of TV over ADSL, combining audiovisual services and telecommunications, and voice over IP, which uses a protocol originally developed for computer networks to transmit voice calls on telecommunications operators' data-transport networks.

Convergence is now a reality and a source of innovative services encouraging competition. Regulation must therefore take it into account, while at the same time respecting the principle of technological neutrality. It must also integrate technological changes to guarantee harmonious development of the sector without major upheavals, or, at least without too many disturbances.

TV over ADSL is undeniably an innovative service that corresponds to the concept of an emerging market as defined in the directives. Emerging markets are explicitly excluded from the list of relevant markets and in view of this, it appears unlikely that in the short term at least TV over ADSL will be included in the list of relevant markets and hence subject to ex-ante regulation. In principle therefore, these markets benefit from total pricing freedom.

This is true even if it includes players with significant market power in the meaning of competition law, due to their position as pioneers or fore-runners. Indeed, this is the "first-mover" premium awarded to operators or service providers in return for the investment made in developing a market. Moreover, the Commission explains that *"emerging markets where de facto the market leader is likely to have a substantial market share, should not be subject to inappropriate ex-ante regulation. This is because premature imposition of ex-ante regulation may unduly influence the competitive conditions taking shape within a new and emerging market"*. At a later stage, only analysis of the markets will make it possible to judge if and when it will be warranted to intervene in these markets, that is, to remove them from the category of emerging markets to that of relevant markets.

Likewise, thanks to broadband, the technology of voice over IP can be used to provide an Internet telephony service of adequate quality. This too is an emerging and not a relevant market, and is therefore not subject to ex-ante regulation. If this market does in fact develop substantially, it will influence the analysis of relevant traditional fixed-telephony markets and the regulation applied to this market will be eased. This is the underlying logic of the directives to be implemented at the European level, and ART will be putting them into practice without delay.



While innovative services on emerging markets are excluded from ex-ante regulation, this does not mean that the regulator should not take an interest in these markets nor that ex-post regulation will not be necessary. In effect, the task of the NRAs is to ensure that the rules of competition are respected. They must therefore verify that, on the one hand, these new services do not interfere to too great an extent with collateral or adjacent markets, and, on the other, that there are no barriers impeding their development.

TV over ADSL is routed via the copper pair of the local loop connecting the subscriber. It is used directly by the incumbent operator, or, in the framework of unbundling, by a new entrant. This wireline infrastructure is used to provide a connection to broadband Internet, voice telephony services and other services including video programme broadcasting (television, video on demand) or videoconferencing services, etc. The launch of a television access service by the historic operator, i.e. by the operator that is undoubtedly in a dominant position on the access market, allows potentially attractive content services to be offered to the end-customer and creates a link between audiovisual content broadcasting and the broadband market, and, more exactly, with two relevant wholesale markets, i.e. wholesale unbundled access and wholesale broadband access. This link results from technical incompatibility precluding a subscriber from being simultaneously a customer of the incumbent operator for television access and of a ULL operator for broadband Internet access.

While innovative services on emerging markets are excluded from ex-ante regulation, this does not mean that the regulator should not take an interest in these markets nor that ex-post regulation will not be necessary.

For these reasons, it is necessary to ensure that alternative operators prepared to make the necessary investment can use unbundled lines to provide both a broadband Internet service and an attractive audiovisual content broadcasting service. Otherwise, the incumbent operator could leverage its advantage to reinforce its position in the ADSL and broadband Internet access market and squeeze out rivals. ART must therefore ensure that the incumbent operator's competitors can technically duplicate this offer of audiovisual services.

In parallel, to ensure development of the new personal telephone services based on IP, voice over IP operators must be able to interconnect with the traditional telephone networks under satisfactory technical and economic conditions. Here too, ART must ensure that there are no obstacles preventing a new entrant from launching such a service, by remunerating the call termination or origination services provided by the traditional network operators at a fair price. Likewise, allocation of telephone number resources to allow their subscribers to be connected from the traditional switched telephone networks must be provided in a non-discriminatory manner.

B. Broadband

2003 was a particularly eventful year for the Internet and especially for broadband, with the emergence of attractively priced retail offers for the general public, along with innovative offers, notably audiovisual broadcasting on the telephone copper pair (TV over ADSL) and telephony over IP.

There was sharp growth in, and increased diversity of retail broadband offers, via ADSL, cable, WLAN (Wifi), satellite or the electricity-supply network (PLC or powerline carrier systems). The general trend was towards an increase in bit rates, up to several mbps, and the emergence of entry-level offers at pricing levels close to those charged for narrowband Internet access.

Upstream of these commercial offers, a number of important regulatory measures were implemented: a new reference price for unbundling, approval of a reduction in France Telecom's wholesale tariffs and the parliamentary debate aimed at authorising local authorities to become telecommunications operators.

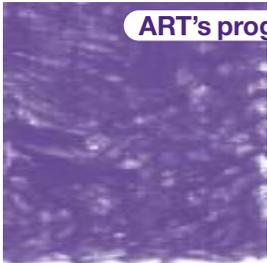
This succession of noteworthy developments took place against a backdrop of sharp growth in the market and in operator investment levels. The number of broadband subscribers doubled for the second year running, to almost 3.2 million ADSL subscribers on 31 December 2003. Operators' forecasts suggest that the market could grow at almost the same pace in 2004.

1. The broadband retail market in France

1.1. Broadband: a variable definition

The term broadband does not yet have a stable definition, either from the regulatory or the commercial viewpoint: it tends to vary as a function of Internet-user applications. In practice, all Internet connection offers at a speed of over 128 kbps are today considered to be broadband offers. In the medium term, if it is necessary to define broadband, it will probably be dictated by applications.

For instance, several megabits per second (mbps) are required for satisfactory real-time video; a few tens of kbps are sufficient to listen to music online (radio over Internet particularly). For consultation of web pages or e-mail, broadband improves user convenience but its main attraction is price-related. Indeed, the price of broadband rarely depends on connection time, contrary to narrowband using the conventional switched telephone network. The broadband offers on the market are generally flat-rate packages which are independent of connection time.



However, broadband offers associated with time or data volume limitations, along with "metered" offers have appeared recently, to satisfy the requirements of a broader base of customers with lower levels of consumption but interested in the greater convenience of broadband. For instance, there are offers with a connection time limited to 20 hours a month and offers limited to 5 Gbytes downloading, along with offers of per-minute billing. These offers are available at prices comparable to that of narrowband and are helping speed up the migration of subscribers from narrowband to broadband, where it is available of course.

Narrowband has stabilised or even declined since March 2003. According to the figures published by the AFA (French association of Internet access providers), the numbers of paying narrowband subscribers (i.e. active in the last 40 days) reached a peak of 7.49 million in March 2003 before starting to fall, to 7.21 million in September 2003. Nonetheless, narrowband is still the main method of Internet access throughout France, for users unable to access ADSL because they are too far from the main distribution frame or because they live in areas not covered by ADSL.

1.2. A rapidly growing market

Demand for broadband services rose very sharply in 2003. The number of broadband Internet subscribers actually grew by more than 120% to over 3.5 million Internet users versus 1.6 million one year earlier. ADSL has the lion's share of this market with over 3 million customers at end 2003: the numbers of cable subscribers rose by only one-third as much, by around 40%. Public enthusiasm for broadband is partly due to a very appreciable fall in access prices (a fall of over 30% for a 512 kbps connection, for instance) following the "price war" initiated by the different Internet service providers in the broadband market and the diversification of offers (higher bit rates for an equivalent price) and the appearance of "triple play" offers associating Internet access, TV over ADSL and voice over ADSL. The high number of ISPs providing broadband services in France, compared to neighbouring countries, suggests that there will be some consolidation in the sector in the longer term.

1.3. The predominance of DSL technologies

Two broadband markets coexist alongside each other: the business market and the residential market. Customer expectations, notably in terms of quality of service and their readiness to pay for it, differ greatly from one market to the other.

The business market is highly segmented. It generates revenues estimated at 0.5 billion euros excluding very high bit rates provided on optical fibre. The residential broadband market generates revenues of around 1.5 billion euros, of which over 85% comes from ADSL technology and around 10% from cable.

ADSL technologies dominate the residential broadband market in France, even though cable was the first platform to offer broadband. Conversely, the cable operators have so far retained a large market share in certain countries, such as the USA, the UK, Belgium and, more generally, most of the Northern European countries, with a market share that is higher or at least comparable to that of ADSL.

The situation of cable in France is rather disappointing and is due to a combination of several unfavourable factors, notably regulatory. This comparative weakness is prejudicial to the development of the information society. It is striking that the countries where Internet and broadband penetration rates are highest, such as Denmark, Belgium and the USA, are also the countries where competition between cable and ADSL is the most effective.

However, we should note that broadband by cable covers 6.5 million households in 650 communes in France, which according to AFORM (French association of multi-service network operators) represents a total of 15.5 million potential users. Among these 6.5 million connectable households, approximately 393 000, i.e. 11% of all broadband subscribers, had subscribed to a broadband Internet access cable offer as of end December 2003,

1.4. The emergence of alternative wireless technologies

Today, broadband access does not rely solely on the fixed network (copper pair with xDSL or electricity cable with PLC (powerline carrier)). Mobile broadband, with 3G (third generation mobiles) was launched very recently in France, while the intermediate offers (2.5G) are increasingly successful with the general public: WAP, MMS, iMode, etc. WiFi is also expanding with the creation of numerous hot spots (wireless Internet access points).

Standards currently being developed, notably Wimax, will lead to wider coverage and higher bit rates. New-generation bi-directional multimedia satellites which include an uplink can also be used to offer access services with high downlink bit rates, and have the advantage of offering total coverage of the territory. Finally, several wireless technologies can be used in conjunction, for instance WiFi and satellite. This possibility is of interest in rural areas.

1.5. Convergence could become a reality

Residential broadband applications are numerous and have evolved significantly with growth in unlimited-time connections and broadband. The survey carried out in the first half of 2003 by CREDOC at the request of CGTI and ART threw light on a certain number of new applications, particularly among younger users. For instance, downloading of music and small video clips from the Internet and participation in networked games appear to be important applications for Internet users. At the same time, numerous broadband access suppliers offer their customers a "broadband portal" to guide them towards attractive, legal content. Websites offer downloading of film trailers or music tracks, some on a fee-paying basis.

An important development at the end of 2003 was the emergence in France of a very different, content-rich category of so-called triple play offers. They combine access to broadband Internet, unlimited or very cheap telephony (voice over IP) and access to audiovisual content (television and video on demand) and have attracted a great deal of interest among operators. The convergence of telecommunications and audiovisual, announced with great fanfare during the period usually referred to now as the "Internet bubble" is finally seeing the light of day. This convergence is bringing real interactivity to television, notably thanks to the return path provided by ADSL, and new services are appearing with video on demand.

The main reason behind the emergence of these new services is the stimulating effect of competition on sector players. ART, and, more generally, the competition authorities, will exercise particular vigilance with the appearance of telephony on IP and audiovisual broadcasting of programmes over ADSL -- durable development of the market, technical and pricing diversification of offers and a substantial drop in retail prices can only be achieved if conditions of equitable competition between players are established.

2. Regulation of the broadband markets

2.1. Structure of the wholesale market

For broadband competition to develop in France, the Internet service providers (ISPs) and the alternative operators must be able to use the incumbent operator's network (access infrastructure), which cannot be

duplicated by a new entrant operator at a reasonable cost. This means that ART's work over the last four years has consisted of defining the offers which France Telecom must provide its competitors for access and inter-connection with its network.

In December 1999, ART asked France Telecom to submit the tariffs of its retail and wholesale offers (so-called option 5) aimed at Internet access providers, for approval.

In June 2000, the Competition Authority ordered France Telecom to provide a wholesale resale offer to alternative operators, the so-called option 3, allowing them to build their own option 5-type wholesale offers to ISPs or to propose retail offers.

In December 2000, a European Parliament and Council regulation concerning unbundling access to the local loop required all the incumbent operators to publish an unbundling reference offer, the so-called option 1. This option gives alternative operators access to the bare copper pair, allowing them to install their own ADSL equipment so that they could compete with the incumbent operator's options 3 and 5 on the wholesale market and allow ISPs to market retail offers competitive with those of Wanadoo, the France Telecom subsidiary.

Hence, by the end of 2000, the regulatory framework was almost complete. It included three methods for regulating broadband, which are still in force today.

2.2. ART actions in the field of unbundling

France Telecom's publication of a new reference offer in mid-2002, following several formal notices from ART constituted the effective start of unbundling. Hence, the most noteworthy development in 2003 was the sharp increase in the number of unbundled lines in the areas covered by the alternative operators. This rose from less than 10 000 on 1 January 2003, or 0.5% of total installed ADSL lines, to a little under 300 000 on 1 January 2004, or almost 10% of all ADSL lines.

Unbundling has allowed alternative operators to propose very innovative offers, both technically and in terms of tariffs. Offers at several mbps have emerged, also ADSL flat-rate packages at less than €20, i.e. at prices that have halved in one year.

ART helped stimulate rollout of unbundling, by organising technical working groups bringing together France Telecom and the alternative operators. The quality of the discussions between France Telecom and these alternative operators resulted in extremely rapid rollout of unbundling in just one year.

Unbundling on 1 January 2004

- 300 000 unbundled lines versus 10 000 a year earlier.
- i.e. 10% of the installed base of ADSL lines versus 0.5% a year earlier.

However, satisfactory solutions have not yet been found for certain problems i.e. equipment authorised for installation in the co-location rooms, the requirement for customers to sign an unbundling agreement, the quality of service of the unbundled pairs delivered by France Telecom and, most important, the quality of service for repairs to copper pairs which are faulty or have failed-on-delivery.

At the end of 2003, France Telecom published a new reference offer intended to respond to some of these concerns, notably in terms of quality of service. By end March 2004, no new agreements had been signed, suggesting that this new offer did not respond to the requirements of the alternative operators.

2.3. ART actions concerning options 3 and 5

The main issue in 2003 was to manage the reduction in the wholesale tariffs for options 3 and 5 requested by France Telecom using methods and a timetable compatible both with continued rollout of unbundling and an equitable redistribution of the productivity gains realised by France Telecom to its wholesale and retail customers.

This reduction in options 3 and 5, which took place in December 2003, went ahead against an unusually tense background for market players. The alternative operators were keen to benefit for as long as possible from an economic space allowing them to make a return on their investments in unbundling, whereas France Telecom was keen to respond to competition from operators using unbundling.

France Telecom proposed differentiating its wholesale tariffs as a function of its production costs. Hence, ADSL access on main distribution frames, with more than 20 000 lines, which allows more efficient resource sharing, is 20% less expensive than on the smaller distribution frames..

This differentiation of France Telecom tariffs brings two advantages. On the one hand, basing tariffs on production costs allows France Telecom to compete on an equal basis with unbundled operators in the areas in which they are active. Secondly, by maintaining a higher wholesale tariff for small distribution frames, France Telecom is encouraged to continue with geographical rollout of ADSL while the alternative operators are encouraged to continue with rollout of unbundling.

Nevertheless, this differentiation is not without risk in the medium term since it could encourage some players to differentiate their retail tariffs, which ART does not find desirable. In addition, if the frontier between large and small main distribution frames is moved too rapidly, alternative operators might be inclined to slow down rollout of unbundling. Hence,

in 2004, ART will take steps to clarify the methods for defining this boundary and the eventual rules governing its displacement.

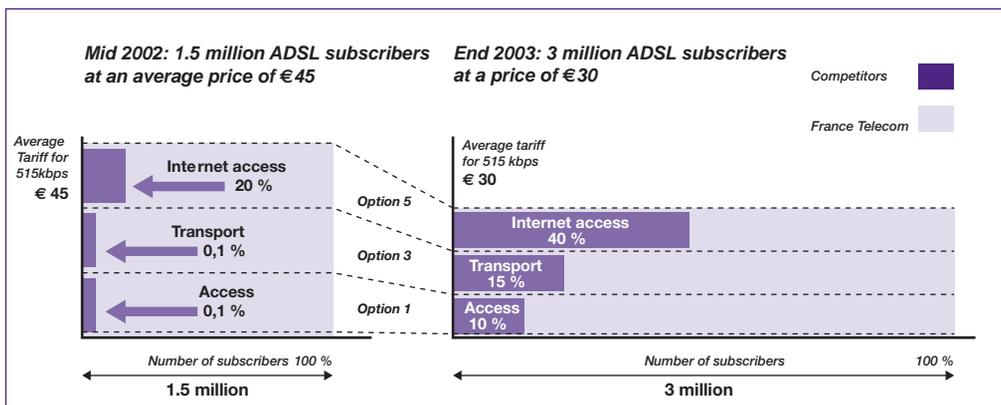
2.4. Development of multi-service broadband offers

France Telecom and TPS have launched an audiovisual broadcasting service using the copper pair, known as “Ma Ligne TV”. Two applications were made to the Competition Authority in respect of this offer, by Free Télécom and LD Com. Following ART’s recommendation, the Authority ordered France Telecom to authorise operators to install their own equipment on the unbundling sites, allowing them to duplicate the France Telecom offer.

The desirable development of innovative multi-service offers on broadband is likely to radically transform the broadband market. It will raise complex problems for regulation, notably in terms of the potential leverage linked to access to content.

2.5. The competitive situation

One of the most noteworthy developments in 2003 was the emergence of competition in ADSL, in general, and unbundling in particular. The competitors of Wanadoo, France Telecom’s ISP, doubled their market share in one year and now hold 40% of the retail broadband market. ULL operators have won between 9 and 10% of the broadband access market in one year, with a little under 300 000 unbundled lines at end 2003. In the intermediate transport market, operators competing with France Telecom have taken 15% of the market. The market share, in value, of the competitors of the incumbent operator and its ISP subsidiary is considerably lower after deduction of the repayments due for purchase of option 5, interconnection and unbundling tariffs.



3. Key factors for success in 2004

The factors of success for the broadband market in 2004 reflect its current difficulties. They are primarily:

- improving unbundling quality of service, notably full unbundling, so that it corresponds to the quality of the wholesale and retail offers that France Telecom proposes to residential and especially business users
- supporting local authorities keen to enter the market, to help them organise their intervention in conjunction with private sector initiatives, in such a way as to maximise leverage, on the one hand, and, on the other, to diminish the legal risk of public intervention in a sector open to competition
- successful implementation of the new regulatory framework which should lead to availability of France Telecom wholesale offers and regulatory mechanisms commensurate with the challenges and expectations of the sector and end-users.

2004 should see development of competition on DSL broadband, including the business market. From the geographical viewpoint, the potential coverage target of over half of households and business users using unbundled access seems feasible.

If these conditions can be brought together, DSL broadband competition should develop more sharply in 2004, in the business market as well. From the geographical viewpoint, the potential coverage target of more than half of households and companies with unbundled access seems feasible. From the point of view of services, multi-service offers with Internet access, voice over IP and audiovisual services could develop rapidly, but will probably lead to complex debate in terms of regulation and competition.

II. ENCOURAGING UNIVERSAL ACCESS TO THE INFORMATION SOCIETY

Growth in mobile usage, the rapid development of broadband Internet and local authority action in favour of these new technologies shows that France has definitely made its entry into the information society.

ART is keen to ensure that information technologies are available to the greatest number by removing the main obstacles to their development. Whether in fixed or mobile telephony, voice or data, ART's action has always been guided by the desire to facilitate penetration and diversification of services while also fostering competition.

New technologies are emerging and user behaviour is changing or is set to change. According to a recent study on the adoption of information technology, carried out by Crédoc for ART and the CGTI (Conseil général des technologies de l'information), 90% of young people between 18 and 21 and almost 70% of 14-15 year-olds have a mobile phone, a penetration rate that is higher than the average. Seven out of ten 12 to 17

year olds have a computer at home and two out of five surf the web from their homes. Multimedia services are popular: radio over Internet and now television over Internet, downloading ring tones or logos on mobiles, SMS messages and MMS (associating text and image), etc.

Today, France has made up its lag behind its main European neighbours in mobile telephony and is among the leaders for broadband rollout.

According to the figures gathered by ART's mobile observatory for the first quarter of 2004, mobile penetration had risen to 69.6% as of 31 March 2004, with 41.9 million active customers subscribing to a mobile service. The multimedia customer base, i.e. people having used at least one WAP, i-mode MMS and email service over the last month (not including SMS) rose to 6.7 million, or 16.7% of the total customer base. The success of SMS was confirmed over the period, with an average of more than twenty messages sent per month and per customer. User appetite for these new services -particularly amongst the younger generation- is a positive indicator for launch of third-generation service.

The actions on the part of the regulator aimed at broadening the mobile market and making it more fluid are: Launch of a price cap mechanism spanning several years for fixed-to-mobile calls, implementation of portability, ART's involvement in the agreement to improve mobile coverage and its commitment to making mobile services available to people with disabilities.

The spectacular growth in broadband observed in 2003 (customer numbers have doubled to over 3 million), is expected to continue this year, with the French market being one of the most dynamic in Europe. While development of the ADSL broadband market was initially concentrated in densely populated areas, the decisions made by ART at the end of 2003 aim to expand the benefits of broadband into rural areas. The measures put in place to liberalise use of the 2.5 GHz frequency band for WiFi and the new authorisation system also contribute to this outcome.

Further use of these information technologies is particularly important for the French economy given its particular level of development. They are key to improving productivity and boosting growth. Several studies have stressed the strong links between use of information and communication technologies and a company's capacity to innovate and adjust to trends in demand. For instance, the OECD stresses the fact that information and communication technologies have a significant impact on growth in work productivity and hence on the medium-term growth potential of our economy.

ART will therefore continue its efforts to ensure that use of these new technologies goes ahead to the benefit of all and does not remain confined to urban areas. This is why the regulator welcomes the new provisions allowing local authorities to become operators of networks or electronic communication services within the context of regional development.

III. MOBILE TELEPHONY: UMTS AND NEW APPLICATIONS

The development of mobile multimedia communication services is a major challenge for telecommunications in France and Europe, and 2004 should be a major milestone in the rollout of UMTS.

A. Mobile multimedia services and UMTS

1. UMTS: a reality in Europe and throughout the world

The first data collected in the different countries where 3G has already been launched gives an indication of the success that the new UMTS-based services are likely to encounter. We note sharp growth in the number of commercial launches of UMTS services throughout the world: following launch by the operator NTT DoCoMo in Japan in 2001-2002, eight commercial launches took place in 2003, most of them initiated by the operator Hutchison, a new entrant 3G operator with no GSM infrastructure. More than thirty launches are planned for 2004, including the services scheduled by French operators Orange France and SFR.

Hence, we think 2004 will be the year that UMTS really takes off. The new, harmonised standard will naturally facilitate international use of mobile services in Europe, but also on the networks of all operators choosing UMTS throughout the world.

2. 3G services: substantial new benefits for consumers

UMTS should facilitate introduction of new services and enhance the mobile multimedia services already available using the GSM/GPRS standard. Some operators believe that by 2005-2006 one quarter of their turnover could come from revenues generated by data/multimedia content (as opposed to 12% at present, primarily from SMS-short messages). Even with substantial growth in traffic, SMS could not be the only driver of growth in revenues generated by multimedia data/content. Today, SMS accounts for 80% of operators' data revenues, while the

remaining 20% comes from other multimedia applications, personalisation services (downloading ring tones, etc.), and interpersonal communications (games, information services).

The services already available on the GSM network, i.e. voice services (telephony) or data transport (web browsing and e-mail), will continue to be available through UMTS. Introduction of UMTS will help free up traffic and enhance service quality in often-saturated city centres.

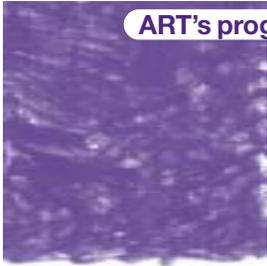
Thanks to the bit rates available via the UMTS standard, it will be possible to offer multimedia services including video sequences aimed primarily at the general public such as video-phone service (telephony with the possibility of viewing caller and called party) and video streaming (continuous viewing of video sequence on the telephone). Trends in video applications will allow subscribers to record short sequences and send them by MMS video (Multimedia Messaging Service video), with delayed or real-time reception of video sequences of sporting events or news items, for instance, and video-phone service.

Different image and sound quality characteristics are available depending on the compression level, from 15 kbps for MMS video on a GPRS network (40 kbps bit rate) to 64 kbps for a video-phone service on a UMTS network, or higher bit rates for video streaming.

Thanks to compression techniques (particularly MPEG4), transmission of a video sequence in real time requires a bit rate of between 30 kbps and 70 kbps depending on the size of the image, the image refresh rate and its structure (complexity of structure, movement, etc.).

Image compression improves "downloading + video playing" applications, which will probably be the most popular type of video usage initially, for sequences such as football matches or news items, by reducing downloading time. These sequences will, at a later stage, be viewable in real time once the bit rates required are available in France, i.e. probably in 2005.

Services aimed at businesses will also emerge. Rollout of the "roaming office" service will allow business customers to use the same information-sharing and transmission environment as they use in their workplace independent of time or place. In the 1990s, GSM coupled mobility and the capacity to communicate, giving companies the possibility of generating real productivity gains. Likewise, the new 3G services will significantly enhance efficiency for business customers.



We expect to see the emergence of a very wide range of mobile terminals compatible with the UMTS standard, from "conventional" mobile phones to laptops with PCMCIA cards or communicating PDAs. Nevertheless, the first terminals coming onto the market will not allow users to benefit fully from all 3G services straight away; the manufacturers had to make certain choices and trade-offs between functions and autonomy.

3. GPRS services: a springboard for the success of UMTS

The mobile multimedia services already launched on GSM/GPRS a few months ago open the way to third-generation services. Take-up of mobile multimedia services available today on GSM/GPRS networks, particularly by young users, and greater use of sophisticated services available through broadband Internet suggests that the even richer multimedia services available via video will be a great success.

Use of 2.5G multimedia packages looks to be growing more sharply today. The new multimedia terminals compatible with these services and offering new functions such as colour monitors, camera and the possibility of sending MMS (multimedia message services) are now available and on the market. Demand for these terminals is growing while the content and services offered are becoming more diversified. For example in France, there are offers such as Orange World, Vodafone Live, or i-Mode, along with multi-operator kiosks such as Gallery or SMS+.

Service packages similar to those offered by French operators are also available outside France. They are often defined and then launched Europe-wide, with specific adaptations for each country. These service packages have a genuine pan-European dimension. As an example, on 1 November 2003, the Orange World offer was launched in six European countries, Vodafone Live in 10 countries, and I-Mode in 6 countries.

B. Key factors for success

In its paper on "European broadband connection: recent developments in the electronic communications sector", dated 4 February 2004, the European Commission emphasized several challenges to be met to ensure the success of broadband services, particularly mobile services, with UMTS.

ART has identified some key factors for success: the need for technology and marketing investment, comprehensive and feature-rich service offers, stronger cooperation between operators and manufacturers to ensure wide-scale interoperability between services and equipment to encourage development of user communities. ART will pay particular attention to any action in the sector that supports these key factors.

1. Technological and commercial investment

To ensure that UMTS develops, operators are required to make significant investments to roll out their networks and provide terminals for their future customers. Rollout is partly facilitated by the possibility of reusing existing GSM sites, which among other things, helps minimize environmental issues.

The rollout of a UMTS network suitable for commercial service in France requires installation of over 2 500 base stations. In addition, UMTS requires a greater number of sites to cover a given area compared to GSM due to the choice of frequency band for the start-up phase.

Apart from network investments, operators will have to make a significant commercial effort during start-up to gain new subscribers, to counter the high cost of the first batches of terminals. Indeed, to ensure rapid take-off of UMTS and successful rollout of inter-personal services such as video telephony, it is important to ensure that sufficient terminals are on the market and available to customers to create a user community or "club" effect. Beyond the desire to increase the terminal market, operators will have to educate customers about the new services available and the new ways of using them.

2. Varied and feature-rich service offers

The improved technological performances allowed by the UMTS standard will give access to a wide range of content and services. Although the provision of feature-rich services relies partly on the inherent characteristics of the UMTS standard, operators can also enhance the services. Here, it is crucial for networks, and particularly service platforms, to be open to all service providers. Consequently, ART encourages operators to enter into partnerships with a view to offering varied services such as those based on geographical positioning or those allowing micro-payments. A wide range of services needs to be offered because it is difficult to know in advance which services will be a success.

3. Improving interoperability

Interoperability is a significant technical challenge and one that operators and network and terminal equipment manufacturers need to tackle together. The objective of interoperability is to allow users to communicate with each other irrespective of the type of terminal they are using or the network to which they are connected. A number of interoperability tests have to be carried out between network infrastructures, between infrastructures and terminals, and between the terminals themselves. Success here requires close technical cooperation between the operators and the manufacturers.

These tests will naturally be carried out initially on equipment chosen by the operator to facilitate rapid launch of commercial service. As soon as this has been achieved, the tests should be extended quickly and progressively to a larger group of network infrastructures and terminals.

The operators and the equipment operators should carry out the optimisation and deployment phase together. It is particularly important to verify network optimisation to ensure that the cells operate correctly with increases in traffic load and that service quality is acceptable under normal traffic conditions.

The success of UMTS services could be accelerated significantly as user communities develop. Accelerated take-up is closely linked to the concept of interoperability, since the more interoperable services and terminals there are, the more people there will be to communicate via interpersonal services.

Natural user communities will develop between subscribers of a given operator in a given country. They can be enlarged in one of two ways. First, they can be extended to customers of different operators within a given country. Here, it is essential that in France, 3G services, and in particular those based on video, are available to everyone and are interoperable. Secondly, an international dimension can be added to the user community, provided that operators propose interoperable services as part of their interconnection and international roaming agreements. Besides increasing the user community, this would allow subscribers to take full advantage of these services, particularly when they travel abroad.

C. 2004: launch of UMTS

During the procedure initiated in August 2003 to verify the rollout obligations for Orange France and SFR, ART observed that technical-economic circumstances such as technology maturity, financial conditions and the operating difficulties encountered on rollout prevented Orange France and Société française du radiotéléphone (SFR) from complying with the rollout obligations initially set forth in the UMTS licence specifications. Having regard to the information gathered from sector players and the unavailability of UMTS network equipment and terminals, ART was obliged to ease rollout obligations for both operators, notably by postponing commercial rollout to 31 December 2004 and the first coverage deadline to December 2005. By this date, these operators must be able to cover at least 58% of the French population. However, ART considered that the medium-term target of 3G coverage for the greatest number of users should be maintained.

ART reaffirms its confidence in the impending take-off of UMTS in France and Europe. As in most European countries, UMTS launch in France is scheduled for the first half of 2004. The regulator will very closely monitor the development of these new services, which are so crucial to the telecommunications sector in France.

Moreover, relations between the different players in the mobile services value chain are bound to evolve, notably those between content publishers and service providers (which often create both content and applications, but which are also responsible for aggregating content and applications), and the owners of portals, i.e. the mobile network operators. Because of their control over the network environment, the latter share the added value created by mobile services with the content suppliers. Video content will probably be sold in the mobile networks through portals or via the MMS video surcharge solution.

The large-scale take-off of content broadcasting is still closely associated with the availability of digital rights management solutions (DRM). Guarantees of legal use of content will contribute to the success of 3G. The regulator will therefore have to ensure that access to the different services is as transparent as possible.

IV. NUMBERING AND WIRELESS LOCAL LOOP

A. Changes in the numbering plan

ART plans to devote substantial time and effort in 2004 to the changes in the numbering plan and the associated rules of management.

There are several reasons that make it essential to initiate an exchange of views on the required changes in the national numbering plan and the associated rules of management:

- regulatory changes: the new European directives currently being transposed into French law bring about substantial changes in number management rules. By way of example, the new code brings together in a single "operators" category players that belonged to separate categories under the old code and that did not all have access to the same numbering resources ("operators of public networks", "providers of public telephone services" and "providers of telecommunications services other than the telephone service". This change makes it necessary to re-examine the management rules and criteria of eligibility for allocation of resources as a function of activity.
- trends in the market: changes in the market are altering the issues associated with allocation of certain number resources. For instance, allocation of the "E" numbers as a carrier-selection prefix was a major factor in developing competition as of 1998. Later, the provision of pre-selection, which is operational today, cancelled out the importance of this aspect, which means that other uses might now be envisaged for the freed-up prefixes.
- technological change: innovation in services is leading to the emergence of new requirements and is likely to impose changes in parts of the numbering plan. For instance, development of voice over IP raises the question of how it should be dealt with in the national numbering plan.

ART will ensure that all the players are associated when these issues are being considered, with the development of relations at international level being an essential aspect of ART's approach.

B. Wireless local loop and Wimax

At the beginning of 2004, we are seeing renewed interest in development of wireless local loop networks in the 3.5 GHz band.

This is in contrast to the situation in 2002 and 2003, where, apart from one operator already holding a WLL licence, no interest had been expressed in the frequencies which had reverted to ART, and where, in autumn 2003, unused frequencies in the 3.5 GHz band in metropolitan France were still being handed back by the holder. This resurgence of interest is due primarily to the emergence of new technologies such as Wimax, and a number of regional or very localised projects are now being studied.

Development of these new technologies is likely to present major challenges in terms of competition, innovation and regional development.

In this fast-changing environment, ART plans to bring together the different players in 2004, to examine the nature and scope of these new projects, assess requirements in terms of available frequencies, and define objective, transparent and non-discriminatory conditions for allocation of the new licences.

V. THE LOCAL AUTHORITIES

The debate over expanding broadband telecommunications services nationwide continued in 2003. The undeniably dynamic trends in development of offers highlight inequalities in availability even more than in the past. The need for intervention by the public authorities, both national and local, has become even more evident and 2003 saw a consolidation of local initiatives and a parliamentary debate around the framework for intervention by the local authorities.

France has some special features that make measures and programmes aimed at completing coverage in areas of inadequate profitability for operators particularly expensive. In July 2003, France Telecom announced that broadband services (ADSL technology) were available to 77% of the population. At the beginning of 2004, this coverage rate rose to 80%, compared to the incumbent's target of 95% at the end of 2005. In view of French population distribution patterns, covering 90% of the population actually corresponds to a much lower geographical coverage rate.

In view of French population distribution patterns, covering 90% of the population actually corresponds to a much lower geographical coverage rate.

From the standpoint of developing competition, only the fifty largest towns in the country have access to a diversified long-distance offer, i.e. one that does not depend exclusively on the incumbent operator.

Hence, 2003 was a period of particularly intensive activity in terms of creating a new framework favourable to the intervention of local authorities on the one hand, and, on the other, an opportunity for those local authorities who had advanced furthest with projects to consolidate their strategies.

A. The institutional backdrop

In the CIADT (Interministerial Committee for Regional Development) meeting held on 13 December 2002, the government announced a plan of action to be implemented in 2003. This plan concerns the powers of local authorities and financial support for projects, already highly structured since the CIADT meeting in Limoges in 2001. The government organised several CIADT meetings in 2003; the decisions made should keep matters concerning information technologies firmly in the forefront.

1. The new powers given to local authorities

In light of the operational difficulties encountered in projects initiated on the basis of article L 1511-6 of the Local Authority General Code, the government took the initiative at the beginning of 2002 to modify the legal framework for local authority intervention in this field.

The draft legislation on the digital economy, adopted by Parliament on 13 May 2004, provides for the repeal of article L. 1511-6 of the Local Authority General Code (CGCT) to be replaced by a new article L. 1425-1 concerning "local telecommunications networks and services". This new article will be inserted in chapter II of book IV, part 1 of the CGCT under the heading "Provisions in respect of certain local public services."

The draft article L. 1425-1 of the CGCT provides for expanding the scope of local authorities' action in the field of telecommunications.

Hence, in concrete terms, local authorities may decide to establish a telecommunications network, to act as "operators' operator" by making available to operators the capacity required to carry out their activity, or to provide telecommunications services to the public.

In respect of this last-mentioned activity, local authorities may provide telecommunications services to the public only where private initiatives are inadequate, as demonstrated by a call for tender which has proved unsuccessful.

The new article removes the distinction between passive and active telecommunications infrastructures from the viewpoint of local authorities, which are authorised to establish and operate all these infrastructures..

This change should enable local authorities to offer operators keen to establish their activity in their area all the technical installations required to carry out this activity and thereby attract operators to areas that are currently economically unattractive. Another one of its aims is to simplify the work of technical analysis that they would otherwise have to undertake to distinguish between active and passive equipment.

Moreover, this new article implicitly recognises that establishment and operation of a telecommunications network by a local authority constitutes a local public service.

This new framework will support local authorities in their choice of legal arrangements as a function of the characteristics and economic attractiveness of their project. Hence, local authorities can choose between different legal structures for building and operating telecommunications infrastructures (management, public contracts or public service outsourcing contracts, etc.).

This means that adoption of article L.1425-1 of the CGCT will give local authorities a secure framework for intervention, helping them more easily to reconcile public action and competition.

ART has on several occasions very clearly expressed its position in favour of intervention by local authorities in the telecommunications sector.

ART believes that the main merit of this new framework is that it guarantees the necessary reconciliation of public policy objectives, all of which have been ratified by the legislator, i.e. adaptation of regional development to the requirements of the information society, and development of genuine competition between operators in the telecommunications sector, in the interests of consumers, whether public or private.

These new arrangements give ART new powers in respect of the intervention of local authorities in the telecommunications sector (see below).

2. Financial support for projects

Broadband rollout requires new investment which is often difficult for operators to make in a country like France, where population density is not very high, without public support. The general framework for government support in financing networks was put in place in previous CIADT meetings. The public mandate entrusted to the CDC (Caisse des dépôts et consignations) reaffirmed by the CIADT meeting of December 2003, led to emergence of 130 significant projects. The government then asked the CDC to estimate the credits available, region by region, along with the potential for capital investment. These estimates should be taken into account by the regional Préfet in the framework of revision of State-Region development contracts or the Docup (unique programming documents).

Against a backdrop of flourishing initiatives and given the funding requirements represented by this movement, the government reaffirmed the need for consistency at regional level.

Local authorities will be able to choose between different legal structures for building and operating telecommunications infrastructures

3. The different CIADT measures taken in 2003

The CIADT meeting of December 2003 focused primarily on the powers of local authorities and financial support, but did not neglect a raft of measures with which ART was keen to be associated, both in terms of preparation and follow-up.

Leaving aside the question of mobile coverage (see part four, chapter 2), the CIADT decided to launch a call for projects concerning alternative technologies (access). ART proposed participating in drafting the specifications so as to provide an upstream guarantee of the regulatory conditions for development of these projects. Through this positioning, ART was also keen to participate in setting up trials of innovative access technologies, combining satellite, power-line carrier systems, WiFi, Wimax and fibre in the home (FITH).

On 26 May 2003, a CIADT meeting devoted to stimulating employment in depressed areas placed great importance on broadband access as a positive factor in the reintroduction of economic activity, using the Vosges area as a pilot region.

The government organised a CIADT meeting focusing on rural development on 3 September 2003, identifying six major areas of action, one of which was the dematerialised economy as a factor of competitiveness. Emphasizing information and communication technologies at the service of rural areas, the CIADT set several targets for the next four years: mobile coverage for 99% of the French population, availability of a broadband Internet connection for the 15 million French people who would continue to be deprived of it without public intervention, and rollout of a very high-speed offer in business parks.

These targets are part of a set of accepted principles explicitly acknowledged in the CIADT text by the government: the beneficial effects of competition, the dynamism of local authority initiatives, the above-mentioned decisions taken by the CIADT meeting of September 2002, and the EC initiative in favour of use of FEDER structural funds in the electronic communications sector as well as in the guidelines published on 28 July 2003.

The government has encouraged these initiatives to implement alternative solutions for serving rural areas and has also highlighted the importance of the advisory role that can be played by the different institutions, particularly the national regulatory authority.

For many years, ART has stood firmly alongside the public authorities in supporting local authority initiatives. However, the new framework for action by the local authorities, as ratified essentially by article L1425-1 of the CGCT, gives the regulator a new positioning. On this point, and in the broader context of transposition of the European directives concerning the new regulatory framework for electronic communications, ART has equipped itself with the means required to play its role as expert adviser and support its capacity to deal with any disputes that might arise on the local level.

B. ART's role in the new system

1. Article L.1425-1

ART is mentioned twice in the body of this legislation. First of all, local authorities taking the initiative to establish and/or operate telecommunications networks must notify the project to the regulator. The same applies to provision of telecommunications services to end-users.

ART is authorised to deal with any dispute concerning the technical and pricing conditions of exercise of the activity covered by article L.1425-1.

The local authorities will be subject to the Post and Telecommunications Code if they decide to operate under the provisions of the new article; for this reason, it is quite understandable that their activities, or those of their agents, are covered by sector regulation. Within the division responsible for regulating the broadband markets, ART has set up a local authorities unit with considerable institutional and technical expertise, allowing it to meet its obligations, both as an advisory, where required, and in terms of the skills in technical-economic analysis that form part of its regulatory work.

ART will take care to ensure that local authority projects go ahead in a framework that respects the fundamental principles of regulation, by giving preference to networks that can be shared and made available to companies in the competitive sector under conditions defined on many occasions by Community rules, i.e. transparent and non-discriminatory.

ART will take care to ensure that local authority projects go ahead in a framework that respects the fundamental principles of regulation

2. ART's role as advisor and expert

ART continued to take note of the requirements expressed by local authorities in 2003. During the parliamentary debates concerning the redrafting of article L.1511-6, ART did not wish to be bound by an obligation to give its opinion on all the projects that local authorities might submit to it, since this role would effectively have been incompatible with its powers to settle disputes.

ART is keen to continue respecting the constitutional principle of free administration of local authorities. In their work to reduce the digital divide, local authorities dispose of several powers in the context of public orders and establishing local public services and may in the future have powers to engage in new forms of public-private sector partnership.

However, these possibilities for intervention are not all equally effective. Development of a diversified offer based on fair, effective and durable competition presupposes good understanding of the existing situation, knowledge of the technologies and an understanding of the conditions under which private operators carry out their business.

ART is and will remain attentive to the expectations of local and regional authorities so as to adapt the framework of its action on a continuous basis. ART is particularly concerned with the question of management of the frequency spectrum, to help those areas least well-served by wire-line networks to construct their strategy.

In 2003, ART was able to assist several local authorities with their projects. However, the questions to be dealt with are bound to become more complex with the easing of the framework for intervention provided for by the law. To effectively exercise its advisory role, ART needs to increase the number of working sessions with local authorities to gain a better understanding of the different aspects of their projects and define more precisely the type of information that they will have to share with the project sponsors.

3. Communication still necessary

The field of action now opening up to local authorities is both promising and risky. The very intervention of the public sector in a competitive domain is likely to interfere with competition. With the adoption of article L.1425-1, a new era has begun for local authorities and the regulator. To a large extent, the players are still in a phase of making hypotheses and understanding the challenges. Hence, it is crucial to organise proce-

dures for sharing experience, at all stages of elaboration and finalisation of projects.

In 2003, ART participated in national and local meetings which gave it the opportunity to share knowledge and identify "good practices". The national communications summer school in Hourtin, the Assises du Net (Net conference) in Nice and the Autrans seminar (Les Journées d'Autrans) gave ART's executive board and its representatives the opportunity to express the regulator's point of view and take note of developments in the field.

4. Reports and studies: an acknowledged role

In 2003, ART carried out several legal studies concerning the action of the local authorities. The study entitled "Installation of telecommunications networks in the public domain and on private property" allowed a detailed examination of the reciprocal obligations applying to managers and users of the public domain.

ART also published a summary of three studies carried out by specialised legal firms concerning the legal framework of local authority intervention in respect of broadband telecommunications network infrastructures. These contributions, which have been made public, proved to be very valuable for project sponsors by providing them with essential guidelines for their action.

As in 2002, ART contributed in 2003 to the multi-customer ORTEL study (acronym for regional telecommunications observatory), which, thanks to the participation of operators in the market, enabled the main telecommunications networks to be mapped and a genuine atlas of information technologies to be made available to the public.

At another level, the regulator launched a study concerning conseil régional strategies concerning purchase of broadband services in the framework of traffic collection from public establishments (hospitals, research centres, etc.) for the Renater network linking universities and research establishments. ART's objective was to achieve a good understanding of the mechanisms of public orders at the regional level and propose a framework favouring development of competition in these markets. In this connection, ART suggested setting up a working group made up of six Conseil Régional delegates, whose contribution was fundamental to the satisfactory development of the study. This method of operating through working groups proved to be as successful as hoped and might be developed further in 2004.

C. Outlook for 2004

Local authority projects acquired a new dimension with the adoption of article L.1425-1 of the local authority general code (CGCT). Economic models have moved beyond simple leasing of passive networks as authorized by the old article L.1511-6.

For ART, the offers which the delegated managers will propose to operators and users of local public networks within the framework of article L.1425-1 are a crucial element in the success of these projects. It is preferable for these offers to be diversified, ranging from dark fibre lease to subscriber resale to access or service providers. The discussions that have begun between the regulator, the départements and the local authorities the furthest advanced with their projects, very frequently highlight this important question of diversity of the originator's offer and local authority control over pricing levels.

The main question here is the efficacy of the outsourcing procedure: the local authorities must protect themselves against the inherent risk of inefficiency on the part of the delegated manager, notably by joint consideration around clauses providing for regular meetings.

In accordance with its principles of action and in view of the fact that this is a new field that might give rise to different approaches and the emergence of diverging interests, ART will in 2004 organise a public consultation on the framework for local authority intervention.

This consultation should allow the Authority to formulate recommendations with the aim of minimising any distortions of competition brought about by the mechanisms of public intervention. It also intends to reinforce its capacity as expert adviser at the service of local authorities requesting such assistance. For ART, this consultation is an essential contribution to the huge task of providing nationwide digital coverage in a context that mobilises both public and private energies.

ART'S powers

CHAPTER 1

The authorisation system

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The authorisation system



The authorisation system

I. FROM INDIVIDUAL LICENCES TO A SYSTEM OF NOTIFICATION

The European directives were partially transposed into French law with the adoption on 31 December 2003 of Act no. 2003-1365 concerning public telecommunications service obligations and France Telecom. The process will be complete on transposition of the draft legislation on electronic communications and audiovisual communication services.

The text and observations below were drafted taking into account the transitional regime (see below) put in place by the Minister responsible for Telecommunications and ART based on the draft "electronic communications" legislation, as available to ART to date, i.e. the draft legislation adopted by the National Assembly on 12 February 2004 and reworked by the Senate on 15 April 2004, before the meeting of the joint committee of the two chambers. They do not therefore intend to prejudice the final content of the law that will be adopted in the near future.

A. The new regulatory framework for authorisations

No authorisation is required to establish and operate a public telephone network and provide telephone services. Operators must simply notify their intention to ART.

1. The principle of the notification system

In the old regulatory framework in force until 25 July 2003, any undertaking wishing to pursue an activity as operator, in accordance with the Post and Telecommunications Code, had to obtain an individual licence to operate a public network (L.33-1) and/or to provide public telephone services (L.34.1).

The new legal framework created by the European directives (the so-called "telecoms package") applying to the different electronic communications sector markets in the member states as of 25 July 2003 (when the

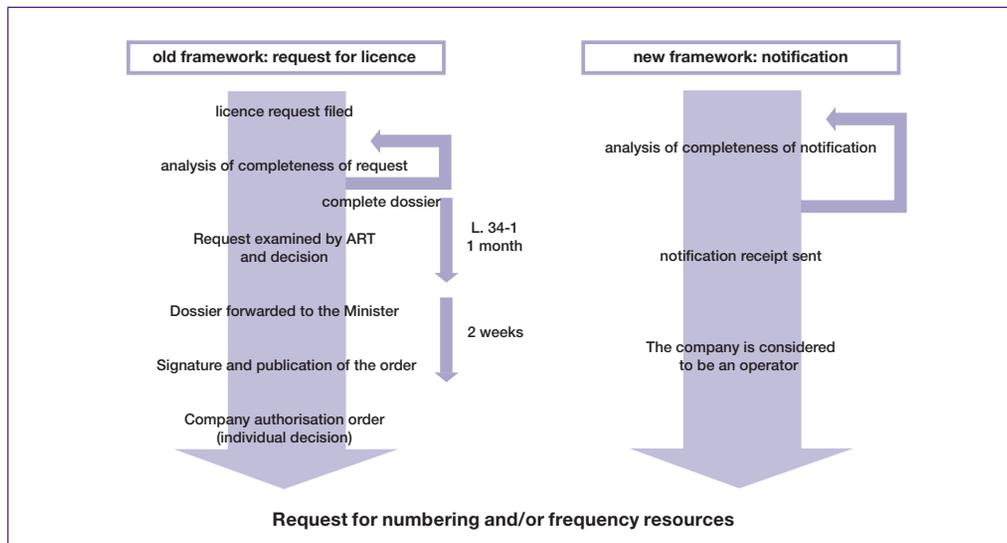
European directives took direct effect), modifies the authorisation system by introducing a system of general authorisation.

Pending adoption of the law and to ensure good interim administration, ART, in conjunction with the Minister for Industry, has set up a transitional regime¹ complying with the objectives of the European directives until they are effectively transposed into French law. ART was keen to describe the practical conditions and methods attached to this transitional regime². The document published by ART does not in any way prejudice the content of the final clauses of the "electronic communications" law to be adopted by Parliament.

Since 25 July 2003, operators are no longer obliged to apply to ART for an individual licence, this obligation being in contradiction with the objective of the European "framework" directive. The draft legislation provides for "freedom to establish and operate public networks and provide public electronic communications services subject to prior notification to ART".

Authorisations issued before 25 July 2003 on the basis of articles L.33-1 and L.34-1 of the Post and Telecommunications code will remain in effect provided that they comply with the Community directives.

The old and the new system of authorisation



Independent multi-CUG networks, which until 25 July 2003 were also subject to an individual authorisation for an independent network are

1 Guidelines concerning the legal framework applicable between 25 July 2003 and adoption of the directive transposition texts, published jointly by the Minister responsible for Telecommunications and ART on 17 July 2003.

2 ART communication concerning the practical conditions and methods attached to the general authorisation system and allocation of numbering and frequency resources, published on 16 September 2003

now considered as public networks and are therefore subject to a simple independent-network notification to ART. Independent single-CUG networks are not subject to any system of authorisation

2. The notification itself

ART sends a notification receipt to undertakings that have filed a complete notification allowing them to exercise their rights. This document allows the recipient to prove to third parties that they have complied with the notification formalities and justify their capacity as telecommunications operators. The operator is then in a position to exercise its rights and is obliged to respect the obligations attached to its capacity as operator.

The notification must enable identification of the petitioner, assessment of the nature and characteristics of the network and/or telephone service provided and, in particular, the area covered by the network and/or telephone service, in order to calculate the base for invoicing the annual control and management fees. Finally, the notification must indicate the estimated date for starting the activity.

On condition that all the elements required are provided, this notification allows the company to commence its activity, without prejudice, however, to possible allocation of frequency and numbering resources, which are still subject to an individual licence issued by ART.

B. The rights and obligations attached to general authorisations

The “authorisation” directive allows member states to attach conditions to general authorisations, provided that they are included in the list set out in part A of the Annex to the directive. Such conditions must be non-discriminatory, proportionate and transparent (article 6).

The rights and obligations set out in the draft “electronic communications” legislation adopted by the National Assembly and subsequently by the Senate repeats these conditions. Among them we might quote: conditions of permanence, quality and availability of the network and the service; the standards and specifications of the network and the service; protection of health and the environment and compliance with town and country planning requirements, including, where applicable, the conditions of occupation of the public domain, the financial or technical guarantees necessary to ensure the proper execution of infrastructure works and conditions of infrastructure sharing, the requirements of public order, national defence and public security, funding of universal service, payment of the charges due by the operator to cover the administrative costs generated (...) under the conditions set out in the Finance Law (...).

ART defines a CUG (closed user group) as a group "based on a community of interest that is stable enough to be identifiable and that pre-dates provision of the telecommunications service".

A subsequent order will cover the methods for implementing these conditions, notably as concerns the content of the notification file.

II. ALLOCATION OF SCARCE RESOURCES

The general authorisation system put in place by the "authorisation" directive and the draft "electronic communications" legislation does not apply to frequency and numbering resource allocation. The old framework has not been challenged on this point. The directive allows member states to require an individual licence for allocation of frequency and numbering resources (article 5) along with payment of a fee for the right to use such resources (article 13). The draft legislation stipulates that allocation of radio frequencies must be done under objective, transparent and non-discriminatory conditions.

Annex B of the "authorisation" directive sets forth the conditions that may be attached to rights of use for radio frequencies. Annex C sets forth the conditions which may be attached to rights of use for numbers.

The text, as adopted by the National Assembly and the Senate, stipulates four cases in which ART may refuse to grant individual rights to use frequencies: protection of public order, effective and efficient use of frequencies, technical or financial inability of the petitioner to continue to fulfil the obligations attached to the conditions of exercise of its activity over the longer term, and judgment against the petitioner involving one of the penalties referred to in articles L.36-11, L.39, L.39-1 and L.39-4 of the Post and Telecommunications Code.

The authorisation must stipulate, within the limits set forth in annex B of the directive: the nature and technical characteristics of the equipment, networks and services that may use the frequency or frequency band, likewise their conditions of permanence, quality and availability and, where applicable, the timetable for deployment and the coverage area; the maximum duration of the authorisation, which may not exceed twenty years; the fees payable by the holder of the authorisation, where they are not set by order; the technical conditions necessary for the avoidance of harmful interference and to reduce the exposure of the general public to electromagnetic fields; the obligations resulting from international agreements concerning use of frequencies and the undertakings provided by the holder in the call for candidates (...).

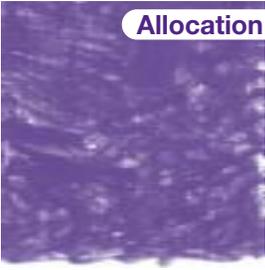
The draft legislation passed by the National Assembly and reworked by the Senate on this point stipulates that an order will be made to set the time limits for granting of individual rights to use frequencies and notification of the conditions of renewal of these rights, likewise the obligations incumbent on holders of the authorisations to allow ART to verify the conditions of use.

ART's powers

CHAPTER 2

Regulation of scarce resources

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Regulation of scarce resources

I. FRÉQUENCIES

Under the Telecommunications Regulation Act of 26 July 1996, ART is responsible for allocating frequency resources to operators and users of civil radiocommunications and managing and allocating audio and television transmission frequencies. The ongoing transposition of the European directives confirms the regulator's role with respect to frequencies.

A. Frequency planning

Frequency planning in France, for the frequency bands which ART is responsible for allocating, is carried out within a national and international framework. The global rules (worldwide) are established by the ITU-R (International Telecommunications Union), transposed on the European level by the CEPT (European Conference of Postal and Telecommunications Administrations) and in France by the ANFr (National Frequencies Agency). ART participates in working groups and conferences dealing with the subjects with which it is concerned at all three levels, allowing it to contribute to the rules to which it will be working and ensure that it has the competence required to establish the conditions of application of these rules.

1. WRC 03

The most noteworthy event in 2003 in terms of frequency planning and standardisation was the World Radiocommunications Conference (WRC) which brought together over 2000 participants from 138 countries in June for four weeks in Geneva. Three people represented ART at this conference as part of a French delegation consisting of 122 members.

Identification of resources for the next generation of WLAN and WiFi and consolidation of the progress already achieved in UMTS were the two main subjects of WRC 03, whereas the previous WRC held in 2002 focused on

DÉFINITIONS :

Frequency :

a frequency is a characteristic of a cyclical phenomenon, commonly called a "wave"

Spectrum :

the full set of frequencies

Wave :

We distinguish between "mechanical" waves that require a physical support (circles in the water) and electromagnetic waves (including light waves) which can propagate in a vacuum

frequency allocation for the European Galileo radio-positioning system and identification of extension bands for UMTS. The main provisions defined by the ITU and contained in the Radiocommunications Regulations (the frequency "bible") have the same weight as an international treaty. Nevertheless, they do not become effective for Europe until their conditions of implementation (technical conditions, timetable, etc.) have been defined by the CEPT and the member states.

1.1. Additional frequencies for wireless local area networks

For ART, one of the main challenges of this WRC was to ensure the availability of sufficient spectrum resources to satisfy development of wireless local area networks or WLAN. Over and above the services currently known under the name of WiFi in the 2.4 GHz band, the main challenge is to expand development possibilities by using technologies such as ETSI/HiperLAN, IEEE 802.11x, among others. The main constraint is the requirement to protect other users of the frequency band identified (5 GHz), i.e. military radars and earth exploration-satellite services. The WRC decided to allocate the globally harmonised 5 150-5 350 MHz and 5 470-5 725 MHz bands limited to wireless access systems including WLAN primarily to mobile services. It also adopted a resolution defining the conditions of use of the different sub-bands so as to preserve other existing services.

1.2. Consolidation of resources for 3G

The other priority issue was to consolidate the regulatory and technical framework for deployment of 3G in the context of frequency allocations

Frequencies and mobility

Mobility has been a major issue in telecoms in the last ten years. Its potential for growth and service diversification is enormous, as are the frequency requirements.

Through the world conferences, the ITU plays a crucial role in organising the worldwide distribution of these scarce resources, between services, geographical zones and states. The main decisions of WRC 03, which have the weight of a treaty, lay the groundwork for future development. Consolidating growth capacity for third-generation mobile while at the same time looking closely at requirements for the next generation, allocating frequencies for broadband wireless networks as a priority, harmonising frequencies for public protection networks globally: all these decisions are crucial to provide operators, equipment manufacturers and users with better information about a more diversified mobile world. And to satisfy their roaming requirements, consumers will also want the new multi-service terminals on which these different applications converge.

Editorial by Michel Feneyrol, ART Board member, in issue no. 34 of ART's newsletter (La Lettre de l'Autorité) published in September 2003

decided at WARC 92 and WRC 2000 for IMT-2000/UMTS. There are still two threats hanging over 3G: premature identification of frequencies for a 4th generation technology, which might encourage the market to "skip a generation", and the emergence in the Far East of a satellite sound broadcasting system likely to lead to constraints in use of the 2.5 GHz extension band allocated to 3G. The WCR took the decision to continue with the ITU studies on frequency requirements for development of IMT2000 and later systems and to take another look at the question at the next conference in 2007. This option therefore carries the least risk of destabilisation for the 3G systems that have been adopted. The constraints related to satellite sound broadcasting have been set at a level that does not for the moment compromise development of 3G throughout most of the world. However, there are still some concerns that these constraints may be modified in 2007

1.3. A first step towards harmonisation of frequencies for security systems

The identification of globally harmonised bands for the different security and emergency services (PPDR -public protection and disaster relief) is a matter of international solidarity which ART supports. However, it is keen to preserve the frequency bands currently used by independent networks (municipal police, SAMU emergency service, etc.) and also to prevent part of the spectrum resources allocated to IMT-2000 being used for PPDR. Given the absence of real worldwide harmonisation, WRC 03 identified frequency bands at a regional and sub-regional level. The 380-470 MHz frequency band was designated for Europe, but additional work was deemed necessary on the point of whether or not to add the 4940-4990 MHz band to cover "advanced" PPDR requirements, a solution adopted by the other regions (in the meaning of ITU).

1.4. Surfing the web from aircraft

Another important result achieved at the Conference concerns access to broadband Internet from aircraft. Frequencies in the 14-14.5 GHz band have been identified to provide the aircraft-satellite link required for this new type of "general public" service.

Among the other decisions made during this WRC that contribute to facilitating Internet access, we might mention identification, on a world or regional level, of several frequency bands in the 17 to 50 GHz range. This would, for instance, enable direct access by individuals to broadband multimedia services by satellite or the establishment of radio access systems combining satellite and WiFi.

1.5. Forthcoming changes/trends in frequency management methods

During the debates, it became apparent that the current breakdown of services as provided by the Radiocommunications Regulations (RR) may not be completely adequate, given the emergence of interactive TV, radio or audiovisual broadcasting towards mobile terminals, integration of WLAN into mobile networks etc. The phenomenon of convergence might result in them being grouped under a single heading, which the ITU today refers to as T-WIMs. (Terrestrial - Wireless Interactive Multimedia)

Already, the existence of multi-band terminals or even multi-standard terminals and various technological developments such as ultra-wide-band radio broadcasting or SDR “Software Defined Radio”, could accelerate this trend. While the situation has not advanced far enough for decisions to be made in 2003, future deliberation will be required over new ways of managing the radio spectrum to find a better way of reconciling the technical rigour essential for managing a scarce resource with the required flexibility, without having to wait for the next WRC in 2007.

1.6. Implementing WRC decisions

After WRC 03, ART participated alongside other agencies responsible for allocating frequencies in the work led by the ANFr (National Frequencies Agency) to define the conditions for integrating WRC 03 decisions into the TNRBF (National frequency band distribution table). The main conclusion of this work carried out in autumn 2003 was a favourable recommendation from ART in February 2004 to the Prime Minister, who, after consulting the other agencies involved, will issue an order approving the TNRBF which will then be published in the Official Journal.

2. Other spectrum planning activities

While preparation and follow-up of WRC 03 on the national, European and world level was the major focus of work in 2003, other activities were carried out in parallel.

2.1. Cooperation with the CEPT

ART continued to contribute, alongside the ANFr, to the work on frequency harmonisation led by the CEPT Electronic Communications Committee (ECC). It was involved notably in work concerning the principles of operational management of frequencies and spectrum plan-

¹ ART recommendation no. 04-199 dated 24 February 2004 .

ning. ART also participated actively in the CEPT "Frequency Management" working group and the different sub-groups on 3G, PMR, fixed service, fixed-satellite service, satellite news gathering (SNG), and ERMES. As an example, we might mention ART's contributions to the debate on vehicle anti-collision radar using 79 GHz or 24 GHz, the debate on use of the UMTS 2.5GHz extension band between the satellite and the terrestrial component, or the debate on identification of harmonised bands for wide-band PMR. In conjunction with ANFr, ART also participated in the work of the CEPT working group on engineering the radio spectrum, which is responsible for defining methods aimed at ensuring the coexistence of different systems. New reports on the compatibility of various radiocommunications systems based on the work carried out were published by the CEPT, particularly in the area of introducing short-range, low-power systems. ART also followed with interest the work related to frequency band identification and conditions of use for new ultra-wide-band technologies for various service applications.

2.2. Frequency coordination in border regions

ART participated actively in various meetings led by the ANFr on frequency coordination in border regions, aimed in particular at preparing several multilateral agreements. As a rule, these agreements are intended to facilitate and optimise the use of frequencies allocated to ART in French border regions.

Finally, ART worked on implementation of the 2003 Agreement (previously called the Vienna/Berlin agreement). This agreement, concerning coordination procedures for mobile and fixed services in border areas and signed in 2003, is not covered by the activities of the member administrations of the CEPT. It is of interest to them, however, as it is designed to harmonise and hence facilitate frequency coordination in the border areas between France and most of its neighbours. Pursuant to this general agreement, ART closely monitored the work on electronic exchange of coordination data and definition of the associated HCM (harmonised calculation method) software.

B. Issue and follow-up of individual rights to use frequencies

1. Conditions attached to rights of use

Pursuant to the "authorisation" directive, rights to use frequency resources are granted by means of an individual ART decision.

When an operator wishes to request frequency resources, it must include proof of its capacity as operator in its request by supplying the notification receipt or the reference number of its authorisation order.

Under the old system of individual licences in force before 25 July 2003, the operator's technical and financial capacity to deploy its telecommunications network project was assessed at the time that the authorisation order was issued.

The text, as adopted by the National Assembly and the Senate, stipulates four cases in which ART may refuse to grant individual rights to use frequencies: protection of public order, effective and efficient use of frequencies, technical or financial inability of the petitioner to continue to fulfil the obligations attached to the conditions of exercise of its activity over the longer term, and judgment against the petitioner involving one of the penalties referred to in articles L.36-11, L.39, L.39-1 and L.39-4 of the Post and Telecommunications Code.

Under the new system of general authorisation, this verification of technical and financial capacity is retained for allocation of rights to use frequencies. ART grants rights to use frequencies under objective, transparent and non-discriminatory conditions and may not refuse to grant such rights except for certain reasons which are listed below:

- protection of public order and defence or public security requirements
- effective and efficient use of frequencies
- the technical or financial inability of the petitioner to continue to fulfil the obligations attached to the conditions of exercise of its activity over the longer term
- judgment against the petitioner involving one of the penalties referred to in articles L.36-11, L.39, L.39-1, et L.39-4.

2. Conditions of rights to use radio frequencies

Annex B of the "authorisation directive" describes the conditions that may be attached to rights of use for radio frequencies. Hence, the authorisation directive specifies the conditions of rights of use of the frequency or frequency band as concerns:

- the nature and characteristics of the equipment, installations, networks or services that may use the frequency or the frequency band, along with conditions relating to permanence, quality and availability, and, where applicable, the timetable for deployment and the coverage area

- the duration of the authorisation, which may not be longer than 20 years, along with the minimum period for notifying the holder of the conditions of renewal of the authorisation and the reasons for any refusal to renew it
- the fees payable by the rights holder, where they are not set by order
- the technical conditions necessary for the avoidance of harmful interference and the limitation of exposure of the general public to electromagnetic fields
- obligations under relevant international agreements relating to the use of frequencies
- any commitments which the holder has made in the course of the call for candidates
- deadlines for granting rights and the obligations imposed on holders of rights to enable control by ART.

3. The main decisions concerning rights to use frequencies

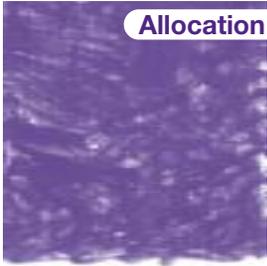
The main decisions concerning rights to use frequencies are described in the sections of Part 4 corresponding to the different markets. The reader may refer to the relevant sections.

- GSM and UMTS mobile networks (Part 4, chapter 2.II)
- Wireless local loop networks (Part 4, chapter 5.III.B)
- Independent networks and PMR (Part 4, chapter 7)
- WLAN and WiFi (Part 4, chapter 5.III.B.3.)
- Satellite networks (Part 4, chapter 2.II.D and chapter 5.III.B)
- Radio paging (Part 4, chapter 2.II.E)

C. Technical coordination activities

The work of technical coordination, notably for microwave networks and satellite links, plays an important role in making frequency allocation decisions and drafting the corresponding notification receipts. The latter are recorded in various specific databases as well as in the ANFr databases. This activity covers a number of components:

- a technical component for verifying the compatibility of the different services, often using shared bands
- a regulatory component for verifying conformity with ITU and CEPT texts and the TBRBF (national frequency band distribution table) signed by the Prime Minister
- an administrative component consisting of the drafting and publication of the decisions of ART's Executive Board.



The following figures for 2003 provide an indication of the scope of this activity for public networks alone:

- 7 075 requests for microwave links
- 171 requests for earth stations
- 13 680 creations/withdrawals/modifications of frequency allocations presented to the ANFr Frequency Allocation Commission for terrestrial and satellite services
- 169 ANFr incoming international coordination dossiers relative to fixed service and fixed-satellite service
- 165 studies carried out for studio-transmitter links
- 64 dossiers presented to the Sites and Rights of Way Commission.

The workload for 2003 was heavy, as it was in 2002. We note decisions to award rights to use frequencies to television channels pursuant to the Audiovisual Act no. 86-1067 of 30 September 1986 amended by the Act no. 2000-719 of 1 August 2000 and, more particularly, article 26.

The freeing-up of France Telecom and Defence Ministry bands in favour of core UMTS bands, initiated in July 2001, was finalised on 31 December 2003, in accordance with the agreements signed. ART made an active contribution by participating in the fundamental spectrum overhaul work led by the ANFr.

II. NUMBERING

A. The numbering plan

Pursuant to the "authorisation directive", rights to use numbering resources are granted by means of an individual ART decision.

When an operator wishes to request numbering resources, it must include in its request proof of its capacity as operator by supplying the notification receipt or the reference number of its authorisation order.

It must provide a request file containing the information listed in the national numbering plan management rules (decision no. 98-75 dated 3 February 1998).

In 2003, ART made 178 decisions concerning numbering. They can be broken down as follows:

- one decision with general consequences
- 177 decisions concerning the general management of numbering resources; these decisions can be further broken down into 97 allocation decisions, 14 reservation decisions, 11 decisions regarding transfers from one operator to another and 55 decisions to revoke rights or modify conditions of use.

Situation of numbering resources end 2003

	Number of numbers
"E" prefixes allocated	6
16XY prefixes allocated	28
16 XY prefixes reserved	0
10XY special numbers allocated	17
10XY special numbers reserved	0
Short numbers (3BPQ) allocated	150
Short numbers (3BPQ) reserved	12
Mobile numbers allocated	66 720 000
Mobile numbers reserved	2 000 000
Fixed non-geographical numbers allocated	13 420 000
Fixed non-geographical numbers reserved	390 000
Fixed geographical numbers allocated	129 240 000
Fixed geographical numbers reserved	310 000

Distribution of short numbers allocated or reserved by service category

Short numbers (3BPQ) for card services or similar	27
Short numbers (3BPQ) for two-step dialling carrier network selection	6
Short numbers (3BPQ) for other uses	129
Total	162

B. Operational management of geographical numbers

1. Call for comments on changes in the short number (3BPQ) management rules

As part of the responsibilities entrusted to ART by the law and taking market trends into consideration, we considered it might be useful to envisage modifying the management rules for 3BPQ-type short numbers. We observe that in 2003 an increasing number of operators requested this type of number with the intention of allocating them to a single editor. ART therefore launched a call for comments on 6 October 2003 concerning changes in the numbering plan for short 3BPQ-type numbers after lengthy preparation and prior discussion with the main operators. This text was well-received by most players. In view of the rules currently in force, ART is unable to satisfy such demands. The modification that will result from this call for comments should, notably, lead to the freeing up of new resources in this format to take into

DEFINITIONS :

3 "E" or 16XY format prefixes:

Prefix with one or four numbers which replaces the zero at the beginning of the called party's number. Used to select the preferred local or long distance operator

Geographical numbers:

numbers reserved for fixed lines (allocated to operators in blocks of 10 000 numbers)

Non-geographical numbers:

0800 type numbers allowing access to so-called special services (freephone, shared-cost calls, shared revenue calls)

Mobile numbers:

numbers beginning with 06 and reserved for mobile operator customers

3BPQ short numbers:

numbers reserved for card services, carrier selection using two-step dialling, kiosk services, etc.

10XY special numbers:

numbers reserved by an operator to provide services to customers (e.g. fault service).

account theoretically increased needs and, if necessary, set up a structure governing these resources.

ART had received 17 replies on 30 November 2003. A summary of these responses will be drafted and made public in 2004.

2. Numbers for voice-over-ADSL-service customers

On 24 October 2002, via decision no. 02-958, ART dedicated the numbers in the 08 70 PQ MC DU and 08 71 PQ MC DU format as mobile non-geographical numbers in metropolitan France. Fairly soon afterwards, operators keen to offer telephony over ADSL services using voice over IP technology (VoIP) and some other service providers began to request allocation of this type of resource. At the end of 2003, 930 000 numbers of this type had been allocated and around 100 000 numbers allocated to customers, all operators combined. However, some "voice over IP" operators are also requesting geographical number resources to serve business customers that prefer this type of number because it has a better "brand image" with the public.

3. Number portability¹

3.1. Fixed number portability²

All fixed numbers became "portable" in 2003. This includes fixed geographical numbers (0Z AB PQ MC DU type, where Z may be 1, 2, 3, 4 or 5), and fixed non-geographical numbers (08 AB PQ MC DU type), which covers freephone numbers and shared-cost and shared-revenue numbers aimed at business customers. However, the transfer process so far concerns only transfers between the incumbent operator and alternative operators. In 2003, we observed the first stages of a process that will be completed in 2004, which consists of implementing portability between alternative operators as well as subsequent levels of portability, i.e. second-level portability whereby a customer can transfer his/her number a second time to a third operator, for example.

Hence, fixed-number portability will become "universal", with customers being able to transfer their numbers as often as they wish, irrespective of their preferred operator.

¹ A discussion forum was organised on this point on ART's website. It can be accessed at the following address <http://www.art-telecom.fr/telecom/trans-chat.htm>.

² The most frequently asked questions concerning the portability of fixed geographical numbers can be viewed on ART's website at the following address: <http://www.art-telecom.fr/telecom/faq/portab-fixe.htm>

As for mobile number portability, this concerns first and foremost a change of operator, and the contractual clauses are fully applicable (length of commitment, notably).

This service allows customers to retain their number when they change operator. The possibility has not yet been fully exploited, although transfer volumes are starting to rise and will increase along with total unbundling (portability is only really interesting if the line is managed from end to end by the new operator; in the opposite case, the customer retains his/her subscription with the incumbent and therefore keeps the old number).

The official definition of fixed-number portability does not make any reference to the associated right to retain the same phone number when changing address. The typical case is a customer who changes operator but not address and keeps his/her number.

The technical architecture of the networks and the associated pricing aspects do make it possible in certain cases to keep the same number after a change of address as long as the person stays in the same Elementary Numbering Zone (ENZ), defined here as a consistent pricing zone. We note that the incumbent operator's new *Maintien du Numéro* offer allows customers to keep their number when changing address, but only if they stay within the same ENZ.

3.2. Mobile number portability¹

The most noteworthy development in 2003 was the commercial launch of Mobile Number Portability (MNP) in metropolitan France. Two years of collaboration between ART and the different players concerned by the process was required to be able to offer customers the ability to retain the same number when changing their mobile operator.

The essential characteristic of mobile number portability, as conceived in France, is the principle of full portability, which means that any customer, irrespective of the type of subscription (whether pre-paid or flat-rate package) may take advantage of number portability at any time. ART has extended this principle to cover most situations that might arise; for instance, the case of a customer who subscribes via a mobile communications service provider (SCS) to a given mobile network but wishes to go directly through the operator managing this network while retaining his/her original number. In this case, there is no change in operator, simply a change in the company with which the customer has the contractual relationship.

¹ The most frequent questions concerning number portability can be viewed at the following address: <http://www.art-telecom.fr/telecom/faq/portabilite.htm>.

Likewise, "internal" portability is encouraged, although the operator is free to decide whether or not to offer this as part of its commercial policy: customers must be able, in principle to retain their number if they change their type of subscription with a given operator (from pre-paid to flat-rate package, for instance).

Various aspects had to be taken into account for the process of changing mobile operator with number portability, such as consumer protection, the minimum cancellation deadlines proposed by mobile operators, technical constraints, etc.

A preliminary analysis of the first 7 months of existence of this new service shows that the process is not yet fully mastered by certain players in the chain, including the consumers themselves, who might not be sufficiently well-informed by the media and, in particular, by the operators' commercial networks. However, in countries where mobile number portability is the furthest advanced, it has been observed that there is a need for a learning period to allow all the players to get to grips with the operating conditions and methods of this new service. Undoubtedly, 2004 will be the year in which all the players will become more familiar with the possibilities offered by mobile number portability.

The emergence of this new service should not distract us from the underlying situation: in effect, the customer of a mobile operator that wishes to retain his or her number is first and foremost a customer looking to change operator.

On this point, the conditions of cancellation of the general terms of sale of mobile operators retain their full force. A customer wishing to cancel his/her contract must take into account, in particular, the residual term of the minimum subscription commitment and the period required to take the cancellation into account (on receipt of the request or from the first invoice following receipt of the request, for instance). Here, we should point out that cancellation deadlines vary from one operator to another and depend on the type of contract.

The deadline for transfer of a mobile number includes a minimum period of two months, broken down as follows:

- *phase 1: issue of a transfer document.* This period gives the mobile operator managing the number to be transferred the time to examine the conditions of eligibility of the request. For pre-paid subscriptions, the transfer document must be issued 15 days after receipt by the operator of the cancellation and transfer request.

For post-paid subscriptions, depending on the contract, these 15 days start either on receipt of the cancellation and transfer request, or from the first invoice after the request. It should be noted that the customer must receive explicit information concerning the reasons for any non-eligibility.

- *phase 2: time allowed for the customer to choose the new operator.* This period, lasting a minimum of one month, was instituted at the request of consumer associations to allow customers sufficient time to choose their new operator. Obviously, the customer may take out a subscription with a new operator at any time during the period of validity of the transfer document.
- *phase 3: implementation of the transfer.* This 15-day period allows operators to put the technical portability process in place. The transfer of the number is effective on expiry of this 15-day deadline.

3.3. The outlook for 2004

For all levels of portability, 2004 will be a year of consolidation of processes and user practices. Mobile number portability should become a matter of habit as is the case in countries where it has already been implemented. International experience shows that when the process is up to speed, the annual rate of transfer is around 1.5% of the total base, i.e. around 600 000 mobile numbers transferred/year for France. Fixed-number portability will move into a second phase of more widespread use with implementation of subsequent portability and/or portability between alternative operators.

In 2004, ART will carry out an analysis of mobile number portability with the aim of improving processes and methods where necessary, the aim being to define a system that will help strengthen competition in the mobile sector by making it easier to change operator while at the same time respecting the rights of the different players and, notably, those of the consumer.

When the process is up to speed, the annual rate of transfer is around 1.5% of the total base, i.e. around 600 000 mobile numbers transferred/year for France

C. The price of fixed non-geographical numbers¹

1. Freephone number

These numbers are free for the calling party calling from a fixed line. They start with 0800 or 0805.

¹ The most frequently asked questions concerning 0800 numbers (non-geographical) can be viewed on ART's website at the following address: <http://www.art-telecom.fr/telecom/faq/faq-num0800.htm>.

2. Shared-cost numbers

These numbers are invoiced to the calling party based on the local or national tariff. They start with 0810, 0811, 0820, 0821, 0825 or 0826.

3. Non-geographical mobile numbers

These numbers are invoiced to the calling party at a tariff lower than or equal to 0.12 euro/min. They start with 0870 or 0871.

4. Shared-revenues numbers

These numbers are invoiced to the calling party in line with the tariff "ceilings" set by ART, per minute or per call according to the table shown below:

0890	0.15 euro/min
0891	0.30 euro/min
0892	0.45 euro/min
0893	0.75 euro/min
0897	0,60 euro /call
0898	1,20 euro/call
0899	other tariffs

During 2004, ART will be looking at the question of a change in tariffs for these services.

Freephone numbers

Freephone numbers (sometimes called "green numbers") are free for the calling party if calling from a fixed network. The called party (company) pays the full price of the call to its operator. Conversely, calls to these numbers are paid by the calling party if originating from a mobile phone.

Shared costs

The cost of the call is shared between the calling party and the person or entity called. The breakdown varies depending on the number called. For instance, if a person who calls an 0820 number is invoiced 0.11 euro inc. VAT/min, the called service pays an additional amount to the operator.

Shared revenues

The revenues from the call and the value-added service are shared between the local loop operator, the operator routing the call and the called party providing the service (e.g. : weather information, booking services). As a rule, these services attract high tariffs. For instance, if a consumer dials a number beginning with 08 92 68 XX XX, he/she is invoiced 0.34 euros inc. VAT/min by France Telecom; this amount is then shared between France Telecom and the service provider.

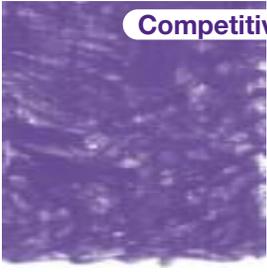
ART's powers

CHAPTER 3

Competitive regulation

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Competitive regulation



Competitive regulation

I. DESIGNATION OF SMP OPERATORS

A. The transition between the old and the new regulatory framework

The new regulatory framework for electronic communications networks and services changes the conditions for designating operators considered to have significant power on a telecommunications market and also the obligations resulting from such designation.

However, the "*framework*" directive, which helps define this new regulatory system, provides notably in respect of "transitional measures" between the old and the new framework that "*Member States shall maintain all obligations under national law referred to in Article 7 of Directive 2002/19/CE ("access directive") and Article 16 of Directive 2002/22/CE ("universal service" directive) until such time as a determination is made in respect of those obligations by a national regulatory authority in accordance with Article 16 of the Directive*".

According to the French legal framework in force in 2003, increased obligations in respect of interconnection and access are imposed on operators considered to have significant power in the markets listed in article L. 36-7 of the Post and Telecommunications Code. Pursuant to this same article, ART must draw up a list of such operators every year.

To respect the goal of the European directives as concerns maintaining the obligations imposed on operators with significant market power until the new regulatory framework comes into force, ART has issued a decision designating these operators for 2004¹.

¹ ART decision no. 03-907, dated 24 July 2003, which draws up the lists of operators exercising significant power in the telecommunications markets in 2004

This decision forms part of the legal framework in force in 2003 defining the conditions and criteria for designation of operators with significant market power along with the obligations imposed on them. It also satisfies the requirement to put in place the "transitional measures" mentioned above, as referred to in the "framework" directive, until the entry into force of the new regulatory framework.

1. The markets examined and the method used

Pursuant to article L. 36-7 of the Post and Telecommunications Code, ART designated the operators considered to have significant power in the following markets: fixed telephony, leased lines, mobile telephony and inter-connection.

2. Geographical segmentation

To examine these markets, ART used the same geographical segmentation as used the previous year, which is based on the licence-award system. Mobile telephony operator licences show a geographical segmentation based on metropolitan France and the overseas départements and territories.

We distinguish between five zones:

- Metropolitan France
- The area comprising Guadeloupe, Martinique and Guyana
- la Réunion,
- Mayotte,
- Saint Pierre et Miquelon.

In Saint Pierre et Miquelon, the operator SAS SPM Télécom is the only operator active in all the markets mentioned in article L. 36-7 of the Post and Telecommunications Code. According to the regulatory framework still in force in 2003, registration of an operator in all the lists corresponding to these markets implies that this operator is responsible for all the obligations contained in article L. 38-4 of the Code. As was the case last year, ART considered in its decision no. 03-907, that registration of SAS SPM in each of these lists would make this operator subject to certain provisions which might be considered disproportionate given its size and the market situation in Saint Pierre et Miquelon. It did not therefore register this operator in these lists. In any case, its situation will be re-examined at the time of the market analysis undertaken pursuant to the new regulatory framework.

Given that the decision issued in 2003 is aimed at managing the transition between the old and the new regulatory framework, ART used a less comprehensive questionnaire to assess the position of operators than was used in previous years. This questionnaire concerned solely results for 2002. It was sent to France Telecom, whose share of the fixed telephony and leased lines market was assessed with respect to the global results of quarterly surveys carried out in 2002. It was also sent to all mobile telephony operators.

In parallel, ART launched a procedure in 2003 to collect the detailed information that will be used as a basis for the analysis of relevant markets.

B. Designation of SMP operators

ART has drawn up the lists of operators as provided for in article L. 36-7 of the Post and Telecommunications Code as a function of the different markets identified. Given the regulatory changes under way, the operators designated in these lists are considered to enjoy significant power in these markets in 2004 until the new regulatory framework comes into force and the market analyses carried out pursuant to this new framework have been completed.

1. Fixed-telephony and leased-line markets

ART observed no indications of significant development of an operator in a limited part of the country and therefore analysed these markets on a national basis. France Telecom was therefore considered to be the only operator with significant market power in the public fixed telephone market and the leased line market in 2004 until the coming into force of the new regulatory framework. The incumbent operator is therefore the only operator recorded in the lists drawn up for 2004 pursuant to article L. 36-7 para 7 a and b of the Post and Telecommunications Code.

2. The mobile-telephony market

The position of operators in the public mobile-telephony market was, conversely, looked at as a function of the separate geographical areas in which they operate.

The operators considered to have significant market power in the public mobile-telephony market in 2004 until the coming into force of the new regulatory framework are listed below:

- in metropolitan France: Orange France and the Société française du radiotéléphone (SFR)
- in the overseas *départements* Martinique, Guadeloupe and Guyana: Orange Caraïbe
- in the overseas *département* La Réunion: la Société réunionnaise du radiotéléphone (SRR).

They are therefore recorded in the list drawn up for 2004 pursuant to article L. 36-7, para 7 c of the Post and Telecommunications Code.

The operator SRR is the only mobile-telephone licence holder covering the Mayotte area. This licence was awarded as recently as April 2001, however. Taking into account the existing market situation in this area and the relatively short time-frame within which SRR has been able to develop its experience, ART does not believe that this operator should be considered for the time being as having significant market power in the geographical market as defined. However, it does not rule out the possibility of re-examining the situation in the future.

3. The interconnection market

ART used the same approach to assess the relative situation of operators in the interconnection market.

The operators considered to have significant power in the interconnection market in 2004 until the coming into force of the new regulatory framework are listed below:

- in metropolitan France: Orange France and the Société française du radiotéléphone (SFR)
- in the overseas *départements* of Martinique, Guadeloupe and Guyana: Orange Caraïbe
- in the overseas *département* La Réunion: la Société réunionnaise du radiotéléphone (SRR).

They are therefore included in the list drawn up for 2004 pursuant to article L. 36-7, para 7 d of the Post and Telecommunications Code.

Analysis of the interconnection market carried out as a function of the geographical segmentation adopted revealed that France Telecom has dominant market share in volumes in all the geographical segments in which it operates. However, ART considered that designation of this operator as having significant market power in the interconnection market would not result in imposition of additional obligations to those already applicable in view of its inclusion in the lists drawn up for the fixed-telephony and leased-

line markets. It did not therefore record France Telecom in the list for the interconnection market.

C. SMP operators' obligations

The operators included in the lists drawn up pursuant to article L.36-7, para 7 of the Post and Telecommunications Code have increased obligations for interconnection and access. These obligations, arising from the legal framework in force in 2003, will be revised when the new regulatory framework comes into force.

1. Obligations of fixed-line and leased-line operators with significant market power

Sections II, III and IV of article L. 34-8 of the Post and Telecommunications Code requires operators to:

- publish technical characteristics and tariffs for the interconnection offer following ART approval. This offer must satisfy the provisions defined in section II of article L. 34-8 of the Code, i.e. detailed conditions must be in place to enable a differentiated response to the interconnection requirements of operators of public networks, on the one hand, and to the access requirements of public telephony providers, on the other. An information management system and accounting procedures must be set up to enable compliance with these obligations to be verified.
- align tariffs for this offer with the cost of the service provided (cost-oriented tariffs)
- comply with interconnection requests from L. 33-1 and L. 34-1 licence holders under objective, non-discriminatory and transparent conditions
- ensure access to the network and respond to justified requests for special access.

Moreover, under sections IV and V of article L. 34-8 of the Code, operators included in the list drawn up pursuant to article L. 36-7, para 7 a of the Code are required to:

- align access provision with costs (cost-oriented tariffs)
- set up a mechanism allowing access to switched services to any operator interconnected using pre-selection and to separate any pre-selection option using short prefixes, on a call-by-call basis.

In addition, these operators must also meet the obligations arising from articles D. 99-23 to D. 99-26 of the Post and Telecommunications Code concerning access to the local loop.

2. Obligations of mobile-telephony operators with significant market power

Pursuant to section IV of article L. 34-8 of the Post and Telecommunications Code, operators included in this list are required to:

- provide an objective, non-discriminatory and transparent interconnection offer
- ensure access to the network and meet justified requests for special access.

3. Obligations of interconnection service operators with significant market power

Pursuant to section III of article L. 34-8 of the Post and Telecommunications Code, operators included in this list must align their interconnection tariffs with costs (cost-oriented tariffs).

4. Obligations that might be imposed on all operators with significant market power

Pursuant to section V of article L. 34-8 of the Post and Telecommunications Code, ART can require any operator with significant power in a relevant market as defined by ART to set up a system allowing access to switched services to any operator interconnected using pre-selection and to separate any pre-selection option using short prefixes on a call-by-call basis.

II. TARIFF CONTROL

Ex ante regulation of France Telecom's retail tariffs as applied today is an essential feature of regulation. This control ensures that the incumbent operator's tariffs are compatible with entry of competitors into the market and that universal service tariffs are effectively affordable.

A. Justification for tariff control

1. Legal analysis

According to the European directives defining the new regulatory framework, the obligations imposed on certain players must be justified by their position in a relevant market and proportionate to the problems affecting development of competition in this relevant market. Moreover, obligations relating to the retail markets must only be imposed where there is inadequate competition in the corresponding wholesale markets. What is the situation for the obligations that were imposed in 2003?

The main obligations imposed on France Telecom in the retail markets in 2003 concerned telephony. These obligations are listed below:

- publication of a retail price catalogue
- signature of a multi-annual agreement covering universal service
- control of customised offers for services included in universal service
- approval of tariffs for universal service and services with no competitors.

A brief examination of this list shows that tariff control is, to a large extent, linked to provision of universal service by France Telecom. From this viewpoint, the new framework does not modify the principle involved. Here, the guiding principle is the direct benefit to the consumer.

The other justification is contained in the concept of "services with no competitor", which, in practice, can be likened to a position of dominance on a market. The new regulatory framework brings greater transparency and a clearer methodology for dealing with this question, by imposing the definition of relevant markets in which a position of dominance is assessed as a justification for obligations that must be proportionate. Here, consumer benefit is served indirectly by the organisation of a competitive market.

Hence, tariff control is an exception to common law, necessitated by the specific configuration of the telecommunications market and the inadequacy of market mechanisms to develop sufficient and durable competition.

2. Economic analysis

Competition in the telecommunications market, and particularly the telephony market, has to develop from the long-distance backbone networks through to the customer. The simple explanation for this is the existence of a high degree of service sharing and data flows in the network backbone and high tariffs for long-distance calls. Hence, investment costs in network backbone can be amortised over many services and in high-margin market segments.

Two major consequences result as far the organisation of competition is concerned:

- new entrant operators must be able to buy the services they cannot provide themselves from the incumbent operator

Tariff control is an exception to common law, necessitated by the specific configuration of the telecommunications market and the inadequacy of market mechanisms to develop sufficient and durable competition.

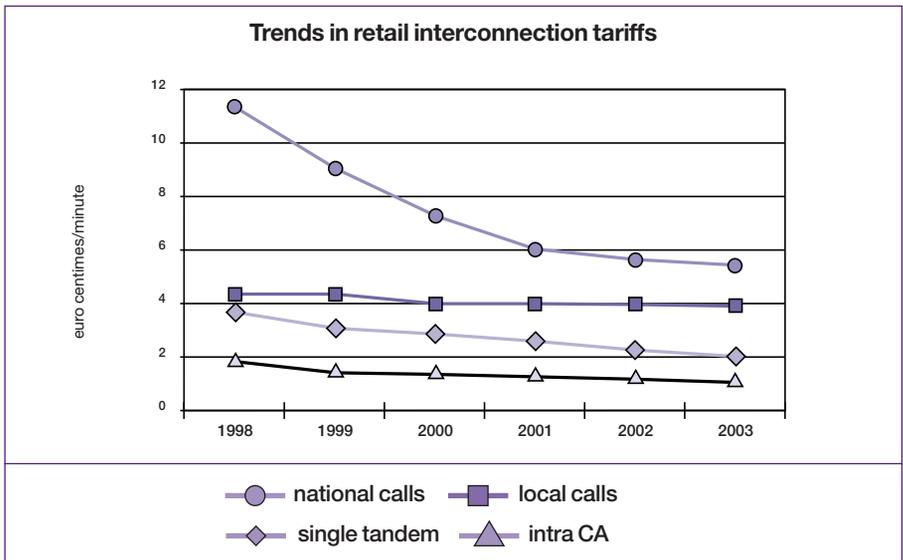
- the incumbent operator's retail tariffs must be gradually adjusted so as to create adequate economic space for the development of alternative operators.

In telephony, for instance, the services that operators buy from the incumbent make up the interconnection offer. These services must be made available at two levels:

- the PRO (point of interconnection) where there is a national offer (so-called double-tandem offer) and a regional offer (the single-tandem offer)
- the CA (subscriber switch), where there is an "intra-CA" offer.

Analysis of use of these different services reveals the strategy of new entrant operators, which are increasingly interested in providing the services that are closest to the subscriber (reduction in double tandem and later single tandem in favour of intra-CA). The same trend is apparent in the opening up of competition in the retail markets: opening up of carrier selection for national and international long-distance calls in 1998, for fixed-to-mobile calls in November 2000, and for local calls at the end of 2001.

The margins generated on long-distance calls on opening up to competition have narrowed over the years, as can be seen from comparative trends in retail prices and interconnection tariffs.



Source : ART

Control of wholesale tariffs is based on the principle of alignment of tariffs with costs (cost-oriented tariffs) and is carried out by annual approval of the interconnection catalogue. Control of retail tariffs is based on prevention of anti-competitive practices, particularly those relating to abuse of dominant position. A non-exhaustive list of such practices is shown below:

- predatory practices
- tariff squeeze effect
- unfair bundling
- pre-emption of a new market.

The introduction of competition into the most profitable markets leads inevitably to an adjustment in tariffs, i.e. a fall in certain tariffs, those subject to competition, and a rise in the tariffs for other services which are still provided under monopoly conditions. The goal of supplying universal service at an affordable cost is ensured by control of the retail tariffs of the operator responsible for providing universal service, i.e. France Telecom. This is carried out on an ex ante (a priori) basis, contrary to prevention of anti-competitive practices and is therefore complementary to it, although the two processes overlap at times. For instance, prevention of excessive prices for a monopoly service helps prevent crossed subsidies between these services and those subject to competition.

As concerns the other electronic communications services not included in telephony, leased lines occupy a special position. They are subject to double control, as an obligatory service and in view of the dominant position of France Telecom. This situation is maintained by the new regulatory framework created by transposition of the directives, at least for the minimum set of leased lines.

Other services, such as those based on xDSL technologies, can be controlled under the heading of services "without competitors" (see below).

3. Definition of control of retail tariffs

This is defined in article L.36-7-5e of the Post and Telecommunications Code. The tariffs concerned are, first, those charged for services included in universal service and, secondly, those supplied "without competitors". In practice, definition of a service provided without competitors is similar to that relating to dominance of the incumbent operator in the market segment concerned. It is described in France Telecom's licence specifications, approved by order no. 96-1225 dated 27 December 1996, in particular by article 17 of this order.

3.1. Transparency

France Telecom is obliged to guarantee price transparency by publishing a catalogue that can be freely consulted and accessed by electronic means at a reasonable cost. In practice, France Telecom presents the whole of its price catalogue on "www.lesprix.francetelecom.com." Moreover, one of the two penalties which ART was obliged to impose on France Telecom was that it provide free access to the price catalogue in its agencies.

3.2. Multi-annual agreement

As concerns universal service, the Post and Telecommunications Code and France Telecom's licence specifications provide for signature of a multi-annual agreement between France Telecom and the Minister responsible for Telecommunications. ART issued a prior recommendation on this agreement (recommendation no. 97-271 dated 10 September 1997). It covers a period of four years and is renewable. The first such agreement covered the period from 1997 to 2000. A report can be consulted on the government website (www.telecom.gouv.fr). The principle of this control is to encourage positive pricing trends for a basket of services by applying a multi-annual target which is quantified annually. For instance, the first agreement concerned reduction of the prices of a basket based on the total consumption of France Telecom customers in 1996. Prices were supposed to fall by at least 9% compared to the price index in the first two years and by 4% in the next two years. Transposition of the new regulatory framework should modify the methods and terms of this control, which could be associated with the market analysis process. This multi-annual target or price cap would then be an obligation defined by ART.

3.3. Approval procedures in 2003

Tariffs for services included in the universal service and tariffs for services without competitors are subject to an approval procedure. This procedure requires:

- France Telecom to file a dossier with ART containing information to justify the tariffs
- ART to issue a recommendation no later than three weeks after the complete dossier has been filed
- approval to be granted within one month, except in the event of suspension by the Minister responsible for the Economy and the Minister responsible for Telecommunications.

These clauses therefore provide for the possibility of tacit approval. In practice, the ministers may also issue explicit approval decisions or explicit decisions not to grant approval, as well as suspension decisions. Moreover, the fact that France Telecom has an obligation to provide

reasons for its pricing decisions may lead the public authorities to request additional information, which will have the effect of lengthening the period between the initial filing, then considered to be incomplete, and issue of ART's declaration and the Ministers' decision. ART issued 85 tariff decisions in 2003, of which approximately 23 were unfavourable (see below). As a general rule, either France Telecom modifies its tariff decision as a function of ART's recommendations, or the tariffs are not approved.

France Telecom gives prior notice of its other tariffs for information to the Ministers and ART. They must be published at least eight days before coming into effect.

3.4. Control of customised offers

Contrary to what is often widely believed, France Telecom has the right to make customised offers, even as concerns tariffs. Conversely, the incumbent has an obligation of non-discrimination and, in particular, must not act in such a way as to create a different situation for two customers operating in the same market. Hence, customised offers must be justified by special features specific to the customer and must not be simple discounts. These principles were confirmed by the Competition Authority's decision¹ in response to ART's application in respect of a customised offer made to a large customer.

B. Methodology

1. Universal service

Independently of the effects on competition described in detail in the following paragraph, control of offers relating to universal service includes some specific aspects:

- compliance with special obligations such as uniform telephony tariffs
- maintenance of special tariffs for certain categories of people ("social tariffs")
- guarantee of affordable tariffs.

This last point aroused the most reservations on the part of ART and the ministers. It is tempting for an operator in a position of virtual and durable monopoly to raise its tariffs so as to protect its margins. To assess whether or not a tariff is excessive involves comparing the revenues generated by the offer in question with the average cost which it generates for the operator responsible for universal service, so as to measure the profit margin generated by this offer.

¹ ART press release dated 26 July 2001.

2. Competitive tests

2.1. Discrimination

Discriminatory practices may differ in their scope. Personalisation of prices on a customer-by-customer basis results in the highest degree of discrimination. The next level is discrimination based on levels of consumption and the lowest level, discrimination by customer category.

These practices are only considered to be anti-competitive under certain very specific conditions. For instance, discriminatory practices will be censured if they give preference to commercial agents enjoying common interests with the operator offering them. This could be the case, for example, of offers reserved for the operator's subsidiaries. This rule is comparatively easy to verify, for instance, simply by reading the agreements or contracts entered into between the incumbent operator and its subsidiaries.

In addition, discriminatory practices must not lead to customers in a given market being placed in different situations. It is acceptable to offer a discount based on different levels of consumption, but two consumers with similar levels of consumption must be able to benefit from the same discounts, other things being equal. Likewise, discounts offered in return for length of commitment are acceptable.

Finally, discriminatory practices targeting competitors' customers are not authorised. This rule is more difficult to put in place. However the number of customers signing up with competing operators rapidly became too high to justify targeting them with a particular offer. This rule was in effect only used at the start of opening to competition. The second rule is undoubtedly the most important in practical terms, since it sharply reduces scope for making customised offers.

2.2. Crossed subsidies

The practice of crossed subsidies is not authorised, but it is difficult to prove in the case of telecommunications. Established case law provides certain cases in which crossed subsidies have been proved. First, this concerns services subsidised by other services where the tariff for this service is lower than its incremental production cost, which means that no share of common costs is allocated to the service in question. A comparison of the breakeven point for the provider of this service before and after its provision shows that production of this service deteriorates the company's balance sheet. In other words, it does not bring any value to the company

in the short term and is hence justified only by hopes of future gains, which assumes a deterioration in competitive conditions.

Incremental costs are generally very low in the telecommunications sector. For instance, an operator with the means to route long-distance calls can offer local calls for the cost of adapting the capacity of network equipment, which is very low compared to the full cost of providing the service. Hence, the price of local calls could be reduced sharply without there being any crossed subsidies. In the case of innovative services requiring investment in new equipment, the incremental cost is higher, but is still well below the average full cost of providing the service, since in many cases it involves simple reuse of existing infrastructure capacity. In practice, it is very rare that a tariff is lower than the incremental costs. Where this does occur, the other economic tests described below are adequate to prove the unlawful nature of the tariff in question.

Another example of crossed subsidies between services is where the tariff for a given service is higher than the cost of providing the service on its own. In this case, all the common costs are covered by sale of this service in isolation. This situation should not exist in a competitive market since production of the service could be ensured under satisfactory economic conditions by a new competitor which would provide only that service at a lower tariff than the tariffs being challenged. Conversely, the situation could be created by an operator in a dominant position which would then generate excessive margins. However, shared costs are particularly high in the telecommunications sector and therefore the costs of isolated provision are much higher than average costs, particularly for an incumbent operator providing a complete range of services and possessing a large customer base. Hence, the situation of tariffs being higher than isolated provision costs is almost unknown.

In practice, crossed subsidies are assessed on the basis of the distribution of common costs, which is less arbitrary than the "all or nothing" situation of the two cases described above. These assessments can be made by comparison of margins for a given breakdown between two similar services offered on markets with different competitive conditions. This is the case, for instance, for a given technical service provided in different geographical zones at different prices. It might also be the case for two services offering similar functions but using different technologies.

2.3. Predatory pricing

Predatory pricing can be proved if the tariff is lower than the average variable cost. But this rule is too strict to be applicable in the telecom-

munications sector, where fixed costs are high and, conversely, variable costs are low. A tariff is also considered to be predatory if it is pitched at between the average variable cost and the full cost and if it is intended to exclude one or several competitors. The first point is easier to quantify than the second, i.e. the intention to exclude a competitor, since high fixed costs can be taken into account by defining an additional cost based on full costs. Conversely, it is more difficult to prove the intention to exclude competitors. The regulator is responsible for encouraging the development of competition and must act as soon as this competition is impeded, i.e. well before competitors are excluded from the market. In practice, this test can be used in two cases. The first concerns practices more particularly targeting a competitor on a given product. This test can then be used to censure an obviously atypical practice on the part of the incumbent operator. The second case concerns an emerging market where the concept of exclusion should not be understood as the desire to force competitors out of the market but rather prevent them from entering it.

2.4. Predation test for leased lines and capacity services

The prices practised by dominant players are considered to be predatory if they are set at excessively low levels (lower than costs) over a long period to force competitors out of the market or discourage them from entering it. In this case, the dominant player is willing to incur losses in the short term in order to generate more substantial profits in the medium to long term, by raising its prices once it has forced competitors out. As a rule, this policy of predatory prices is only possible where there are high entry barriers and where the dominant operator has an advantage over its competitors in terms of financing.

In the leased line market, France Telecom enjoys both these advantages as dominant operator, which means there is a risk of predatory pricing. The leased line market is a segment with high economic barriers to entry. The operator in place has already made or even amortised its infrastructure investments and is therefore able to pursue a policy of forcing out competitors (which cannot earn a return on their investment or even enter the market) by reducing prices to excessively low levels. We might also consider that France Telecom has an advantage in terms of financing compared to some of its competitors, which are highly dependent on long-term outside financing that has become difficult to find in the telecommunications sector. Moreover, these competitors have a much less diversified range of services than France Telecom and are thus less able to finance a price war from internal resources.

The predation tests applied by the regulators or the competition authorities are based on a comparison between the price practised by the dominant operator and an appropriate cost indicator over a given period. Unlike predation tests in many other sectors of activity, ART does not use the average variable cost¹ as its main reference in the procedure for approving France Telecom tariffs. The reference indicator is the average total cost or complete cost. This method, unlike that based on average variable costs, can factor in capital costs and participation in covering common or shared costs, both of which are essential in telecommunications.

Until now, the predation test used in the leased line market has made it possible to ensure that the absence of new entrants in this market was not due to excessively low costs in the low-bit-rate leased line market (less than 2 mbps). More important, it made it possible to protect competitors having made high investments in alternative infrastructures (optical fibre metropolitan area networks for businesses) from predatory pricing for leased lines and high-bit-rate capacity services (over 2 mbps).

Nevertheless, in the case of more widespread use of interconnection offers by operators in order to enter the leased lines and other retail capacity services market, a squeeze test would more effectively ensure that there was sufficient economic scope for intervention by new entrants.

2.5. Tariff squeeze effect

There is a risk of tariff squeeze when an operator in the retail market which also provides an interconnection service practices a tariff that results, for another operator deemed to be effective, in an average revenue lower than the average cost of providing an equivalent offer on the retail market.

France Telecom is active both in the fixed-telephony retail market and the intermediate interconnection market. The tariff squeeze effect test as applied to a France Telecom retail offer consists of verifying whether an alternative operator considered to be effective can make an equivalent offer under economically viable conditions while using France Telecom's interconnection service.

¹ See Akzo Chemie BV vs. the European Commission (1985).

The test will be favourable if the average revenues resulting from this offer allow the third-party operator to cover the average cost incurred to make available a comparable offer, bearing in mind that this cost includes, notably, interconnection costs.

At this point, we do not consider whether an operator must be able to offer a lower price than France Telecom to acquire a customer. Hence, where an operator competes with France Telecom's best tariffs, i.e. tariffs corresponding to the squeeze test thresholds, it might decide temporarily to sell its services at a lower price in order to increase its market share.

C. France Telecom tariff decisions

As an SMP operator in the fixed-telephony market, France Telecom is subjected to special control. Prior to implementing its tariff proposals for universal service or services for which there is no competitor in the market, the incumbent operator must obtain approval of these tariffs by the Minister for the Economy and the Minister responsible for Telecommunications, after ART's recommendation.

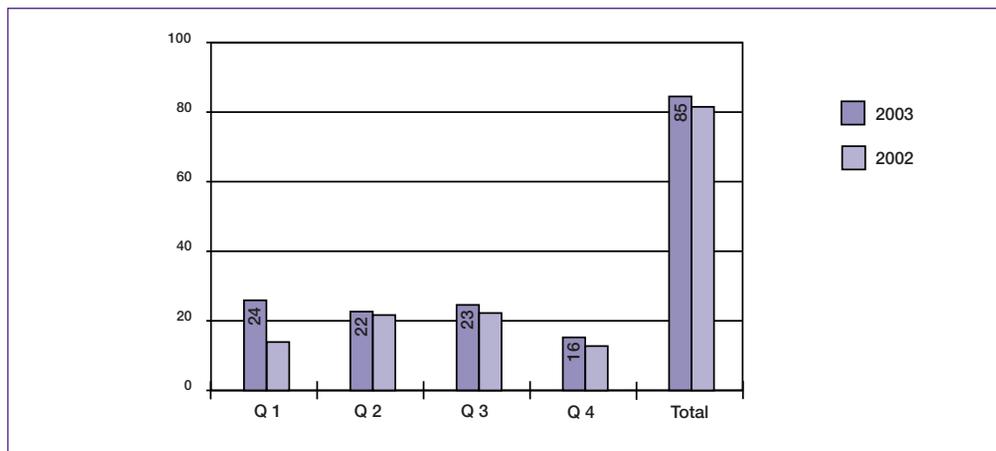
1. Recommendations on tariff decisions

On 31 December 2003, France Telecom sent ART 165 tariff decisions: 118 requesting a recommendation and 47 for information. Hence, ART received 118 requests for a recommendation on tariff decisions relating to the creation, trial or generalisation of new services and changes in prices, especially relating to changes in certain flat-rate packages and commercial launch of new tariff options such as the so-called unlimited offers (unlimited calls to 3 numbers or calls at a single price irrespective of the duration of the call, up to 2 hours maximum).

ART issued 85 public recommendations on France Telecom tariff decisions, of which 21 were unfavourable. The chart below illustrates the number of recommendations issued by ART in 2003.

All recommendations or tariff decisions are published within 48 hours on ART's website www.art-telecom.fr

Number of recommendations issued by ART during 2003



Source : ART

2. Results for 1997-2003

The following figures give an idea of the amount of work accomplished in 7 years:

	1997	1998	1999	2000	2001	2002	2003
Number of pricing decisions submitted by France Télécom	138	147	170	192	135	154	165
-for information	45	42	60	61	40	46	47
-for approval	93	105	110	131	95	108	118
ART recommendations	61	80	74	88	72	81	85

Source : ART

3. Analysis of tariff decisions

Out of the 118 requests, two-thirds of which related to services included in the scope of universal service, 108 had been examined by ART, 5 were still under examination as of 31 December 2003 and 5 had been withdrawn by France Telecom. Some of the final tariff decisions were grouped together in the same recommendation, thus reducing the total number of recommendations issued.

Out of the 108 tariff decisions received for recommendation and examined, 85 received a favourable recommendation and 23 an unfavourable recommendation (in part or in whole).

Hence, an unfavourable recommendation was issued for 23 France Telecom tariff decisions:

Of the 108 tariff decisions received from France Telecom in 2003, 85 received a favourable recommendation from ART and 23 an unfavourable recommendation (in whole or in part)

- 6 tariff decisions were not approved by the Ministers, who refused France Telecom's proposals on the basis of ART's recommendations
- the approval time-frame for 3 of the decisions was suspended by the Ministers
- 13 tariff decisions were adjusted by France Telecom to comply with ART's recommendation and subsequently approved by the Ministers
- 1 tariff decision was approved by the Ministers who accepted France Telecom's proposal but did not accept the ART recommendation.

4. Deadlines

ART has three weeks from receipt of the dossier to issue its recommendation.

In 2003, the majority of France Telecom tariff decisions sent for recommendation were examined within 18 days of receipt of the complete dossier (except for a very few cases when this deadline was exceeded). In six cases this deadline was exceeded due to the complexity of the dossiers analysed and their impact on competition.

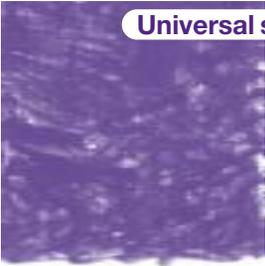
On average, one out of every three dossiers sent to ART was incomplete and required ART to request additional information

ART's powers

CHAPTER 4

Universal service

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Universal service

Competition and public policy

The 1996 Act organised the public telecommunications service and designated France Telecom as the public operator responsible for providing universal service. The Act of 31 December 2003, which transposes the European directive into national law, abolishes the incumbent operator's legal monopoly on universal service. Any operator who agrees to provide universal service throughout France may be designated to do so after a call for candidates. If no candidates come forward, France Telecom will be responsible for providing this service.

The current definition of universal service is nationwide provision of a telephone service, narrowband Internet, public payphones and a directory and directory enquiry service. By giving other companies the opportunity to provide universal service and by subordinating competition to regional development objectives, the law reconciles the goal of operator efficiency with the concern for equality that guides public policy. This reconciliation continues to be one of ART's major preoccupations.

Editorial by Jacques Douffiagues, ART Board member, in issue no 37 of ART's newsletter (La Lettre de l'Autorité) published in April 2004

The 26 July 1996 Act, which opened up telecommunications services and infrastructure to competition from 1 January 1998, made provision for universal telecommunications service.

Universal service is one of the three components of the public telecommunications service, on the same level as mandatory telecommunications services (ISDN - integrated services digital network, leased lines, packet data switching, advanced voice telephony services, telex) that must be made available nationwide and general interest goals (in respect of defence and security, publicly funded research and higher education).

Universal service is one of the three components of the public telecommunications service. Universal service funding is shared between the operators.

Universal service, as defined in Article L.35-1 of the Post and Telecommunications Code, consists of:

- making quality telephone service available to all at an affordable price
- providing public payphones nationwide
- providing a printed and electronic directory and a directory service as well as social tariffs.

Universal service funding is shared between the operators. ART is responsible for evaluating the net cost each year and determining the share to be paid by each operator.

I. THE COST OF UNIVERSAL SERVICE

A. The historic components

The cost of universal service is defined as the net cost incurred by the designated operator as a result of its obligation to provide this service.

It is broken down as follows:

- the C1 component represents the costs linked to the imbalance in the current France Telecom pricing structure. This transitional component, which covered the period during which the incumbent operator adjusted its prices, was discontinued on 1 January 2000.
- the C2 component relates to uniform geographical pricing, i.e. the cost of serving the whole country in such a way that all subscribers can access telephone services at the same price irrespective of their location.
- the C3 component includes social tariffs i.e. the obligation to provide a special tariff offer for certain social categories (in particular, people on low incomes or people with disabilities, and including the cost of telephone-related debts), the cost of providing public payphones nationwide, and a universal directory and the associated directory enquiry service.

B. ART's role in assessing the cost of universal service

The methods used to assess each universal cost component, and the definition of traffic volumes used to determine the proportionate amounts to be paid by the different operators, are set out in the decree on universal service funding¹.

¹ Decree no. 97-475 dated 13 May 1997 concerning funding of universal service pursuant to article L.35-3 of the Post and Telecommunications Code, published in the OJ of 14 May 1997, p.7248.

Up until 31 December 2003, ART provided detailed information about these assessment methods, applied them and then submitted its assessment of the net costs generated by the universal service obligations, and the corresponding amounts payable by the operators to the Minister responsible for Telecommunications. The amount was then formally noted by the Minister responsible for Telecommunications¹.

As of 1 January 2004, following publication of the law concerning public telecommunications service obligations and France Telecom² and the new wording of articles L.35-3 and L.36-7 of the Post and Telecommunications Code, ART determines the principles and methods used under the conditions set forth in article L.35-3 of the Post and Telecommunications Code, sets the amounts of contributions to funding universal service obligations and monitors the funding mechanisms.

C. Universal service funding

The old law initially provided that the cost of providing universal service, entrusted to France Telecom, be shared fairly between all operators.

Up until 31 December 1999, the cost of providing universal service was funded in two ways:

- from a surcharge on interconnection fees for the tariff imbalance and uniform geographical pricing, on the one hand
- from payments to a universal service fund for social tariffs, calls from public payphones and universal directories and directory enquiries, on the other.

As of 1 January 2000, the entire cost of universal service is financed from the universal service fund.

The legislative and regulatory framework for the universal service fund is set forth in article L. 35-3 of the Post and Telecommunications Code. It was supplemented by articles R. 20-39 and R. 20-41 of the decree no. 97-475 dated 13 May 1997 as concerns fund management procedures.

As of 2003, operators pay their provisional universal service fund contributions in two instalments, on 15 January and 15 September each year. The amount of the provisional contribution is equal to the last known final contribution. The final cost is calculated in the second year following the year in question and contributions are adjusted accordingly by 20 September at the latest.

¹ Art.L.35-3 and L.36-7 (4^o) of the Post and Telecommunications Code.

² Law no. 2003-1364 dated 31 December 2003, concerning public telecommunications service obligations and France Telecom, published in the OJ of 1 January 2004, no. 1

II. ASSESSMENT OF UNIVERSAL SERVICE COST FROM 1997 TO 2004

A. Calculation method contested by the CJEC

On 12 May 1998, the French association of private telecommunications operators (AFOPT) and the French association of telecommunications services operators (AOST) filed a complaint with the European Commission concerning non-compliance with article 86 (abuse of dominant position) and article 90 (illegal government aid) of the Treaty of Rome and directives 90/388/EEC, 96/19/EC and 97/33/EC, following the adoption of French regulations on universal service. The plaintiffs claimed that the French regulations infringed the Treaty by imposing on them a disproportionately high contribution to universal service, thereby strengthening the dominant position of France Telecom.

In its ruling on 6 December 2001, which ordered the French Republic to pay the costs of the action, the Court of Justice of the European Communities (CJEC) did not contest the principle of universal service nor that of a specific funding mechanism. However, the Court was keen to ensure that the mechanism set up did not result in excessive charges for new operators called on to contribute to the funding of universal service. The main points of non-compliance between 1997 and 1999 were: the cost assessment method, the failure to publish operators' contributions and creation of an effective funding mechanism as of 1997.

B. Measures imposed to remedy objections raised by the CJEC

The Minister for Industry issued three orders relating to assessment of the cost of universal service, on 11 July 2002¹, 2 August 2002² and 2 July 2003³, based on ART recommendations and taking into account the objections of the Court of Justice of the European Communities:

- revised assessments of the cost of universal service and operators' contributions for 1997, 1998 and 1999, and modification of the provisional universal service cost assessment and operators' contributions for 2002 (order no. 02-329 dated 23 April 2002)
- final assessment of the cost of universal service and operators' contributions for 2000 (order no. 02-417 dated 11 June 2002)

1 Order dated 11 July 2002, recording the final values of the net cost of universal service and operators' final contributions for 1997, 1998 and 1999, OJ no. 244 dated 18 October 2002, p. 17288. 2 Order dated

2 August 2002, setting the rates mentioned in article R-20-37 of the Post and Telecommunications Code, used to assess the cost corresponding to universal service obligations for 2000, OJ no. 246 dated 20 October 2002, p.17435.

3 Order dated 2 July 2003, setting the final operators contributions to the universal service fund for 2001, OJ no.166 dated 20 July 2003, p.12274

- final assessment of the cost of universal service and operators' contributions for 2000 (order no. 03-586 dated 29 April 2003)

Some objections were no longer valid, particularly those concerning flat-rate assessments for certain cost components, i.e. uniform geographical pricing for 1997, charges related to unprofitable subscribers in profitable areas and social tariffs for 1998. Conversely, others were still valid, notably the failure to take into account the intangible benefits accruing to the operator responsible for universal service through its provision of this service, the allocation of costs and revenues from unlisted numbers to the directories and directory enquiries component instead of to the uniform geographical component and reassessment of the C1 component in respect of the tariff imbalance¹.

ART carried out a new assessment of the net cost of provision of universal service for 1997 and operators were reimbursed the entire amount of the sums paid to the fund (1 million euros) along with supplementary payments of 2.71 million euros.

C. Intangible benefits

ART also took intangible benefits into account and reclassified costs and revenues for unlisted numbers in the uniform geographical pricing component rather than in the C3 component (directories and directory enquiry services) as before. The savings generated for operators by factoring in intangible benefits amounted to 54.4 million euros for 1998, 67.9 million euros for 1999, 104.1 million euros for 2000, 98.2 million euros for 2001 and 112.7 million euros for the provisional assessment for 2002.

The cost of universal service (before and after inclusion of intangible benefits)

Euros (million)	1997	1998	1999	2000	2001	2002	2003	2004
Cost before inclusion	0 *	329,7	178,5	232,8	240,3	409,3	240.3	240.3
Cost after inclusion	0 **	275,0	110,7	128,8	142,1	296,6	142.1	142.1
Intangible benefits	0 **	54,7	67,8	104	98,2	112,7	98.2	98.2

Source : ART

* Provisional assessment

** The assessment of the cost of universal service for 1997 is zero, since in the absence of opening to competition, the Court of Justice of the European Communities considered that there was no call for shared funding

¹ Modification of the definition and of value N, which corresponds to the average number of subscribers of the universal service operator mentioned in article R.20-32 of the Post and Telecommunications Code defining the methods for calculating the cost of the pricing imbalance and the value of Pe, the reference monthly subscription price, in the formula $C=12 \cdot (Pe-P) \cdot N$, where P is the average monthly subscription price.

Contrary to the findings of previous studies carried out for ART, the assessment of intangible benefits is not restricted to benefits linked to brand image. It also includes benefits related to ubiquity, life cycle and access to data, as stated in the European Commission communication dated 27 November 1996.

1. Brand recognition

This benefit stems from the fact that France Telecom provides universal service. The incumbent operator establishes public payphones in every town and village and provides telephone service to anyone requesting it, even in sparsely populated areas. As a result, France Telecom can draw benefits from the improved public image associated with providing these services.

2. Universal coverage in the area of ubiquitous operation

According to the European Commission communication Com (96) 608, the fact that the universal service operator has universal coverage in the area of ubiquitous coverage (i.e. incurs comparatively lower costs than its competitors in extending the network to new customers), constitutes an intangible benefit for this operator.

ART considers that this benefit was implicitly taken into account in the model for calculating uniform geographical pricing, through avoidable-cost-based modelling.

3. The "value" of certain customers (linked to life-cycle)

Some customers, unprofitable at a given date, may become profitable later (impact of the age of children in a household, for instance).

ART considered that the uniform geographical pricing model stimulated development of an operator acting under market conditions. Accordingly, such an operator is considered to have only overall knowledge of the level of consumption in the area in which it is seeking to provide service. Hence, there is no advantage linked to knowledge of the life cycle of subscribers at the individual level.

4. Marketing advantages derived from access to telephone usage data

This advantage corresponds to the fact that by providing universal service, an operator has access to information (e.g. levels of consumption, traffic profiles, etc.) that can be used for market or network planning purposes.

However, data related to customers who would not be connected by an operator operating under market conditions, i.e. unprofitable customers,

is not relevant. ART considers that the benefit derived from the usage profiles of these customers is probably low, given that they are unprofitable.

In the absence of information related to telephone usage data in unprofitable areas, ART believes that this advantage was zero in 2002, although this does not prejudice any future assessments.

5. Methods used to allocate intangible benefits to each pricing component

Life cycle effects (unprofitable areas and subscribers) are booked entirely to the cost of uniform geographical pricing (C2). The impact of brand image is booked by default to each component on a pro rata basis.

Assessment of intangible benefits

Euros million	1998	1999	2000	2001	2002*	2003**	2004***
Brand image	54,7	67,8	94,5	87,5	86,4	87.5	87.5
Ubiquity	already taken into account						
Life cycle	0	0	9,5	10,7	26,3	10.7	10.7
Usage data	0	0	0	0	0	0	0
Total	54,7	67,8	104	98,2	112,7	98.2	98.2

Source : ART

* Provisional assessment - ** Provisional assessment calculated on the last known final contribution. The assessments for 1998 to 2001 are final assessments

D. Summary table

Trends in the net cost of universal service (in millions of euros)

	1997	1998	1999	2000	2001	2002*	2003*	2004*
ART decision number	02-329	02-329	02-329	02-417	03-586	02-329	03-910	03-1119
C1	Tariff imbalance	0.00	34.76	6.71				
C2	Uniform geographical pricing	0.00	217.24	89.64	105.00	104.80	175.20	104.80
C3	Public payphones	0.00	23.32	14.18	14.30	14.80	18.60	14.80
	Social tariffs	0.00	0.00	0.10	9.40	22.50	102.80	22.50
	Directories and directory enquiry services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	275.32	110.63	128.70	142.10	296.60	142.10	142.10

Source : ART *Provisional assessment

Component eliminated
 Component funded by a surcharge on interconnection tariffs
 Component funded via the universal service fund

E. Disputes in progress

1. Before the Paris Administrative Court

Free made a claim and a request to suspend payment of its final contribution for 2001 to the Minister responsible for Telecommunications on 7 November 2003. ICS lodged a claim on 23 August 2003 contesting the order setting its final contribution for 2001. Both operators had already lodged claims against the provisional cost for 2001 in 2001.

2. Before the Conseil d'Etat

2.1. Tiscali

The proceedings initiated by Tiscali (three claims: an urgent application to suspend the effect of the ART decision no. 02-329 of 23 April 2002, an urgent application to suspend the effect of the ministerial order dated 11 July 2002, and an application to challenge the contents of the ministerial order dated 11 July 2002) have come to an end.

The order handed down by the *Conseil d'Etat* on 8 November 2002, which addressed the first two claims, partly suspended the ART decision concerning payment of the first instalment on 20 August 2002. However, the *Conseil d'Etat* did not suspend either the ministerial order nor that part of the decision ordering Tiscali to pay the second instalment of the same amount on 20 September 2002.

In its judgment of 18 June 2003, the *Conseil d'Etat* ruled on the application to challenge the contents of the ministerial order: it cancelled the order dated 11 July 2002, which set the provisional cost of universal service for 2002, on the grounds of lack of transparency. The *Conseil d'Etat* noted that *"while the new bases for calculating the net cost of universal service [...] were shown in the proposal issued by ART, on 23 July 2002, the existence of this proposal was only brought to the attention of operators by the notification sent them at the end of the month of July 2002 informing them of the amount of provisional contributions to funding the universal service imposed on them for 2002, and that under these conditions, the operators did not have sufficient time to calculate the amount of the provisional contribution that would be required of them in respect of 2002 and to pay it within the deadlines allowed, which had in any case been shortened."*

The *Conseil d'Etat* also pointed out that the contributions required in respect of funding of the universal telecommunications service constituted a tax imposed by the Minister. It also indicated that the administrative court was competent to hear in the first instance disputes relating to universal service and that a prior application must be made to the Minister before instigation of any legal proceedings.

2.2. Other claims

19 claims are currently before the Conseil d'Etat :

- 111 claims (LDCOM and its subsidiaries; Bouygues Telecom; Cegetel and its subsidiaries and AFORS¹) contest the ART order and notification letter concerning the provisional cost for 2002.
- 4 claims (Bouygues Telecom, Cegetel, SFR and SRR²) contest the ministerial order and the ART decision concerning the final cost for 2000. As a point of procedure the claimants advance the same lack of transparency as Tiscali, since the order was not published until after the notification and the call for funds, which is in breach of regulatory deadlines; they also contest the competence of the authors to set new calculation rules. In terms of the merits, the claimants contest the assessment of intangible benefits, along with the failure to take certain elements into account, such as ISDN³, convenience feature services and the calculation methods.
- 2 applications for an order to suspend the order no. 2003-338 dated 10 April 2003 concerning funding of the universal service were also filed by Bouygues Telecom and AFORS.
- 2 claims were formulated by Bouygues Telecom concerning the ministerial decision of 27 September 2002 refusing to reimburse the sums paid for 1997, 1998, 1999, 2000 and 2001 and the ministerial order of 11 July 2002 setting the final contributions for the cost of universal service for 1997, 1998 and 1999.

The actions envisaged:

- The order relating to the provisional cost for 2002, which took into account the ruling of the Court of Justice of the European Communities dated 6 December 2001, was set aside by a decision of the Conseil d'Etat dated 18 June 2003, on the grounds that the new methods for assessing the net cost of universal service, along with the cost itself, had not been published under “conditions of sufficient clarity and timeliness” to allow the operators to put aside the amount of the contributions that would be demanded of them.
- A draft order relating to the provisional net cost of the universal telecommunications service for 2002, on which ART issued a recommendation (recommendation no. 03-1075) on 30 September 2003, is currently being examined by the Conseil d'Etat. This order, which defines the methods of assessment, compensation and sharing of the net costs of universal service to determine the provisional contributions payable by telecommunications operators for 2002, provides

1 French association of network and service operators

2 Société réunionnaise de radiotéléphone.

3 Integrated services digital network.

a regulatory basis for regularising the situation of the universal service fund for 2002. It provides a basis in French law for the conditions governing compliance¹ with the CJEC ruling of 6 December 2001 for 2002 while also satisfying the requirements of transparency highlighted by the *Conseil d'Etat* in this same ruling. In effect, the order no. 2003-338 dated 10 April, concerning the funding of the universal telecommunications service, amending the Post and Telecommunications Code to ensure its compliance with the CJEC ruling mentioned above, is only valid for the future. ART will again propose the provisional cost for 2002 to the Minister and will subsequently notify it to the operators concerned.

III. CHANGES IN THE REGULATORY FRAMEWORK

A. The “universal service” directive

Directive 2002/22/CE of the European Parliament and the Council dated 7 March 2002, concerning universal service and users' rights relating to electronic communications networks and services, the “universal service” directive, was published in the Official Journal of the European Communities on 24 April 2002 as part of the “*telecoms package*”.

The Commission must regularly review the scope of universal service and will report to the European Parliament and the Council, no later than three years after the date of implementation of the measures, i.e. 25 July 2006, since the directive was to have been transposed by member states no later than 24 July 2003

On examination of the directive, the Commission set out its objectives:

- to update the concept of universal service
- to define users' rights in respect of the development of competition by envisaging the definition of a minimum set of services throughout Europe
- to ensure that the universal service obligations be understood in the widest possible terms and be approached with the greatest technological neutrality.

The universal service directive does not deal solely with universal service (scope, calculation of cost, funding, designation of the operator(s) responsible for providing universal service, obligations of the designated operator(s), but also with subjects dealt with in the “access and interconnection” directive such as portability and pre-selection, tariff control of retail offers and leased lines.

¹ The text of the draft order is not codified, since it is, by nature, transitional

1. The main provisions

1.1. Broadening of the scope of universal service

Article 4 of the directive explicitly includes Internet access in the scope of universal service in the following words: “the connection provided shall be capable of allowing end-users to make and receive [...] data communications, at data rates that are sufficient to permit (functional) Internet access”, which can indeed be provided by the switched telephone network.

To take account of technological neutrality and trends in market competition, mobile operators are also considered as potential universal service providers, as opposed to fixed-line operators exclusively.

1.2. Designation of the operator responsible for providing universal service

Article 8 of the directive provides that “Member States may designate one or more undertakings to guarantee the provision of universal service (...) so that the whole of the national territory may be covered”.

In other words, provision of universal service may be broken up between its different components or even between different parts of the same component, and entrusted to one (or several) operators.

Designation of the operator(s) responsible for universal service must be carried out using “an efficient, objective and non-discriminatory designation mechanism, whereby no undertaking is a priori excluded”. The designation mechanism can be either by open tender or public auction.

1.3. Funding and calculation of the cost of universal service

To calculate the cost of universal service obligations, article 12 stipulates that: “The accounts and/or other information serving as the basis for the calculation of the net cost of universal service obligations [...] shall be audited or verified by the national regulatory authority or a body independent of the relevant parties and approved by the national regulatory authority”.

Article 13 provides for funding from public funds to compensate the operator designated to provide universal service, where it is subject to an “unfair burden” or from an independent fund, with a mechanism for sharing the net cost of universal service obligations.

2. The other measures

The “universal service” directive also deals with regulatory controls on companies with significant market power in specific markets. One chapter is devoted to end-user interests and rights and, notably, contractual protection of these interests and rights vis-à-vis their operator, number portability, pre-selection, etc. There are also clauses concerning obligatory services and leased lines.

B. Transposition of the "universal service" directive

The Act of 31 December 2003¹, concerning public telecommunications service obligations and France Telecom, integrates the regulatory changes linked to transposition of the directive “on universal service and users' rights relating to electronic communication networks and services”.

1. The different components of universal service

Universal service is made up of several components:

- a quality telephone service at an affordable price
- a directory enquiry service and a subscriber directory in printed and electronic form
- access to public payphones located in the public domain
- measures in favour of disabled users to guarantee access, equivalent to that enjoyed by other end-users, to the three services mentioned above.

2. The scope of universal service

The new Article L.35-1 of the Post and Telecommunications code defines “functional Internet access” as provided for in the directive and includes Internet access in the scope of universal service. Universal service must “*be capable of allowing end-users to make and receive telephone calls, facsimile communications and data communications, at data rates that are sufficient to permit (functional) Internet access*”. This addition, which might appear to be an enrichment, does not in any way modify the existing scope, since Internet access communications are already routed via the switched telephone network.

3. Designation of universal service providers

France Telecom is no longer the operator designated by the law to provide universal service. The law now provides that “*any operator that agrees to provide a component of universal service nationwide and is*

Pursuant to the European Community directive, narrowband Internet access is now included in the scope of universal service.

Designation of the operator(s) responsible for provision of universal service is now carried out by means of a call for candidates. If this procedure is unsuccessful, the operator is designated by the Minister.

¹ Act no. 2003-1365 of 31 December 2003, concerning public telecommunications service obligations and France Telecom, published in the Official Journal on 1 January 2004, no. 1, p.9

capable of doing so may be entrusted with provision of one of the components of universal service”.

Designation of the operator(s) responsible for provision of universal service is now done via a call for candidates. This call covers the technical and tariff conditions and, where applicable, the net cost of provision of these services. Each of the components of universal service is covered in a separate section of the call for candidates. Where this call is unsuccessful, the *“Minister responsible for Telecommunications designates an operator capable of providing the service in question nationwide [...]; it also decides whether or not to issue new calls for candidates”* (the new article L.35-2 of the Post and Telecommunications Code)

This nationwide-call-for-candidates procedure will allow the opening up to competition of universal service provision as required by the directive. It should contribute to a reduction in the cost of universal service and take into account the cost-effectiveness of operators other than the public service operator. The net costs taken into account to assess the cost of universal service may not be higher than the commitments made in the framework of the calls for candidates.

4. A new concept: “unfair burden”

The new article L. 35-3, III of the Post and Telecommunications Code introduces the concept of *“unfair burden ”* as contained in the directive. It stipulates that *“where the net costs of an operator subject to universal service obligations does not represent an unfair burden for this operator, no compensation will be paid to it”*. This implies that the operator providing universal service must provide proof of this unfair burden. An order will be issued to define what constitutes an “unfair burden”.

5. Elimination of the shared competence of ART and the Minister responsible for Telecommunications

Under the old system, ART proposed the cost assessment and the contributions payable by the operators in respect of universal service to the Minister responsible for Telecommunications, who formally noted it in an order.

This shared competence no longer exists. Pursuant to article L. 36-7, 4, ART determines the principles and methods used under the conditions set forth in article L.35-3 of the Post and Telecommunications Code, along with the amounts of contributions to fund universal service obligations and is responsible for monitoring the funding mechanisms.

C. Change in calculation method

On ART's analysis, the method used to calculate the cost of universal service before adoption of the Act of 31 December 2003, based on traffic

The cost of universal service is now spread between operators on the basis of the revenues generated from telecommunications services.

volumes, resulted in disproportionate weighting for activities generating low revenues per minute. This method was in breach of the principle of fairness between contributors, since Internet service providers paid a charge 10 times higher compared to their profit margins than mobile operators.

The new law spreads the cost of universal service between operators on the basis of the revenues generated by telecommunications services “excluding revenues generated in respect of interconnection and access activities that are the subject of the agreements defined in article L.34-8, I of the Posts and Telecommunications Code and other services carried out or invoiced on behalf of third-party operators”. The law provides for an exemption threshold which will be defined by a Conseil d'Etat order.

The new calculation method will apply as of the final assessment of the cost of universal service for 2002, which shall be carried out no later than 2 November 2004.

By way of simulation, based solely on the calls currently used to calculate contributions, a calculation method based on turnover (revenues excluding interconnection and access) would have given a combined contribution for fixed, mobile and Internet activities of approximately 0.7% of the relevant¹ turnover in 2000.

D. Aspects of the implementing order

The forthcoming implementing order will define the public service obligations and methods used to designate the operators responsible for universal service. It will also modify those articles of the Post and Telecommunications Code relating to the method of calculating the net cost of universal service.

In the current state of drafting of the order, ART estimates that “unprofitable subscribers in profitable zones” should be excluded from the calculation of the cost of the uniform geographical pricing component, since it is difficult to assess and may give rise to certain side effects that give absurd results, particularly in the case where an improvement in the profitability of the operator responsible for universal service leads to a rise in the net cost of uniform geographical pricing.

Where an area is unprofitable, the net cost is equal to the global deficit of the area, whereas in the case of a profitable area, the cost is equal to the sum of the deficits of unprofitable subscribers. Hence, by way of illustration, if an area has 1,000 subscribers, 500 of whom present a deficit of €10/year and 500 a profit of €9 a year, the net cost of the area comes to €500 ($-500 \times 10 + 500 \times 9 = 500$). If the profitability of profitable subscribers increases by €1 to €10, the area is no longer globally unprofitable ($-500 \times 10 + 500 \times 10 = 0$) but the net cost of unprofitable subscribers in the area is still equal to -€5000 (-500×10).

¹ This means turnover generated solely by the calls included in the calculation.

ART also decided to formulate a number of observations and make proposals concerning the draft order:

- "Unfair burden": the net cost of universal service currently represents 0.5% of sector revenues. Once the cost of the service provided under universal service exceeds 0.01% of the revenues generated by the universal service offer in respect of one component, compensation will be due in respect of its provision.
- Exemption for certain contributors who generate less than €10m in revenues from telecommunications services. Based on 2001 estimates, 24 operators would have contributed to funding universal service if the threshold had been set at €10m of revenues (out of a total of 58 potential operators). The operators benefiting from the exemption together generate less than 1% of sector revenues. Furthermore, the exemption applies to a maximum amount of 50,000 euros. This exemption does not compromise competitive conditions in a market.
- Elimination of the indicators making reference to the France Telecom network, such as the size of areas. ART proposes that the size of areas (referred to as "zoning") take into account an operator's geographic segmentation capacity
- Factoring in the indirect revenues accruing to the universal service operator as a result of serving an area: when an operator decides whether or not to serve an area, it carries out a global economic calculation, taking into account all the revenues from this area (including revenues from related services such as ISDN, ADSL and leased lines) rather than the revenues generated solely by the telephone service.
- Allocation of intangible benefits: the directive forbids a priori allocation of intangible benefits on a component-by-component basis.
- ART is keen to introduce the notion of "economic efficiency" and to avoid any reference to replacement costs which would increase the cost of universal service.
- The rate of return on capital used to calculate the cost of universal service could factor in the weighted average cost of long-term capital of an entity investing in telecommunications activities in France, along with that of an operator responsible for providing universal service taking into account, notably, the decrease in risk linked to compensation for all or part of the service it provides.

IV. INTERNATIONAL COMPARISON

Scope of universal service	Telephone service	Social component	Geographical component
Argentina	Universal access is provided via public payphones	Retired people, beneficiaries and low-income users benefit from a reduction for local telephony service	Customers living in high-cost areas benefit from a subsidy, so as to maintain tariffs for these customers at the same level as for customers in big cities.
Australia	Obligation to provide access but no obligation to provide service	Aimed at disabled people and people with special needs	An unlimited local call service and Internet access at a bit rate of at least 14.4 kbps must be provided in "extensive" areas (sparsely populated areas covering 80% of the country).
China	Goal: to ensure access to the telephone service in every town or village	Not included	Via universal access
DR Congo	Universal access to voice and telex service at an affordable tariff	Not included	Via universal access
USA	Included	The <i>Low Income Support Mechanism</i> proposes reduced tariffs for people with low incomes: reduction in installation costs (Link-up America) and the subscription price (Lifeline assistance). These two programmes are further enhanced for native Alaskan or American tribes.	The <i>High Cost Support Mechanism</i> covers non-profitable areas - i.e. rural areas where local loop costs are at least 15% higher than the national average and urban areas where they are at least 35% higher than the national average.
France	For voice and fax services	Invoice reduction for recipients of certain social benefits (RMI, ASS, AAH, war pensions). Cancellation of telephone-related debts (case-by-case). Restricted service maintained for one year for debtors.	Via universal access
Hong-Kong	Universal access and service at an affordable tariff	Not included	Uniform geographical pricing
Romania	Universal access via teleboutiques and/or public payphones	Subsidised subscription for low-income users	Via universal access
UK	For voice and fax services at an affordable price	<i>Light User Scheme: a rebate is offered to users whose telephone bill does not exceed a certain amount. Subscriber disconnection procedures must be proportionate, non-discriminatory and made public.</i>	Any reasonable request for connection to the telephone service must be satisfied. Mandatory uniform geographical pricing for telephone service.

Internet access	Free access to emergency services	Directory and directory enquiry service	Public payphones
Not included	na	Not included	A monthly subsidy is provided: - in areas not connected to the network, maximum one public payphone per village - in disadvantaged areas, for public payphones with pre-set prices
As well as universal service obligations (USO), there is an obligation to provide access to digital data services (DDSO), divided between a "general" service (96% of the population) and a "special" service (the remaining 4%).	Included	Not included	The operator in charge of Universal Service must ensure "reasonable access" to public payphones. The ACA (Australian regulator) recommended at the start of 2004 that obligations be increased for handicapped persons and Aborigines living in reserves.
At a later date	na	Not included	Universal access mode.
Not included	Not included	Not included	Universal access, at an affordable tariff
Planned for schools and libraries	Included	Not included	Not included
Access to narrowband Internet included	Included	Universal directory (printed and electronic) and universal directory enquiries service	Each <i>commune</i> must have at least one public payphone. One additional payphone for every tranche of 1500 inhabitants between 1000 and 10 000 inhabitants.
Not included	Included	Directory and directory enquiries service	A reasonable number of payphones must be installed. Only payphones installed in certain locations are eligible for subsidy (4400 payphones in 2001).
Not included	na	Directory enquiries service and subscriber directory	Alternative to teleboutiques to allow universal access
Included, at a bit rate of 28.8 kbps	Included	Included	Provides for reasonable coverage of the territory with public payphones at an affordable price. OFTEL has published Universal Service criteria for installation of a new public payphone (size of population, type of habitat, distance from nearest public payphone)

na = not available

INTERNATIONAL COMPARISON

Scope of universal service	Disabled people	Other services included in universal service	Operator in charge of universal service
Argentina	Specially adapted handsets and services must be offered to disabled people	Schools, libraries and healthcare centres benefit from a reduction on telecommunications service access tariffs.	Telecom Argentina. Any operator providing universal service on a <i>pay or play</i> basis
Australia	Specially adapted handsets and services must be offered to customers. In the longer term, public payphones must also be adapted.	dna	Telestra (for USO and DDSO) and Hot-key Internet ("special" DDSO only)
China	Not included	dna	Any operator proposing one of the services is eligible
DR Congo	Not included	dna	OCPT (Congoese Post and Telecommunications Office)
USA	Manufacturers must make specially adapted handsets and services available to disabled people	<i>The Schools and Libraries Support Mechanism provides for rebates of 20% to 90% for schools and libraries in respect of certain services, including telephone calls, Internet access and private networks.</i> <i>The Rural Healthcare Support Mechanism subsidises connection of healthcare professionals located in rural areas to urban medical centres to enable medical services (diagnosis...) to be provided at the same tariffs as in densely populated areas.</i>	Any operator proposing one of the services is eligible
France	Must enable access of equivalent quality to other users	Itemised billing, outgoing call-barring services, pre-payment systems, keyboard dialling, calling line identification, direct incoming selection, automatic call transfer.	France Telecom until 31 December 2004
Hong-Kong	Special handsets must be available for disabled users. Currently looking at subsidising these appliances via the fund. Specially adapted public payphones must be installed.	Tropical cyclone warning service Storm warning service Flood warning service	Hong Kong Telephone Company
Romania	Non included	dna	None, since 01/01/2003. A call for candidates is to be launched
UK	Specific measures are planned for disabled people	Outgoing call-barring service	BT nationwide and Kingston in the Hull region

na: not available - dna: does not apply

Universal service funding	Contributors	Calculation method	Net cost of universal service
Funding planned	All telecommunications service providers	15% of revenues net of taxes and fees and excluding revenues generated in areas with a telephone penetration of less than 15%	na
For both USO and DDSO	Telecom operators (around 100 contributors)	Retail revenues net of interconnection charges	Between \$AUS210-\$AUS240m (Eur130m-Eur150m) depending on the year for USO
Different arrangements: - tax exemption and/or low-rated loans for companies meeting universal service obligations - direct state investment - a fund will be set up	The government	dna	dna
No funding	dna	dna	dna
Via a fund. The universal service fund subsidises the 4 <i>Support Mechanism components</i>	All operators providing interstate services (including mobile operators) contribute to Universal Service	Proportional to revenues from interstate and international services	The contribution rate is 9% (of revenues from the services concerned). In 2002: \$5.6bn (Eur4.7bn), or 1.8% of total telecommunications services revenues; 52% for non-profitable areas; 12% for social tariffs, 36% for schools and libraries; 0.2% for the rural Healthcare Program.
Via a universal service fund	Telecommunication services operators	Retail revenues from telecommunications services	2001: Eur142m (telephone service: geographical component Eur105m; social component Eur22m; public payphones: Eur15m; directory: 0.
Via a universal service contribution	Operators (including mobile operators)	Proportional to international traffic volumes	2001: \$HK 127.9m (Eur13.58m); public payphones \$HK53.2m; telephone service \$HK74.8m.
No funding	dna	dna	dna
Not included	dna	dna	Offset, more or less, by intangible benefits

na: not available - dna: does not apply

V. THE UNIVERSAL DIRECTORY AND DIRECTORY ENQUIRY SERVICES

A. The order concerning universal directories and universal directory enquiry services

Since the Act of 26 July 1996, France Telecom must, in respect of its universal service obligations, “provide a directory enquiries service and a subscriber directory”. Article L. 35-4 provides that this directory and this service must be universal or comprehensive, i.e. allowing users to obtain the numbers of all subscribers to the public telephone service (irrespective of their operator, whether fixed or mobile) subject to the agreement of these subscribers.

In the version of article L. 35-4 resulting from the Act of 26 July 1996, “an organisation that is legally distinct from the companies offering telecommunications goods or services, drafts and updates the list required for publication of universal directories and provision of the universal directory enquiries service”. For reasons to do primarily with financial viability, no such organisation was ever created.

This led to an amendment to article L. 35-4, by the order no. 01-670 dated 25 July 2001. Each entity producing a universal directory or providing directory enquiry services must now request the subscriber list from each operator allocating numbers, without any intervention by a third party. This law required adoption of an order by the *Conseil d'Etat* in respect of the guarantees to be put in place to ensure confidentiality of data and protection of privacy. This order was published in the Official Journal on 6 August 2003¹.

In consequence, until recently the only subscribers appearing in the directory were the fixed-line subscribers of the incumbent operator and the subscribers of alternative operators having signed an agreement with France Telecom to appear in the directory.

The draft version of this order on which ART issued a recommendation² on 21 February 2002, defined the obligations of fixed and mobile operators (minimum content of the lists to be supplied, updating conditions, etc.). It also covered the rights of subscribers, who retain the possibility of not being included in the lists and are no longer required to pay for an unlisted number. Furthermore, subscribers have increased protection against use of their contact details for commercial canvassing. The order

¹ Order no.2003-752 dated 1 August 2003, concerning universal directories and universal directory enquiry services amending the Post and Telecommunications Code, OJ 6 August 2003, p.13581.

² ART recommendation no. 02-145 dated 21 February 2002 concerning the draft order relating to the universal directory amending the Post and Telecommunications Code.

also reinforces competition in the sector by requiring “*operators to provide the lists of subscribers and users (...) to any person wishing to publish a universal directory or provide a universal directory enquiry service*”, whether on the national, regional or local level. Moreover, the order provides for a fee to be paid in remuneration for provision of subscriber lists by the operators.

The universal directory will, as it does today, exist in several forms: paper (for each département), electronic (Internet and Minitel) and via the telephone directory enquiries service.

B. Subscribers' rights and operators' and publishers' obligations

1. Subscribers' rights

Article R-10 of the Post and Telecommunications Code gives any person subscribing to a telephone service the right to be included free of charge in a list intended for publication. Subscribers opting for a pre-paid formula must specifically request inclusion in these lists from their operator.

Hence, the subscribers of all operators (mobile operators, France Telecom, other fixed-line operators) are now eligible to be included in the universal directories and the universal directory enquiry services.

All new subscribers will be informed by their operator of their right to be included in the lists when signing a subscription agreement. Existing subscribers who have not already benefited from an offer of inclusion in the directories will be informed of their rights by their operator. Subscribers may exercise their right of inclusion at any time after taking out a subscription.

In return for this right to be included in the lists, subscribers benefit from increased protection on several counts:

- the right not to be listed in the directories or the directory enquiry service (unlisted number) free of charge; an individual may request the operator not to list his/her full address or only the initial of his/her first name (except in the case of several people with the same initial and name)
- that data concerning them and included in the list of subscribers or users not be used in direct canvassing operations by mail or telephone

- that his/her name should not be able to be found from his/her telephone number ("reverse search")

In addition, all the users of a given fixed line, and not only the person taking out the contract, can have their details included in the directory.

2. Operators' obligations

Operators are required to forward their subscriber lists to any publisher of a universal directory or provider of universal directory enquiry service. This data may be forwarded in the form of a file or via access to a database.

The operators are responsible for verifying the exactness of the data and updating the lists.

3. Remuneration for service provided

Pursuant to article R.10-6 of the Post and Telecommunications Code, a remuneration is payable for this forwarding of data which must reflect the cost of the service actually provided.

The fee to be paid is set by each operator according to the following principles:

"The costs to be taken into account in setting this fee are those directly or indirectly incurred in respect of making available the subscriber lists. These costs may, notably, include a portion linked to depreciation of the computer hardware and software required and a standard return on capital employed. Costs specific to providing the subscriber lists must be fully taken into account in setting the fee. Costs linked to the operator's other activities are not included."

This provision is interpreted by the Competition Authority, the Paris Court of Appeal and the Supreme Court of Appeal to mean that the fee for this services takes into account only the costs associated with provision of the service; costs corresponding to other services or costs common to several of the operator's activities are not to be taken into account.

4. Publishers' obligations

Pursuant to article R.10-5 of the Post and Telecommunications Code, publishers are required to guarantee the security and confidentiality of the data contained in the files forwarded to them. To this end, they must, notably, ensure that their agents and partners comply with this obligation of confidentiality.

Publishers must respect the following rules of presentation of the directories:

- obligation of neutrality with respect to operators: when processing data, publishers may not classify subscribers according to telephone operator
- advertising inserts must be identified as such
- there is nothing to prevent a subscriber with several subscriptions from choosing different regimes of treatment for the different subscriptions. In such cases, the directory publisher may decide on how the data is presented: either it presents the data in different lists according to the subscriber's wishes, or it applies to all the data the highest level of protection which the subscriber has chosen with one of the operators. Hence, if a subscriber has requested that only his/her fixed telephone number be not used for commercial canvassing, the publisher may also submit the subscriber's mobile telephone number to the same regime.

Pursuant to article R.10-7 of the Post and Telecommunications Code, the directory must contain information about all the rights listed above in a way that can be freely accessed by the subscriber. In practical terms, this means that the publisher must make mention of subscribers' rights in its paper or electronic directory.

Moreover, pursuant to the Act no. 78-17 of 6 January 1978 concerning data processing, computer files and individual liberties, use or sale (barring any contractual provision to the contrary) of lists for other purposes than to create directories or directory enquiry services is prohibited.

C. “Opt-in” or “Opt-out” ?

Operators must inform subscribers not having yet received a proposal to be included in the directory, as a rule by ordinary mail, of their right:

- not to be included in the directories
- that the details collected by their operators not be used for direct canvassing
- that their details not be accessible by "reverse search".

This letter must ask subscribers to make a decision on exercise of their rights. For subscribers failing to reply to this letter, two approaches are possible:

- opt-in mode: the subscriber is considered, by default, to have exercised his/her right. In other words, subscribers must give explicit consent
- opt-out mode: the subscriber is considered, by default, not to have exercised his/her right.

The approach used hitherto in France was:

- opt-out for inclusion in the directories
- opt-in for direct canvassing and the reverse-search directory

In other words, where a subscriber does not reply to the letter sent by his/her operator, his/her details are included in the directories but the subscriber is "protected" against direct canvassing and reverse-directory search.

However, the mobile operators have proposed an amendment to the draft "electronic communications" legislation. It is worded as follows: "*Prior consent of mobile-telephony-operator subscribers is required for any inclusion in the lists of subscribers or users drawn up by their mobile operator for all personal data concerning them*". This amendment aims to implement the opt-in system for inclusion of mobile subscribers in the directories.

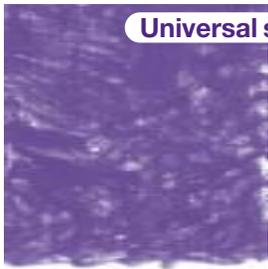
Each of the two approaches has different consequences in terms of use of the directory. From the viewpoint of consumers, the universal directory will contain fewer details for mobile subscribers, which is likely to complicate matters for a person wishing to contact a mobile subscriber. However, it increases consumer protection. From the viewpoint of the operators, the traffic generated by the universal directory will be lower than in opt-out mode.

D. The universal directory in Europe

The table below shows the situation as of the first quarter of 2004 of the options chosen in different European countries concerning the principles chosen for the universal directory.

	Germany	Austria	Belgium	Denmark	Spain	Finland
Fixed	Opt-in : directories	Opt-in			Opt-out	
Mobile	Opt-out : directory enquiries	Opt-out previously	Opt-out	Opt-out	Opt-in	Opt-out
Reverse search	Forbidden				Forbidden	Opt-out
Commercial canvassing	Opt-in			Opt-in	Via automatic means: opt-in if not opt-out	By SMS and e-mail: opt-in By telephone: opt-out
Existence of universal directory	Since 1998 but contains few mobile numbers	Part of Universal Service since 1998		Since 1996	Yes	The electronic directory is universal. Paper director: fixed subscribers only
Problems encountered				None		Opt-in (direct marketing by SMS, e-mail) due to data protection problems
Database used						
Size of paper directory						100 000 subscribers

Source: ART - 1st quarter 2004



	Greece	Italy	Netherlands	Portugal	UK	Sweden	Switzerland
Fixed	Opt-out : but operators want opt-in	Opt-in	Opt-out	Opt-out planned but mobile operators not in favor of that solution	Opt-out	Opt-in	Opt-out
Mobile					Opt-in		
Reverse search					Opt-in		Opt-out
Commercial canvassing					Opt-out		
Existence of universal directory	Not completely finished		Since September 2002	No	For fixed numbers only	Yes	
Problems encountered	Opt-out created data protection problems		Lawsuits on provision of data and publication of KPN tariffs, later on completeness of the directory		Apparently not	No	
Database used	Original customer base		Customer base primarily				
Size of paper directory					A few hundreds of thousands of entries		

E. The Iliad /France Telecom dispute

A dispute between the company Iliad, which wished to supply a universal directory enquiries service, and France Telecom, concerning the conditions and methods of access to the incumbent operator's subscriber lists was referred to ART.

The incumbent operator proposed selling its subscriber base to Iliad under the terms set in its price catalogue. Iliad considered that this proposal did not comply with the regulatory obligations.

Iliad therefore filed a request for settlement of the dispute with ART in March 2003, so that the regulator would rule on the non-compliance of this offer and order France Telecom to present an offer satisfying, notably, the conditions of cost-oriented tariffs and the principle of non-discrimination.

1. The principles

1.1. Concerning cost-oriented tariffs

ART noted that there was a substantial discrepancy between the revenues which the incumbent operator received from access to its subscriber base and the costs of building up this base and that, as a result, the France Telecom offer was not cost-oriented.

ART's analysis should be seen in the more general context of access to subscriber lists, an issue that gave rise to a decision of the Competition Authority on 12 September 2003¹.

The Competition Authority and ART intervened in disputes concerning sale of France Telecom subscriber lists in both cases, but in a different legal framework. ART made its recommendation pursuant to article L. 33-4 of the Post and Telecommunications Code, in the context of provision of the universal directory enquiries service and publication of universal directories, whereas the Competition Authority ruled in the generic framework of competition law, on sale of subscriber lists for publication of commercial directories. In its decision, which ART analysed attentively, the Competition Authority also ruled on the absence of cost-orientation with respect to the access offer.

1.2. Concerning the principle of non-discrimination

ART considered that the structure of the France Telecom tariff offer inhibited development of competition.

¹ Available on ART's website, www.art-telecom.fr, under reference legislation

France Telecom's directory base is sold at a fixed cost, which does not depend on the scale of intended use of this base. This tariff offer, which is not justified by cost-orientation considerations, results in substantial differences in charges between players in the directory enquiries and directories market compared to their volume of activity in the end market, and constitutes a barrier to entry in these markets.

2. Settlement of the dispute

ART ordered France Telecom to make an offer to Iliad within 60 days that respected the principles of cost-oriented tariffs and non-discrimination. It was also keen to set guidelines which, while respecting the general principle of cost-oriented tariffs, also concerned pricing methods and conditions that would, to the greatest extent possible, guarantee equivalent conditions of access to subscriber lists for players themselves operating under equivalent conditions in terms of market and volume of activity.

France Telecom appealed against the Competition Authority decision¹ and the ART decision n° 03-1038 dated 23 September 2003. The Court of Appeal rulings dated 6 April 2004 rejected France Telecom's appeal against the Competition Authority decision. It set aside the ART decision on settlement of the Iliad-France Telecom dispute, while restating the substance of this decision and maintaining the new France Telecom tariff offer (see below).

3. The new France Telecom offer

The tariffs of this new offer are available under heading L12 of France Telecom's price catalogue².

Service	Tariffs excluding VAT
Technical costs of provision	200 € /delivery
Online directories and directory enquiry services	0,003 € /request
Printed and alphabetic directories	0.065 € /entry
Printed business directories	0.050 € /entry
Application of an invoicing limit	2 000 000 € per medium and per customer

Source : ART on information supplied by France Telecom

¹ Decision no. 03-D-43 of the Competition Authority dated 12 September 2003 concerning compliance with injunctions pronounced against France Telecom by the Paris Court of Appeal in its ruling dated 29 June 1999

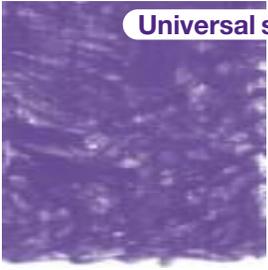
² Article available on:
<http://www.lesprix.francetelecom.com/Catalogue/Catalogue.nsf/WebMainNav>

ART's powers

CHAPTER 5

Action in favour of consumers

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Action in favour of consumers

I. THE MAIN DECISIONS IN FAVOUR OF CONSUMERS

Through the recommendations it issues in the context of France Telecom retail tariff control, ART seeks to ensure fair tariffs for consumers and affordable tariffs for universal service. It also oversees satisfactory operation of the market by ensuring that tariffs are compatible with the entry of competitors into the market, something that is also beneficial to users, whether residential or business. Encouraging the development of competition to the benefit of consumers is one of the regulator's main tasks.

A. The effect of France Telecom tariff decisions on consumers

We might give two examples to illustrate the regulator's action in favour of consumers.

The selective call-barring service on outgoing France Telecom calls allows consumers to restrict use of their telephone line by barring certain types of calls. Call-barring may be permanent or selectable, in which case the consumer chooses when to activate the bar. The purpose of this service is to give consumers better control over the amount of their telephone bill.

France Telecom, which offered its customers a selective call-barring service for outgoing calls on a selectable basis free of charge, proposed at the end of 2002 that customers pay for this service, whatever the barring option chosen by the user. ART did not give a favourable ruling on this tariff decision, arguing that France Telecom should retain its current tariff arrangements until the new European regulatory framework was put in place¹.

Encouraging the development of competition to the benefit of consumers is one of the regulator's main tasks.

¹ Recommendation no. 03-68 dated 16 January 2003.

Telephone subscription prices in Guyana, Saint-Pierre-et-Miquelon, Mayotte and the northern islands of Guadeloupe are set at lower levels than in metropolitan France, la Réunion and the Antilles. In June 2003, France Telecom was keen to apply the same pricing levels (before VAT) in metropolitan France and the overseas départements and territories, without any special exclusions.

While ART was not opposed to the principle of such standardisation¹, it questioned the size of the increase in the subscription price (+€1.39), and its effect on the average consumer invoice (+7%) in these overseas départements and territories, notably for small consumers. It therefore issued an unfavourable² recommendation on this tariff proposal.

B. The effect of France Telecom offers on competition

France Telecom universal service offers and offers for which there are no competitors require ministerial approval after a recommendation from ART. When analysing these tariff applications, ART is particularly attentive to the level of France Telecom tariffs. The regulator must ensure that an alternative operator is able to offer an equivalent service at the same price, using France Telecom's interconnection services, so as to avoid a tariff squeeze effect. Some examples described below illustrate ART's action on this point.

In the residential market, France Telecom proposed a «*Bonus*» offer, the object of which was to offer additional call time to customers subscribing to one of the «*Les Heures Locales*» packages as a function of the length of time the contract had been in force:

- over 6 months: 5% additional call time
- over 12 months: 10% additional call time
- over 24 hours: 15% additional call time.

ART was keen to verify that this offer did not result in France Telecom proposing offers likely to interfere with effective competition or inhibit the entry of new operators. On conclusion of its analysis, it noted that the pricing levels brought about by this increase in call time for the «*Les Heures Locales*» packages generated a tariff squeeze effect vis-à-vis alternative operators wishing to provide a comparable offer and using France Telecom's interconnection service. For this reason, it issued an unfavourable recommendation³.

¹ ART would be favourable to a gradual adjustment in the pricing level, over three years, for instance

² Recommendation no. 03-891 dated 22 July 2003.

³ Recommendation no. 03-454 dated 3 April 2003

In the business market, France Telecom proposed an offer in January 2003 called *Atout RPV Tarifs Equilibre*, entitling subscribers to various price reductions compared to the existing «*Tarif Equilibre*». This «*Tarif Equilibre*» corresponds to special prices for national and international telephone calls based on a call set-up charge and per-second billing from the first second with no time-of-day differentiation.

ART checked to what extent the levels of revenues resulting from implementation of this option would be compatible with the costs of an alternative operator considered to be efficient and wishing to market an equivalent offer while using France Telecom's interconnection service. It issued an unfavourable recommendation¹ given the possible tariff squeeze effect which this offer might introduce for alternative operators. In effect, the reductions in interconnection tariffs that came into force on 1 January were smaller than those envisaged by France Telecom for retail tariffs, thereby reducing alternative operators' room for manoeuvre.

II. SPENDING BASKETS

ART publishes spending baskets for fixed-telephony services (not including special tariff options) which illustrate trends in France Telecom's basic prices. These spending baskets can be used to assess the spending structure of a given category of users (residential or business users²). They reflect global trends resulting from the combined trends of all the basket's components and can be used as a statistical tool for observing the market over the period in question.

A. Methodology

1. Basis of calculation

The only elements taken into account are the telephone subscription and national calls to geographical numbers and mobiles. In other words, the basket does not include international calls, teletel or audiotel calls and calls to the Internet. The calculations give an average annual value including VAT for residential users and excluding VAT for business users.

2. Structure of consumer spending

In previous years, ART used an index based on a set consumption structure as assessed in 1996. This year, it was keen to adjust this method so

¹ Recommendation no. 03-233 of 6 February 2003.

² This category includes professional users and businesses, as in the Market Observatory.

as to better factor in trends in consumption resulting from changes in customer usage, notably higher volumes of calls to mobiles. To this end, it used a Laspeyres¹ type method whereby the base is adjusted every year. The consumption structure used is calculated in accordance with the annual findings of the Market Observatory published by ART for the years from 1998 to 2002.

3. Valuation method

This factors in the different tariff levels, peak and non-peak calls and the impact of statistical call duration given the existence of indivisible billing periods.

B. Trends in consumer spending

Trends in consumer spending are shown in the tables below. .

Spending basket index, residential customers

Residential customers	1998	1999	2000	2001	2002	2003
annual trend	-5.4%	2.0%	-3.3%	-2.8%	-1.1%	-1.2%
base 100 in 1997	94.6	96.4	93.3	90.7	89.7	88.6

Source : ART

Spending basket index, professional and business users

Professional and business users	1998	1999	2000	2001	2002	2003
annual trend	-8.5%	-2.5%	-7.2%	-7.1%	-1.7%	-1.8%
base 100 in 1997	91.6	89.2	82.6	76.8	75.4	74.1

Source : ART

Between 1997 and 2003, depending on the methodology used², we note that:

- all user categories benefited overall from favourable pricing trends
- prices fell more sharply for professional and business users, by around 26%, compared to only 11% for residential users.

Based on the volumes declared by operators for the quarterly surveys carried out in 2003, the price of the telephone subscription now represents a substantial portion of the invoice for all user categories:

¹ The price index is calculated on the basis of past reference volumes.

² On average, the Laspeyres index gives a result that is 2 points higher than that of the Paasche index for residential customers and for the 1997-2003 period for residential customers

- around 45% for residential subscribers versus 35% in 1997
- around 39% for business users versus 23% in 1997.

The proportion of calls to mobiles rose with the increase in volumes then began to fall with the decrease in tariffs. Hence, it:

- rose from 7% in 1997 to 17% in 2003, after peaking at 19% for residential users
- rose from 20% in 1997 to 24% in 2003, after peaking at 28% for business users.

ART intends to pursue its work on the call spending basket by widening it to include other types of calls.

One noteworthy development during the period was growing tariff diversification as shown by the emergence of special tariff options, corresponding primarily to:

- flat-rate packages depending on call termination
- sliding-scale tariffs depending on call volumes and duration
- differentiated tariffs depending on call concentration or unlimited call offers.

III. CONSUMER DIVISION ACTIONS

A. Informing consumers

Informing consumers is one of ART's responsibilities. Article L.32-1 of the Post and Telecommunications Code states, in particular, that ART must ensure fair and effective competition between operators to the benefit of users. In a sector that is now fully competitive, the goal is to ensure that consumers have access to the information enabling them to identify the constant ongoing changes in this sector. ART must ensure that the activity of authorised operators complies with their commitments. In order to monitor this activity, ART has at least three sources of information at its disposal: the surveys it carries out concerning the conduct of telecommunications sector players and use of services by consumers, statistical analysis of the letters and e-mails sent and telephone calls made by consumers to ART and regular contact with consumer representatives.

Decrease in prices between 1997 to 2003

- residential subscribers:
– 11%
- business subscribers:
– 26%

Subscription as proportion of the invoice in 2003

- around 45% for residential subscribers versus 35% in 1997
- around 39% for business subscribers versus 23% in 1997

Share of fixed-to-mobile calls in 2003

- rose 7% in 1997 to 17% for residential users
- rose from 20% in 1997 to 24% in 2003 for business users

With the aim of informing consumers, ART posts the list of licensed operators and distributors (SCS) on its website (www.art-telecom.fr), along with information about their identity (registered company name, address, contact details for sales and customer service), type of offer and coverage area.

As in previous years, ART continued with its efforts to inform and provide direct assistance to consumers in 2003. It encouraged consumer involvement by organising various actions in collaboration with associations on topical subjects, in the form of public consultations, institutionalised or informal work meetings and Internet discussion forums.

The website also allows consumers to access articles on various topical subjects. There are links to organisations such as the DGCCRF (French organisation for competition, consumers and the repression of fraud) and the French committee on unfair contract clauses. The consumer can also find the addresses of associations belonging to the French Consumer Council. There is also an online FAQ section (frequently asked questions).

B. Dialogue with consumers

ART's action aimed at consumers includes providing them with reliable information and educational input, and also by seeking to understand their concerns and promoting dialogue with them. In 2003, ART's communication division took advantage of the new information technologies to organise several live discussion forums aimed at consumers and Internet users.

What exactly is a live discussion forum? It is an interactive, live dialogue on the Internet enabling people to communicate with one or several other people at the same time via written messages. As a rule, a live discussion forum session lasts between 45 minutes and 1 hour. In concrete terms, Internet users post their questions on the website using their computer keyboard. All the people connected during the session can read these questions and react immediately. The experts participating in the session respond in real time using the same methods, i.e. they immediately type in their reply and these replies are displayed in the question-answer window that can be read by all the people connected. After the session, a full transcript of the conversation is kept on the site for reference purposes.

Live discussion forums are much appreciated for their interactive, user-friendly aspect. For instance, to accompany the launch of mobile number portability, ART organised a first session with Internet users on 1 July 2003 on this theme and more generally on all the questions linked to portability (fixed-line, special numbers, etc). The main idea was to give consumers correct information about how to go about obtaining portability from their mobile operator. This session brought together a total of

485 visitors. ART repeated this initiative on 22 October 2003 by organising a chat session on short numbers and numbering. This session gave consumers a better understanding of the use of these numbers and, perhaps more important, information about the tariffs charged for them. A further session on 16 December 2003 was devoted to the many questions around development of ADSL and unbundling: technical problems, tariffs and contracts, coverage of the territory, etc. The numbers of people taking part in these last two sessions rose with each operation: 521 visitors for the first and 546 for the second, demonstrating a real need for this type of communication.

ART intends to continue using this powerful means of dialogue between the administration and the public in its communication programme in 2004.

C. Consumer complaints

The number of letters and e-mails sent by consumers to ART has risen steadily since 1998. In 2003, over 1400 users contacted ART, directly or through associations, to request explanations on its decisions or concerning organisation of the sector (20%), notify cases in which operators have failed to respect their obligations (27%), or to request ART's mediation in a civil lawsuit (60%)¹. Approximately 1650 telephone calls were also received and dealt with. However, these volumes are very small compared to the number of complaints addressed to operators' customer services, nor are they representative of the volume of complaints addressed to consumer associations.

1. 2003 activity in a few figures

As in 2002, the highest proportion of letters and e-mails received from consumers concerned fixed-line telephony: 42% compared to 47% in 2002, versus 37% for mobile telephony (47% in 2002)². We might note that requests concerning fixed telephony are growing more sharply than those concerning mobile telephony. This reversal in trend, initiated in 2001, reflects the greater maturity of the mobile sector and also the increase in conflicts specific to the other sectors. The remaining requests concerned primarily the Internet, and indeed the proportion of Internet-related requests is continuing to grow (21% in 2003 versus only 9% in 2002).

¹ The total amounts to more than 100% since some letters may elicit a direct reply (request for information) but also be forwarded to the operator concerned for action.

² However, according to the AFUTT (French telecommunications users association) complaints observatory, published on 30 March 2004, mobile telephony is still the main subject of consumer complaints in the telecoms sector, accounting for over half of all complaints in 2003 versus almost two-thirds in 2002.

The greatest number of disputes concerned tariffs and billing (30%), contractual problems (35%), technical problems (20%) and finally, the poor quality of customer services (15%).

2. The main difficulties encountered by consumers

2.1. *The fixed-line sector, excluding Internet access*

■ Inadequate and unclear information

Customers complain of the poor quality of information freely available or provided by the customer service departments of all operators. Some of the requests made to ART are recurring -- they concern subjects which consumers continue to have difficulty understanding. We mention some of these issues below:

Third-party billing and special-number billing. Consumers have difficulty understanding their invoice and complain to ART about the high prices of calls to special numbers, particularly for contacting a public service or ISP hotline services. In addition, they complain of not having information about the identity of the carrier at the time of the call. This is also a matter of significant dissatisfaction and concern for consumer associations, whether in the case of 10 digit numbers starting with 08, or short numbers (3BPQ form), which they criticise for lack of tariff clarity.

The rights and obligations related to provision of universal service by France Telecom. These complaints concern, for instance, total disconnection in the event of non-payment, demands for a deposit when a line is opened or the obligation to opt for a standing order after payment incidents. Consumers have difficulty understanding the link between France Telecom obligations and contractual freedom for users.

■ Technical problems

Although the quality of fixed lines is globally satisfactory, we note some one-off complaints. They may concern very specific cases (moving house, chronically poor line quality, etc.), but they may also challenge the good faith of the operator, notably as concerns the reliability of invoicing systems.

■ Carrier pre-selection

Pre-selection was set up during 2000: despite the fact that three years have elapsed since then, ART is still having to deal with operational problems related to this tool of competition. It still accounted for almost 10% of letters received in 2003.

ART has received numerous complaints from consumers given pre-selection against their will, without having explicitly requested the service or following a request for information.

Another concern of consumers is the time taken to implement or terminate pre-selection. Operators very quickly try to abdicate responsibility and the situation is very uncomfortable for the consumer, who has the unpleasant impression of not being free to make his or her own decisions and ends up contacting ART to solve the problem.

As a rule, pre-selection and termination procedures remain obscure. The general impression is that they are no longer understood either by consumers or some distribution networks, and therefore give rise to many requests for assistance.

2.2. The mobile telephony sector

■ Contractual problems

Very many consumers acquired new terminals in 2003, mostly because they wanted the new colour-screen mobiles or terminals with a digital camera and MMS (Multimedia Message Service). The fast pace of renewal and promotional offers for subscription tariffs led in some cases to an extension of existing contracts (24 months in general for a new terminal a terminal subsidised by the operator).

Implementation of portability (see below) led to difficulties associated with cancellation of contracts. Customers offered the possibility of changing operator while retaining the same number are not always aware of a possible 24-month extension of the contract with the original operator and are surprised, when they switch to the new operator, to receive a demand for payment of the residual monthly charges in accordance with the contractual clauses.

As in other years, there are still miscellaneous contractual problems (no network coverage or poor coverage of their home or work place, non-renewal of a student subscription, difficulties in obtaining cancellation for reasons of unemployment or leaving the country, international roaming tariffs, etc).

■ Mobile portability

Mobile number portability (MNP) became commercially available on 30 June 2003¹ pursuant to the guidelines of July 2002 which were finalised after a lengthy process of consultation with all the players, particularly the operators and consumer and user associations. Portability allows users to retain their original number when changing mobile operator. It is an important factor for competition and market fluidity and a development long-awaited by consumers. Start-up of portability on the scheduled date was technically successful but has given rise to many queries and requests for intervention with the mobile operators.

Given that the transfer cycle takes a minimum of two months in France, the first requests for portability, made in July 2003, only became effective at the beginning of September. Customers often complain of a lack of clear information about the procedure to be followed or of receiving incorrect information. Among the other complaints made, we might mention failure to receive the transfer document within the scheduled deadline or if it is received, failure to warn the subscriber of residual monthly payments still due after the cancellation, not being informed of the progress of the request and the service being cut off, whether temporarily or permanently, at the time of the transfer.

Certain mistakes, technical in nature, have been corrected, but customers are still poorly informed about their rights and the deployment of portability sheds new light on cancellation difficulties and the problems inherent in the term of contracts, which differ from one operator to another. Portability also gives rise to new problems in public contracts, where the expiry date is not always compatible with the duration of the transfer operation.

Unblocking SIM cards for mobile phones, an important issue up until 2001, is now only a minor cause of complaint to ART (3.5%). Most of these cases involve consumers being unable to obtain the unblocking code for their handset from their operator or complain of having received the wrong code which has blocked the phone definitively.

2.3. The Internet

The main complaints concerning the Internet revolve around unbundling, primarily, but also broadband. Whereas in 2002, many customers complained of not having a line eligible for ADSL, the main cause of complaint in 2003 is the operating difficulties of unbundling and the "over-optimistic" marketing of offers by some operators or ISPs. Such problems as delays in implementing or restoring a line while the customer continues to be billed, the lack of reliable information, the high price of calls to "hot lines",

¹ ART press release dated 23 July 2003, concerning terms for implementation of mobile number portability

which are too often considered ineffective, have contributed to the poor image of some offers.

D. Meetings with consumer associations

Regular, informal contacts continued with consumer and user associations in 2003.

On a more formal basis of consultation, meetings were organised between the Executive Board and consumer and user associations, notably on the topics of market analysis, mobile number portability, short numbers (3BPQ type) and access to directory enquiry services (such as the "12" service), etc.

Finally, ART participated actively in the working group led by the CNIL (Computer freedom and privacy committee) concerning implementation of the universal directory.

IV. STUDIES CARRIED OUT AT THE REQUEST AND ON BEHALF OF ART IN 2003

ART commissioned several studies in 2003 aimed at understanding user behaviour in connection with the new information technologies and their knowledge of the telecommunications sector.

A. Take-up, use and acceptability of the NICTs (New information and communication technologies)

ART collaborated with the CGTI (Conseil général des technologies de l'information) to commission the annual survey on take-up of the NICTs in French society¹ from the Credoc (French research centre concerning the study and observation of living conditions). For the first time, the study sample was expanded to include young people from 12 to 17².

1. Telephony

The main findings of this survey were as follows: 21% of French people used the services of several operators at their homes in June 2003, versus 9% in June 2000; 90% of young people between 18 and 29 have a mobile phone and are very interested in the new services on offer (SMS, SMS+, MMS, etc.). However, mobile Internet access does not as yet have a large number of enthusiasts.

¹ This survey is available on line on www.art-telecom.fr

² Survey carried out in June 2003 with two representative samples, selected on a quota basis: the first concerned 2004 individuals aged 18 and over, the second concerned 210 individuals between 12 and 17, using face-to-face interviews.

While the trend towards replacement of fixed telephony by mobile telephony is confirmed, the survey notes that the rate of change is very slow.

2. Personal computers and the Internet

Almost half of all adults now have a computer at home and household ownership rates continue to grow quite sharply. Schools play an important role in the process of integrating computers into the daily life of the younger generations. 93% of 12-17 year-olds can be considered as "familiar" with home computing. 30% of people aged over 18 and 40% of 12-17 year olds can connect to the Internet from their homes. Another finding was that the problem of transaction security tends to curb development of e-commerce. Finally, the survey showed that the cost of calls and equipment are still the main obstacles to access to home computing or the Internet.

B. Consumer perception of the telecommunications sector

ART commissioned a survey from the CSA consulting firm in January 2003 aimed at gaining a better understanding of consumer perception of the telecommunications sector against a backdrop of rapid development of competition and technological innovation.

The study¹ shows that 86% of residential customers had a fixed lined in January 2003, an appreciably lower rate than in earlier years, reflecting the substitution of fixed telephony by mobiles. Among the 14% of people not equipped with a fixed telephone, 93% declared that the household had at least one mobile phone. Two-thirds of individuals aged 15 years and over have a mobile phone and 78% of people lived in a household where at least one person has a mobile phone. As concerns the Internet, CSA notes that the most commonly used method of connection in January 2003 was still narrowband switched Internet (3 out of 4 of connections), versus 20% for ADSL and 5% for cable.

17% of the people in the sample had both a fixed and a mobile phone and home Internet connection.

The people questioned considered that the prices of telecommunication services are not particularly clear. Over 70% of them find it difficult to compare the prices offered by operators, whether fixed or mobile. As a rule, consumer knowledge of mobile telephony prices looks to be better and closer to the

¹ The survey was carried out by means of face-to-face interviews at the homes of the 2.076 people questioned aged 15 years and over. These interviews took place between 6 and 31 January 2003. The sample is representative of the French population depending on the quota method. Survey available online on www.art-telecom.fr

real situation than their knowledge of fixed-telephony prices. Fixed-telephony prices are generally overestimated, except for the price of fixed-to-mobile calls, which are generally under-estimated. Average Internet prices are over-estimated for narrowband and cable and slightly under-estimated for ADSL subscriptions. However, this result should be approached with caution given the low response rate.

The CSA survey also shows that the budget which people claim to devote to telecommunications is still closely correlated with household income.

Monthly declared telecommunications budget

	Monthly household income						
	Total	Less than 900 €	900 - 1200€	1200 - 1500 €	1500 - 2300 €	2300 - 3000 €	3000€ and over
Less than 15 Euros	1%	3%	1%	2%	1%	0%	1%
Between 15 and 30 Euros	9%	25%	15%	12%	8%	4%	1%
Between 30 and 60 Euros	33%	40%	49%	41%	34%	26%	11%
Between 60 and 100 Euros	27%	21%	21%	28%	34%	32%	20%
Between 100 and 160 Euros	19%	4%	9%	13%	19%	27%	40%
Between 160 and 320 Euros	7%	2%	2%	3%	4%	8%	22%
320 Euros and over	1%	1%	0%	0%	1%	0%	3%
No response	2%	4%	1%	1%	0%	3%	2%

Source : ART/CSA

Action in favour of consumers



ART's powers

CHAPTER 6

International actions

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International actions

I. RELATIONS WITH THE EUROPEAN UNION

Following adoption and publication of the new Community regulatory framework in 2002, the main events in 2003 were the drafting of secondary legislation or implementing orders for the directives. ART participated in this work, notably in the framework of the Communications Committee (COCOM) and the European Regulators Group (ERG).

During 2003, ART was less involved in the work of the European Council, given that its agenda focused more on development of the information society than on regulation. The subjects dealt with by the Council encompass the entire field of electronic communications, from numbering (".eu" domain name) to network security (creation of a European network security agency), and taking in issues to do with development of the information society, including the Europe 2005 Action Plan, subjects in which ART does not have specific competence.

For this reason, ART's European action focused on the work of COCOM and the IRG/ERG.

A. COCOM

1. Role and operation of the Committee

An electronic communications committee (COCOM)¹ was set up as part of the new regulatory framework. Its objective is to assist the European Commission, in particular as concerns the role performed by the secondary legislator on behalf of the Council. For this reason, EU member states are represented in COCOM by their respective governments. Nevertheless, ART is present in COCOM alongside the Ministry responsible for Telecommunications (DiGITIP –government organisation for the development of industry, information technology and post). Apart from the Member States and the Commission, representatives of states accepted as candidates to join the European Union also participate as observers in COCOM meetings, as well as representatives of various other agencies, such as those representing operators or consumers, the standardisation organisations, and so on, although not all COCOM meetings are open to these representatives.

As a classic instrument of comitology², COCOM allows member states to make official recommendations to the European Commission, either in fields connected with its consultative competence (article 3 of the "comitology" decision of the Council dated 28 June 1999³), or in those connected with its competence in regulation (article 5 of the same decision), and also to exchange their views on any subject included in the agenda.

Cases in which COCOM exercises powers of consultation or regulation are determined by the directives of the new electronic communications regulatory framework. The main regulatory powers of COCOM vis-à-vis the Commission concern technical activities, such as adoption of standards or decisions concerning numbering. For regulatory activities in the strict sense (legal or economic) COCOM tends more to exercise its powers by issuing recommendations.

2. The Committee's main work in 2003

COCOM's work in 2003 concerned primarily the following subjects:

- recommendation on calling party localisation
- standardisation, leading to an initial mandate granted to ETSI (European Telecommunications Standards Institute), concerning implementation of article 18 of the framework directive
- report on facilitating access to electronic communications for people with disabilities

¹ according to the provisions of article 22 of the "framework" directive

² Comitology: the process of consultation of regulatory committees

³ No. 1999/468/EC

- recommendation on the definition of relevant markets (see below)
- recommendation on article 7 of the framework directive (see below)
- work on revising the recommendation on leased lines for inter-connection, which has already led to the adoption of a first part concerning conditions of provision, which should be supplemented by a second part concerning tariffs during 2004.

The lean version of COCOM (restricted to its active members, i.e. the member states), is the agency through which the European Commission presents any proposal to veto (according to article 7 of the framework directive) any draft measure taken by an NRA (national regulatory authority) relative to definition of a relevant market or designation of an SMP operator, within the framework of its market analysis powers. Thus, in February 2004, a Finnish national measure (not designating international service operators as having significant power in their retail market) was vetoed by the Commission, after consultation with COCOM.

3. The major texts adopted by the Commission in 2003 after consultation with COCOM

The new European regulatory framework for electronic communications adopted in 2002 made it necessary to adopt a certain number of texts designed to facilitate and clarify implementation of this framework. These texts were adopted either on the Commission's initiative or because they were already provided for in the directives themselves. For instance, ART contributed, notably through its observations, to drafting two European Commission directives that were adopted this year. The first, concerning relevant markets, was provided for in the framework directive; the second, concerning consistent development of the internal market, clarifies the interpretation of article 7 of the "framework" directive¹ and results from ART's own initiative.

3.1. The recommendation on relevant markets²

This recommendation, dated 11 February 2003, provides further information concerning implementation of article 15 of the framework directive on the market-definition procedure, which is central to the powers given

¹ Directive 2002/21/EC of the European Parliament and the Council dated 7 March 2002 concerning a common regulatory framework for electronic communications networks and services.

² European Commission recommendation dated 11 February 2003 concerning the relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and the Council dated 7 March 2002 concerning a common regulatory framework for electronic communication networks and services.

to the NRAs according to the new regulatory framework. It concerns markets liable to be subjected to ex-ante regulation because they are not judged sufficiently competitive after analysis by the regulator. The Annex to this recommendation defines a set of relevant markets which the NRAs must examine in each member state of the European Union. A NRA may define a relevant market not included in this list but must give its reasons arising from an analysis of the competitive situation, as described in the recommendation.

3.2. The recommendation concerning article 7 of the "framework" directive

Article 7 of the "framework" directive is another lynchpin of the new regulatory framework. The Commission was keen to draft a recommendation on this point, notably to interpret the deadlines provided for in the text of the directive. This clause is in fact one of the main instruments of harmonisation within the European Union by providing for the NRAs to inform each other of any draft measure proposed by a national regulatory authority, and control over such measures by the European Commission.

B. The IRG/ERG (Independent Regulators Group/ European Regulators Group)

In 2003, ART worked actively in partnership with its European counterparts to harmonise the practices of NRAs and exchange experiences, despite the disparities between countries in terms of the progress of transposition (which should have been completed in all member states on 23 July 2003).

The guiding principle of the new European directives is to adapt regulation to the competitive situation observed in the markets defined (see part 2, chapter 1, on market analysis), using the principles of competition law. Consistent development (i.e. harmonisation) of regulators' practices corresponds to the objectives of the "framework" directive to foster development of an open and competitive European market.

1. Work carried out jointly with other European NRAs

1.1. From informal to formal: from the IRG to the ERG

Cooperation between NRAs commenced on an informal basis back in 1997 in the Independent Regulators Group (IRG) created on the initiative of several national regulatory authorities including ART. This "club" of NRA managers enables its members to exchange their experiences so as to deal with problems, notably competitive problems, that are similar from one country to another. The IRG brings together the NRAs of all the mem-

bers of the European Union, along with Switzerland, Liechtenstein, Iceland and Norway¹. The ten new member countries of the Union participated in IRG meetings as observers from November 2002 until they joined the European Union on 1 May 2004.

The meetings of NRA managers are further supported by working groups set up to deal with specific matters. The themes tackled by these working groups include fixed networks, mobile markets, transposition of the new framework, analyses of market data, SMP operators, compatibility and costs. Within the IRG, the NRAs also exchange their experiences by means of benchmarks (tariff comparisons notably) and questionnaires. Common positions are worked out within these groups, with the aim of harmonising and sharing best regulation practices within the European Union.

A more formal structure was created in 2002 for the common work carried out by the NRAs. This is the ERG (European Regulators Group), set up to discuss concrete implementation of the new regulatory framework. The ERG, set up on 29 July 2002, was created to advise the Commission on subjects relating to day-to-day regulation. It has the same members as the IRG and a permanent secretariat within the Commission (DG Information Society). The ERG does not have its own working groups, and the two institutions therefore work together. For instance, the work schedule for 2004 was drawn up jointly by the IRG and the ERG.

In 2003, the IRG and the ERG were chaired by Mr. Arnback, the Dutch regulator, supported by two deputy chairmen (the Finnish regulator, who acted as chairman last year, and the Belgian regulator, who will act as chairman in 2004).

1.2. Enhanced transparency

The work carried out by the IRG/ERG is inspired by a concern to understand the reality of the market. 2003 was the first year in which the different players were consulted by the IRG/ERG. These consultations have enabled regulators to achieve greater transparency and take better account of the real situation. The different players were thus given the opportunity to express their concerns. This practice of public consultation will be retained and taken further in the future. The themes on which the players were consulted in 2003 are:

- the 2004 work schedule of the IRG and the ERG
- PIBs² concerning CMILT (average long-term incremental costs)
- the report on bitstream access

¹ Switzerland, Iceland, Norway and Liechtenstein are members of EFTA (European Free Trade Association). All of them except Switzerland also belong to the European Economic Area

² Principles of implementation of best practises

- remedies for problems of competition (on two occasions in 2003).

The ERG also publishes the minutes of all its meetings along with a press release.

2. The issues dealt with by the IRG and the ERG in 2003

2.1 . Main focus of work in 2003: market analysis

The work of market analysis, initiated in 2003, was the main focus and structure for the working schedule of many IRG/ERG working groups¹.

A great deal of work was carried out upstream of the written document produced jointly by the Commission and the NRAs on "remedies" to competitive problems in the framework of market analysis.

2.1.1. The concept of SMP operator

This concept was examined so as to ensure consistent understanding of the concepts included in the Commission guidelines on identification of relevant markets and SMP operators, given their complexity and the associated difficulties of interpretation.

2.1.2. "Remedies" to competitive problems

One of the main issues in 2003 concerned drafting of a document common to regulators and the Commission on possible "remedies" to competitive problems. This work, initiated at the end of 2002, concerned the choice and justification of ex-ante obligations imposed on SMP operators, which is central to the regulator's task. After analysing the power of players on each of these markets, ART and its European counterparts will have to impose obligations on players identified as having significant market power, to prevent any abuse of their position to inhibit competition or set prices at too high a level. These obligations or remedies must be proportionate to the problem to be resolved, i.e. appropriate to each situation. To carry out this task, NRAs have a range of tools of varying importance: obligations of transparency, non-discrimination, accounting separation, access to specific network resources and tariff control. This document, which has been submitted to two public consultations, was finalised in April 2004 following consultation of sector players.

¹ For 2003, the ERG's work schedule may be consulted at the following address: http://erg.eu.int/doc/work_progr_2003/erg_wp_2003.pdf. The IRG's work schedule may be consulted at the following address : <http://irgis.icp.pt/admin/attachs/277.doc>. For more information about the IRG/ERG, the reader may refer to the ERG and IRG websites, respectively: http://www.erg.eu.int/index_en.htm and <http://irgis.icp.pt/site/en/index.asp>

This document will assist national regulatory authorities in deciding on remedies specific to their market and will serve as a reference in the event of problems arising in a given market. It will be revised and supplemented as a function of the experience acquired over time.

2.2. Specific market studies

This work, based on the experience of the NRAs, supplements the theoretical document on remedies to competitive problems. This document brings together theory and practice, with the aim of reconciling market situations with the remedies provided for by the framework directive and the universal service directive.

2.2.1. PIB¹ concerning mobile call termination

The publication of a specific document on the mobile termination market supplements the more general and theoretical document on remedies. This market has specific characteristics (any call-termination operator is liable to be an SMP player in the meaning of the Commission) and the very existence of a problem in this market depends on the retail pricing method chosen, i.e. calls paid by the calling party - as in Europe - or by the called party - as in the USA. We also note that the more general question of call-termination tariffs, whether terminating on the fixed or the mobile network, is one of ART's current concerns; on 16 April 2004, in the framework of the analysis of relevant markets, it launched its first public consultation on the "voice call termination on mobile networks" wholesale market.

2.2.2. Bitstream access

The common position on definition of bitstream services describes the different technical architectures existing in Europe (four main situations), then looks at the regulation means implemented by each NRA (obligation to provide under the access or special access regime, transparent and objective conditions, non-discrimination, cost-oriented tariffs, reasonable tariffs, retail minus, ...).

The document presents the regulatory measures for this market in the context of the new European regulatory framework and, primarily, the ex-ante obligations imposed on an SMP operator (unlike unbundling, which is still subject to European regulation).

ART was particularly concerned to leave open the possibility of including option 5 in the bitstream market at a future date.

¹ Principles of implementation of best practices

Finally, the ERG worked on drafting implementing texts for directives issued by the Commission, such as the recommendation on notification procedures, article 7, subsequently adopted by COCOM, likewise the recommendation on accounting separation (work started in 2003 and due to be finalised in 2004).

3. The 2004 work schedule of the IRG/ERG: pursuing the work carried out in 2003

Priority work for 2004 concerns international roaming, mobile call termination, regulation of broadband services and implementation of the new regulatory framework. The work schedule for 2004 pursues the work initiated in 2003, with particular attention to competition and transparency.

A report on the analysis of costs and prices of international roaming for the end-user is on the agenda. It should provide a common definition of the concept of international roaming, with an analysis of the degree of price transparency for users. The national regulatory authorities are keen to envisage common action to reduce wholesale roaming prices, which would lead to a reduction in retail prices. It is even more essential to harmonise action at wholesale market level given that measures imposed in national wholesale markets will have an impact on retail markets in other countries.

The objective of work on mobile call termination consists of defining a tariff considered to be competitive, using benchmarks, as provided for in the PIB¹ drafted in 2003.

Finally, comparisons of the different regulators' policies concerning broadband will also be carried out.

¹ *Principles of implementation of best practices*

The legal value of European legislation

Regulations

Texts issued by the Parliament and the Council (some regulations are issued by the Council acting alone) on the proposal of the Commission. They are directly applicable and compulsory in all EU member states without the need for transposition into national legislation. They therefore create legislation applicable throughout the European Union and across all borders and are uniformly and fully valid in all the member states. These states, their institutions and authorities are directly bound by the clauses of a European regulation and must therefore comply with it in the same way as national law.

Directives

Texts issued by the Parliament and the Council on the initiative of the Commission (a directive may also be issued by the Council acting alone or the Commission acting alone, as, for instance, the Commission's "competition" directive). They bind member states in respect of the results to be achieved within a given deadline, while at the same time allowing the national authorities to choose the form and means of implementation. These texts must be transposed into national law to enter into force in each member state. This transposition must be completed within the deadlines provided for in each directive. If the member states fail to comply with this obligation, they may be prosecuted before the Court of Justice of the European Communities (CJEC) for breach of Community law. Community directives do not create direct rights or obligations for citizens of the European Union, since they are aimed solely at member states. However, pursuant to CJEC case law, after expiry of the transposition deadline, all the official bodies of member states are obliged to interpret and apply national legislation in accordance with the directives and to set aside any clauses of their internal law that are contrary to a directive that has not yet been transposed. The CJEC has recognised the right of individual citizens to pursue a member state in respect of a directive that has not been transposed or is badly transposed into national law and to claim their rights in respect of this directive before the national courts, provided that the provisions of the directive are clear, precise and unconditional and offer no scope for interpretation as to the substance. In France, the courts recognise in certain cases the possibility of directly applying certain provisions of the directives in the event of non-transposition or unsatisfactory transposition.

Decisions

Texts adopted notably by the Commission, which must then comply with the process of consultation of regulatory committees (comitology procedure). The Commission may act by decision pursuant to the Treaty (for example, as concerns competition) or pursuant to regulations or directives giving it this power. Like regulations, they are binding in every respect but, conversely, only on designated recipients. Hence, performance of these decisions does not require national legislation. The decision may be addressed to one, several or all member states, companies or private individuals.

Recommendations and Communications

These legal instruments are not binding. They indicate the Commission's interpretation of a clause or specific subject. However, we should note that in the field of electronic communications, recommendations have a particular legal structure in that the national regulatory authorities must take them into "the utmost account" and that where a national regulatory authority chooses not to follow a recommendation, it shall inform the Commission giving the reasoning for its position (article 19 of the "framework" directive).

C. The European Conference of Postal and Telecommunications Administrations (CEPT)

The CEPT is a pan-European body comprising 46 member countries and is the major instrument of frequency planning and coordination in continental Europe, hence ART's active participation in the work carried out by a number of expert groups.

From the regulatory point of view, the pan-European harmonisation effort, which was the central role of the CEPT, is of less interest due to the expansion of the European Union in May 2004, which coincides with the entry into force of the new Community framework. There is still a certain interest in CEPT activities in this area, however, because they do not cover exactly the same ground as the European Union committees and groups and the IRG (Independent Regulators Group). Hence, it provides a forum for cooperation between numerous countries on important topics.

ART is heavily involved in this body, since two of its members chaired the working groups devoted to numbering and international interconnection, respectively, in 2003.

ART is also represented in the ITU working group which organises coordination of ITU activities within the CEPT.

II. RELATIONS WITH THE REST OF THE WORLD

A. The International Telecommunications Union (I.T.U.)

France is represented in the ITU, which is the only worldwide organisation specialising in telecommunications, by Government representatives, i.e. the Ministry for Foreign Affairs in the top policy-making bodies (Plenipotentiary Conference and Council) and the Secretary of State for Industry in the other bodies. ART is, however, closely involved with the work being carried out and takes part in the major conferences. It may also represent France at certain events at the Minister's request, as was the case at the World Regulators Summit in Geneva in 2003. The summit was devoted more particularly to independent regulators, since the Secretary General of the ITU is keen to boost their presence within the organisation.

ART participates in the above meetings in an expert capacity and also in technical conferences, notably the World Radiocommunications Conference held in Geneva in 2003. It plays an active role in ITU-T study groups,

contributes to establishing the French position in ITU-R¹ and participates in international negotiations within the framework established by the ANFr (French National Frequencies Agency). It also reports on certain regulatory and regulation questions in the ITU-D² study group (see chapter 7).

A number of major events stood out in 2003:

1. The World Radiocommunications Conference (WRC)

The World Radiocommunications Conferences (WRC) are held every two or three years. Their purpose is to examine and, where necessary, revise the Radiocommunications Regulations, the international treaty governing use of the radio frequency spectrum and the orbits of geostationary and non-geostationary satellites (see part 3, chapter 2).

The ITU's Radiocommunications Meeting took place between 2 and 6 June 2003, just before the WRC, which was held from 9 June to 4 July 2003.

The next WRC and ITU Radiocommunications meetings are scheduled for 2007, given the very full timetable for 2006 (Plenipotentiary Conference, World Conference on Telecommunications Development, etc.).

2. Télécom 2003

This exhibition, organised every four years by the ITU in Geneva, brings together the main decision-makers (administrations, operators, manufacturers, service providers, etc) in the public and private telecommunications sectors. The 2003 meeting was held in Geneva between 12 and 18 October. ART's Chairman spoke in the opening forum and met with representatives of foreign regulatory authorities. ART also had a stand in the French Pavilion.

3. The World Summit on the Information Society (WSIS)

This Summit was held for the first time, from 10 to 12 December 2003 in Geneva, and brought together political leaders, private sector company heads, representatives of civil society, NGOs and the media, with the aim of laying the groundwork for sustainable development of an information society to the benefit of all. ART participated in the meetings held to prepare for this summit in Geneva in September 2003.

B. The Organisation for Economic Cooperation and Development (OECD)

ART participates in OECD work dealing with telecommunications regulation, notably in the Information, Computer and Communications Policy

¹ ITU radiocommunications sector

² ITU development sector

Committee (ICCP) and the working group devoted to OECD telecommunications and information services policy. ART made a substantial contribution in 2003 to examination of the report concerning telecommunications reform.

This work is part of a broader programme answering to an initiative formulated by ministers from OECD member countries in 1998, asking the secretariat of the organisation to launch a country-by-country examination concerning the progress of regulatory reform.

On completion of this peer examination, a multidisciplinary report is drafted on the state of regulation reform for each country concerned.

The comprehensive examination of France carried out in 2003 consisted of four thematic chapters and two sector chapters, one of which concerned telecommunications regulation.

On completion of the telecommunications chapter, the rapporteurs formulated the following series of recommendations:

- to ensure that the regulations and the regulatory processes were transparent, non-discriminatory and efficiently applied
- to reform regulation with the aim of stimulating competition and the consequences for consumers
- to re-examine and, where necessary, strengthen the scope of application and effectiveness of competition policy and the means implemented to ensure compliance with the related obligations.

While for the most part these recommendations seem sensible, i.e. strengthening powers of sanction, some, such as the recommendations on transparency did not appear to be based on any observed failing.

III. INTERNATIONAL COOPERATION

Cooperation with emerging and developing countries continued in 2003. ART uses its expertise and international reputation to develop cooperation with its different partners and counterparts in countries outside the EU.

For ART, international cooperation on regulation complies with the objectives pursued by the European directives and ITU policy as defined by the World Telecommunications Development Conference in Istanbul and the Plenipotentiary Conference in Marrakech. ART also ensures that the relations established are in line with government foreign policy, and indeed certain relations have been instigated at the request of the government.

This is why ART places particular importance on multilateral cooperation. Regulatory authorities are confronted with substantial requirements based on

common issues in carrying out their tasks. The recent development of regulatory institutions, the very specific nature of regulatory questions, the need to master new techniques of analysis concerning cost calculation and the strategies of the different players, the emergence of specific regulation law and the overall mastery of these questions requires top-level training adapted specifically to requirements.

A. Bilateral cooperation

In 2003, ART established closer relations with some 10 or so countries (Saudi Arabia, China, South Korea, the USA, Japan, Jordan, Morocco, Mexico, Poland, the Democratic Republic of Congo, Tunisia). This cooperation took the form either of delegations visiting Paris for more or less in-depth discussions on communications sector liberalisation or the economic and technical aspects of regulation, or overseas expert missions by members of ART's Executive Board or staff. Some of these missions involved advising partner governments on the process of sector reform.

More extensive relations were maintained with a small number of counterparts with which ART has cooperation agreements. These resulted in training sessions in Paris and some more in-depth exchanges (Morocco, Gabon, Democratic Republic of Congo).

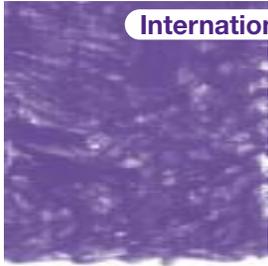
B. Multilateral cooperation

As part of an ITU initiative (Development sector) supported by the Tunisian regulator, ART took part in a training workshop on interconnection principles and practices organised in Tunis by the "ITU Centre of Excellence for the Maghreb and the Near and Middle East" from 26 to 28 January 2003.

One of the subjects on which ART works in collaboration with multilateral cooperation agencies such as the ITU is the crucial role of competitive regulation of the markets in developing broader access to Information Society services. ART is particularly interested in the question of universal service and access, for several reasons. Leaving aside its undoubted competence in this field, ART has made universal service and access the backbone of its international cooperation policy, notably vis-à-vis its French-speaking counterparts.

ART, represented by Dominique Roux, member of the Executive Board, participated in the World Symposium of Regulators held on 8 and 9 December 2003 organised by ITU-D, which focused on the practical tools available to regulators to promote universal access to information and communication technologies.

ART has made universal service and access the backbone as main lines of its international cooperation policy



C. Creation of the Telecommunications Regulation Network for French-speaking countries

French-speaking regulators meeting in Bamako, the capital of Mali, on 27 and 28 October 2003, set up FRATEL (Telecommunications Regulation Network for French-speaking countries) to share their experiences and adopted a plan of action for 2004. This cooperation network has been set up in accordance with the final declaration of the International Symposium on the Development of Regulation in the French-speaking countries (Syderf 2002), which was adopted in June 2002 in Paris.

Fifteen French-speaking countries sent the managers of their telecommunications regulation institutions to the meeting. The presence of the ITU, the World Bank and the ESMT (Multinational School of Telecommunications) in Dakar demonstrated the importance which these institutions attach to the creation of this network. Over sixty participants shared their experience of regulation on the theme of good regulatory governance faced with the challenges of globalisation.

The Bamako meeting adopted FRATEL's charter and its plan of action for 2004, which was drafted following a call for comments sent to members of the network during the first half of 2003 by the coordination committee chaired by ART.

The regulators belonging to FRATEL unanimously agreed on four objectives:

- to encourage dialogue between regulators
- to foster exchange of information and experience on the fundamental themes of regulation
- to analyse the major challenges of universal service/access
- to implement training programmes on topics of common interest.

FRATEL adopted a plan of action for 2004, providing for:

- the holding of FRATEL's 2004 annual meeting on mobiles in Morocco
- a 2-day seminar in Paris on the topic of universal service/access, which took place on 28 and 29 April 2004
- creation of a website
- study of a training project bringing together ENST Paris (the French School of Telecommunications), ARTEL (the National Telecommunications Regulation Authority of Burkina Faso), the University of Ouagadougou, the World Bank and the ESMT.

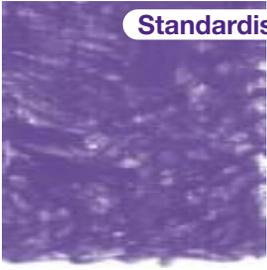


ART's powers

CHAPTER 7

Standardisation

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Standardisation

Standardisation is a key element in economic and commercial exchanges (opening new markets, establishing economies of scale, etc.), and is central to the regulator's preoccupations. The standardisation phase, which sets the conditions for and structures the development of the market, is upstream of the regulator's "timetable", which focuses on short-term structural issues (standard interconnection offer, settlement of disputes, and so on).

The regulator is involved periodically in the standardisation process, through its participation in various institutional organisations, with the aim of ensuring compliance with the principles associated with the establishment of new economic models, freedom of choice for the user, forward-looking management of the spectrum and numbering resources, interpretation of and compliance with mandatory requirements, etc. Its participation, based on prior national consultation, is vital, given the need for consistency between standardisation and regulation.

By monitoring standardisation, the regulator can set the overall framework and guidelines for dealing with future debates. The information received gives ART better visibility of market trends, the intervention of the different players and phenomena of excessive promotional activity compared with the actual state of research and development.

I- ITU-T

Three organisations share standardisation work worldwide: ISO (International Organisation for Standardization), IEC (International Electrotechnical Commission), and ITU (International Telecommunications Union) whose head office is in Geneva. The ITU is an international organisation, part of the United Nations, through which governments and the private sector coordinate telecommunications networks and services worldwide. It is

divided into three sectors: ITU-R (radiocommunications), ITU-D (development) and ITU-T (standardisation). ART's relations with the first two sectors are described in the preceding chapter "International actions".

ITU has 189 member states. More than 650 sector members (operators and manufacturers) and over 90 associate members (smaller companies) also participate in the organisation's standardisation work. The number of sector members remained stable in 2003 despite the crisis in the industry, while the number of associate members continues to rise. One of the original features of the ITU is that it brings together players from both the private and the public sector in its standardisation work. ITU-T produces recommendations (standards), which, albeit voluntary in terms of application, are recognised worldwide. More than 2 900 recommendations have been produced to date.

ART's role in ITU-T can be classified in three major areas:

A. Direct participation in the work of selected study committees

ART participates in the work of study groups (ITU-T technical groups) notably as regards regulatory aspects. It is actively involved in the work of Study Group no. 2 which covers operational aspects of networks and services (in particular, numbering) and in Study Group no. 3, which deals with tariff principles and international compatibility. ART is chairing this group in 2003-2004. Besides the work on international numbering, ART also participated very actively in 2003 in defining and expanding the ITU's role in domain names and Internet addressing. It also acted as rapporteur (organiser) for one Study Group no. 3 topic. For the other more technical study groups, ART keeps up to date with the work being done through a network of relevant experts.

B. Participation in ITU-T decision-making bodies

ART also participates actively in the work of the Telecommunications Standards Advisory Group (TSAG), which manages the ITU standardisation sector in between the different World Telecommunications Standardisation Assemblies convened every four years to decide on standardisation strategy issues.

Within TSAG, ART plays the role of deputy head of the French delegation alongside the Ministry of Industry and participates very actively in the work of this group: definition of standardisation priorities, organisation of study groups to improve response to market requirements, improvement in working methods to reduce lead times for releasing new standards, etc.

In 2003, ART also made a contribution to the different workshops in ITU's standardisation sector, focusing on important topical subjects such as emergency telecommunications, new-generation networks, domain names and Internet addressing.

ART participates in the top-level bodies of the ITU with the aim of gaining a better understanding of all the topics linked to standardisation. These include the Administrative Council, which meets once a year, and the Plenipotentiary Conferences, which meet every four years to decide on the organisation's overall strategy and budget.

In 2003, ART also participated in the CEPT (European Conference of Postal and Telecommunications Administrations) working group dealing with ITU matters, which defines European positions for top-level meetings of the international organisation.

II. ETSI

ART contributes to the work of the strategic organs of ETSI (European Telecommunications Standards Institute), i.e. the General Meeting, the Board, the coordination committee (OCG), the finance committee and impact committees. ART took its turn in chairing the finance committee from April to November 2003 and also chairs the committee that coordinates the Institute's contributions in the new regulatory framework for electronic communications networks and services. ART is part of the ETSI delegation in the committee set up to coordinate standardisation work for third generation mobile systems: 3GPP PCG OP². The activities associated with this work are carried out in close collaboration with DiGITIP and the ANFr (National Frequency Agency).

We might highlight some significant aspects concerning ETSI and ART's action in 2003.

A. A time of radical reform for the European Institute

ETSI is one of the three officially-recognised EU standards organisations, alongside the European Committee for Standardisation (CEN) and the European Committee for Electrotechnical Standardisation (CENELEC) (see directive 98/34/EC). The "framework" directive of the "*telecoms package*" implicitly confirms the status of these three organisations.

¹ European Telecommunications Standards Institute. ETSI is responsible for defining standards for the telecommunications sector at European level.

² www.3GPP.org project coordination group

At end 2003, ETSI had 699 members, including equipment manufacturers, operators, service providers, users and governments, broken down as follows:

- 537 full members from 35 CEPT countries
- 126 associate members from 19 countries not included in CEPT
- 36 observers including a new country, Albania.

After rising briefly at the beginning of 2003, the total number of Institute members fell by 87 compared to 2002. This fall in membership reflects a number of factors: bankruptcies, mergers and expulsions and represents the delayed effect of the financial crisis in the sector.

Against this difficult backdrop, ETSI initiated an in-depth examination of its own positioning and outlook. This ambitious approach is built on the Institute's solid foundation of experience at European level (contributor to eEurope initiatives) and at the world level through partnership projects: 3GPP (third-generation mobile) and MESA (wide-band emergency communication systems). ETSI has a distinguished record of providing assistance to various forums (since the end of 2003, it has provided secretariat services for the Open Mobile Alliance - a mobile services consortium).

ART will continue to participate in this debate as a source of suggestions and proposals.

B. A declining budget

Over the last 18 months, ETSI has been confronted with a material fall in resources due to the drop in the number of its members. Its financing is subject to hard bargaining and tends to crystallise sometimes dogmatic positions on the part of manufacturers. Questions have arisen in terms of global balancing of the accounts and also in terms of a new approach to financing partnership projects including 3GPP for mobiles and UMTS. The global reflection around ETSI financing, in which ART is participating, might be completed in the first half of 2004.

Through its chairmanship of ETSI's finance committee from April to November 2003, ART became involved in management and preparation of the budget. Despite an appreciable fall in resources (budget of Eur20.6m), down by around 6%), ETSI succeeded in maintaining a certain equilibrium, allowing it to perform its tasks satisfactorily.

C. Supporting promotional activities

On the international level, ETSI is keen to make the regulators, the new players in the sector, more aware of the challenges of standardisation. Given its experience in dealing with standardisation and regulation issues, ART is regularly involved in strategic reflection with ETSI in this field and participates in ad hoc conferences. For instance, ART was involved in the

workshop organised by ETSI and ANRT, the Moroccan telecoms regulator, held alongside the Morocco Telecoms exhibition in the spring of 2003 and regularly contributes to the "Impact" working group responsible for promotion.

D. 3G standardisation: defining future directions

ART is part of the ETSI delegation in the 3GPP coordination committee¹ (partnership-based standardisation structure bringing together regional standardisation organisations for third-generation mobile). This involvement gave it a central position in the UMTS standardisation process and increases its visibility of current debates as does its contacts with the different national players involved through the regular holding of informal meetings.

The coming debates within the 3GPP PCG are bound to structure the future of mobile standardisation. On the European level, it is essential to find the best possible approach for dealing with trends in standardisation work using a partnership approach, given that the different regional players may have diverging interests. Moreover, 3GPP must reaffirm its attachment to transparent, non-discriminatory rules in the question of patents, at a time when cooperation with the OMA (*Open Mobile Alliance*) consortium is starting up. Through its presence in the ETSI delegation to 3GPP, ART will be positioned at the centre of ongoing debates and will contribute to them in the interests of national players in the broadest sense.

E. Reflection around service interoperability and freedom of choice for users

To respond to the challenges associated with the new regulatory framework (notably article 17 "standardisation" of the "framework" directive), the European Commission has given a mandate for standardisation to the European standards organisations: CEN, CENELEC, ETSI. In agreement with these two organisations, ETSI has assumed leadership and in November 2003 sent an interim report to the Commission, followed by the final version in the spring of 2004.

ART has been involved in these upstream questions through its leadership of the internal coordination group within ETSI: the OCG ECN&S and its role in steering a group of four experts who worked together for five months and contributed to answers for ETSI's technical committees. This work should lead initially to a review of the interim list of standards/specifications published by the European Commission in the framework of article 17 in December 2002.

¹ Third generation partnership project.

The process will continue with more focused standardisation steering work via a group of experts attached to COCOM, created by ART in consultation with DiGITIP.

The challenges for regulation are not yet clearly understood given that the national regulatory authorities have only just started the market analysis process. Nevertheless, ART will continue to participate in studies concerning service interoperability and freedom of choice for users, particularly in the framework of the next generation networks (NGN), likewise in the strategic contribution of standardisation on these two topics.

F. ETSI defines the outlines of future electronic communications networks

After publishing a study on the challenges of the next generation networks (NGN)¹, ART keeps a close watch on the debates concerning this field. It participated in a European Commission workshop organised on this topic in October 2003 (see the Commission website). It follows with interest the work initiated at ETSI on the next generation networks through creation of the TISPAN committee, which brings together the TIPHON (telecom multimedia over IP) and SPAN (development of fixed networks) committees. To date, there is no single definition of next generation network, and several next generation network migration options are emerging.

TISPAN has adopted a matrix-based approach and is concerned primarily with standardisation of multimedia services via xDSL access and wireless access techniques (Wireless LAN), VDSL or optical fibre. This work relies on the work carried out in the 3GPP forums and points to the emergence of the fixed/mobile convergence desired by the manufacturers with a view to achieving economies of scale, and the incumbent operators which are becoming increasingly integrated. Hence, fixed MMS and instant messaging services are attracting particular attention, likewise content distribution. IPV6 is taken into account but remains optional all the same. Finally, these activities, which bring into play the essential cohabitation with networks that will remain in place for several years, contribute to the structuring of exchanges between IP operators, announcing a decline in peering.

¹ Study available on www.art-telecom.fr

III. NATIONAL CONSULTATIVE STRUCTURES

A. CFCT-ITU

The French committee for the coordination of ITU standardisation (CFCT-ITU) was reactivated in 2001 with a view to coordinating the French position within the framework of the ITU-T's work. This committee, which is chaired by ART, includes representatives from both the government and the private sector. It held four meetings in 2003. Two of them, convened ahead of the Telecommunications Standardisation Advisory Group meetings, were aimed at finalising the different French positions. Its work will pick up speed in 2004, with preparation of the World Telecommunications Standardisation Assembly, the supreme organ of the standardisation sector, which defines sector strategy for the next four years.

Through this committee, France should be able to play a leading role in the ITU-T, both in terms of identifying new topics for study and participating in the improvement in the ITU-T's structure and working methods.

We expect to see an appreciable simplification in national coordination structures in 2004, with the creation of a General ICT Committee under the aegis of AFNOR. This committee should allow better "horizontal" coordination of the major topics, which are often dealt with in different standardisation organisations (ITU, ETSI and private forums).

B. The Interministerial Standards Group (GIN)

ART participates in the Interministerial Standards Group (GIN) which regularly brings together standards representatives from each ministry to define national and international public policy guidelines in this field. Within the GIN, a specialist working group on Information and Communication Technologies (ICT) was set up in 2002 under the aegis of the Ministry for Industry. It is responsible for assisting the GIN in this sector and ensuring that the various ministries adopt a consistent position. During the three meetings held in 2003, this specialist group in which ART participated actively, worked on a number of topics such as emergency telecommunications, the electronic signature, and the introduction of new standards documents.

C. CF ETSI (French ETSI coordination committee)

CF ETSI, which is chaired by a representative of DiGITIP, is one of the standardisation committees for information and communications technologies under the leadership of AFNOR (French Standardisation Organisation), which took over responsibility for this structure, a function hitherto performed by France Telecom. It brings together the French members of ETSI.

Every month, CF ETSI reviews standards projects in the fields of interest to it. After a public enquiry, it holds a vote and issues a national position on these texts. It examines any matter of potential relevance to the members of ETSI and prepares ETSI's general assemblies.

As well as participating actively in discussions on ETSI's general policy in the national coordination committee (CF ETSI), ART monitors work related to its own mandate with particular attention to the fields of radiocommunications, numbering and service quality.

D. AFNOR Forum Observatory

To ensure better visibility of all the forums in the field of information technologies, AFNOR has set up a Forum Observatory financed during the development stage by government subsidy. The objectives of this structure are:

- identification and validation of forums
- identification of the main documents produced
- assessment of the main resources for action and influence within these structures
- forward assessment of the strategies of forums seeking official recognition
- informing the industrial sector to make it aware of the challenges raised by the forums.

ART sits on the steering committee of this project alongside Alcatel, Bull, Inria, the CNRS, France Telecom, the secretariat for Industry, the Ministry of Research and participates in the editorial committee of this organisation.

ART actions in the different market segments

CHAPTER 1

Fixed telephony

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Fixed telephony

I. MARKET FIGURES

A. Fixed lines, options and additional services

Units	31/12/00	31/12/01	31/12/02	31/12/03	Growth (%)
Number of fixed lines (end of period)	34 080 828	34 083 938	34 124 175	33 905 438	-0,6 %
- analogue	29 596 781	29 248 261	28 980 091	28 626 949	-1,2 %
- digital	4 373 260	4 773 539	5 084 292	5 218 318	+2,6 %
- WLL	2	518	438	378	-13,7 %
- cable connections	43 213	61 620	57 674	59 793	+3,7 %

Source: ART

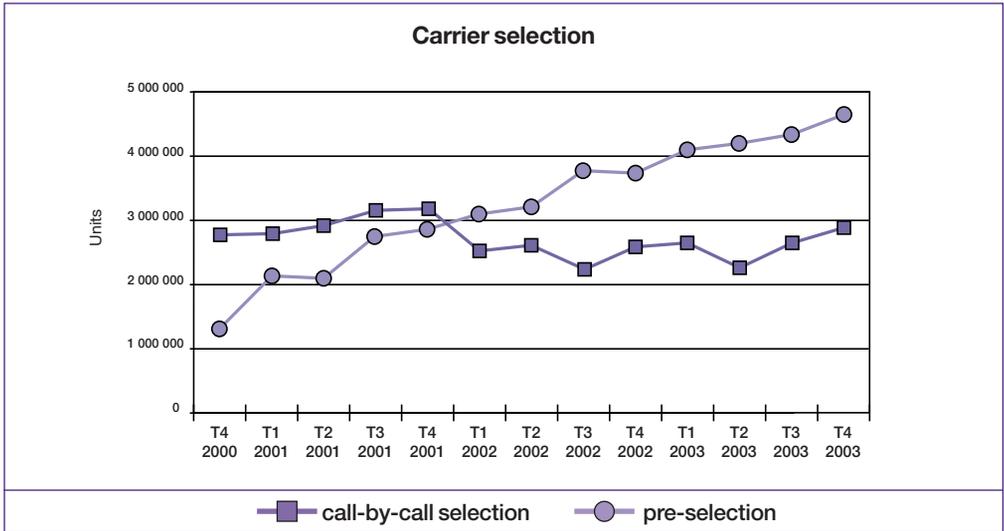
The number of fixed lines decreased slightly to below the threshold of 34 million lines (stable for the last three years). An increasing number of households are cancelling their fixed subscription (around 15% according to the Crédoc study published in November 2003) and replacing it with a mobile subscription.

B. Number of carrier-selection subscriptions

Units	31/12/00	31/12/01	31/12/02	31/12/03	change (%)
Number of carrier-selection subscriptions	4 359 460	5 937 776	6 420 482	7 589 630	+18,2%
- number of call-by-call selection subscriptions	2 860 000	3 167 059	2 722 289	2 944 713	+8,2%
- pre-selection subscriptions	1 499 460	2 770 717	3 698 193	4 644 917	+25,6%

Source: ART

In 2003, ART had to adjust the carrier-selection figures for the previous quarters and years. These changes have been taken into account in the data shown here



Source: ART

Carrier-selection subscriptions for both call-by-call and pre-selection continue to grow at a steady rate. The number of subscriptions grew by 947 000 subscriptions or 26% over the year. Pre-selection represented more than 13% of fixed lines at the end of 2003.

C. Access, subscription and additional service revenues

(€ millions)	2000	2001	2002	2003	Change (%)
Access charges, subscriptions and additional services	5 144	5 366	5 426	5 505	+1,5 %

Source: ART

Note: The increase of 1.5% in 2003 is due to the 3.6% subscription increase, which occurred in July 2002. The 2002 yearly increase was only 1.1% since the subscription increase occurred in the middle of the year. However, the reduction of approximately 220 000 fixed lines in 2003 reduced subscription-revenue growth by approximately 0.5 points.

D. Calls from fixed lines

Revenues (€ millions)	2000	2001	2002	2003	% Change
Local calls	3 007	2 847	2 590	2 342	-9,6 %
National calls	2 006	1 673	1 602	1 476	-7,9 %
International calls	897	871	850	822	-3,3 %
Calls to mobiles	2 729	2 895	2 919	2 745	-6,0 %
Total fixed-line revenues	8 639	8 287	7 961	7 384	-7,2 %

Source: ART

Volumes (millions of minutes)	2000	2001	2002	2003	% Change
Local calls	77 037	72 527	66 052	61 415	-7 %
National calls	27 801	28 097	28 091	27 500	-2,1 %
International calls	4 454	4 610	4 808	4 771	-0,8 %
Calls to mobiles	7 649	9 384	10 498	11 285	+7,5 %
Total fixed-line volumes	116 942	114 617	109 449	104 971	-4,1 %

Sources: ART

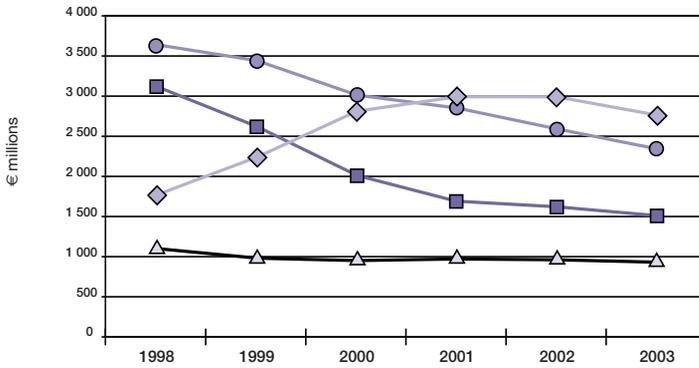
Note: *Public-payphone, phone-card and narrowband low-speed-Internet volumes are not included.*

The downward trend in fixed-network local-call volumes continued in 2003 with a 9.6% drop in value and a 7% drop in volume. The tariff decrease accelerated when the segment was opened to competition in January 2002.

National and international calls also dropped in both volume and turnover albeit to a lesser extent.

The effect of the lower call-termination charges for fixed-to-mobile calls is evident with an increase in traffic volume of 7.5% and a reduction of 6% in value.

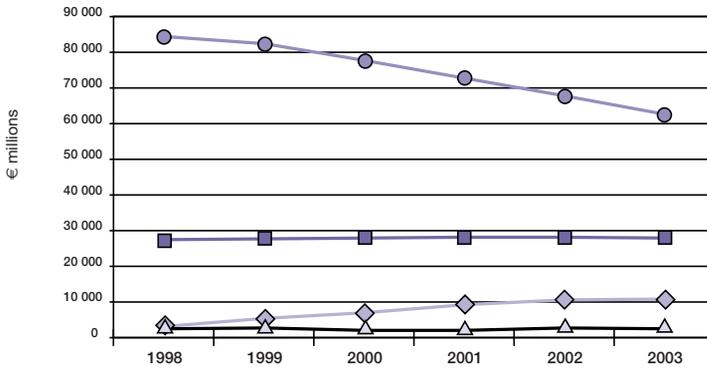
Fixed-line call revenues



- Local calls
- National calls
- ◆ International calls
- ▲ Calls to mobiles

Source: ART

Fixed-line call volumes



- Local calls
- National calls
- ◆ International calls
- ▲ Calls to mobiles

Source: ART

E. Public payphones

	2000	2001	2002	2003	Change (%)
Public payphones revenues (€ millions)	516	469	426	333	-21,7 %
Call volumes (millions of minutes)	2 397	1 960	1 627	1 383	-15 %
Number of payphones 31 December	229 620	213 993	202 418	192 273	-5 %

Source: ART

The deterioration in payphone activity observed over the last few years continued in 2003 with a drop of 20% in revenue and 15% in volume. The number of payphones in service fell below 200 000 units.

F. Fixed telephony cards (pre-paid and post-paid)

There are two types of phone card (excluding cards which can only be used in the incumbent's payphones):

- post-paid cards for which billing takes place after the call has been completed (cards linked to a subscriber's telephone account with call costs appearing on the subscriber's bill, to a bank or credit card which can be billed directly or to an account held by a distributor),
- pre-paid cards: contain a fixed, pre-paid amount which can be used for telephone calls.

	2000	2001	2002	2003	% Change
Fixed-line phone card revenues	332	251	217	217	-0,1 %
Millions of minutes generated by phone cards	2 611	1 903	1 380	1 503	+8,9 %
Number of pre-paid cards sold	44 397 831	2 577 378	15 935 134	19 191 476	+20,4 %

Source: ART

The data for fixed telephony cards only covers operators that have registered their activity with ART. They do not cover the total market.

II. PRICE CHANGES

A. Telephone subscriptions

The average value of the France Telecom subscription price for the different user categories increased over the period 2000- 2003

- 8.2% for consumers;
- either 8.7% or 11% for businesses depending on the type of contract.

This is shown in the two tables below:

Consumer	2000	2001	2002	2003
Main subscription	100	104	106	108

Source: ART

(base 100 in 2000) - from basic France Telecom tariffs and ART price baskets

Business	2000	2001	2002	2003
Contrat Professionnel	100	107	109	111
Contrat Professionnel Présence and/or Numéris	100	106	107	109

Source: ART

(base 100 in 2000) - From France Telecom basic tariffs and ART price baskets

B. Telephone calls

1. Changes in incumbent operator's prices

The incumbent's basic tariffs have not changed for the last three years irrespective of the market segment with the exception of fixed-to-mobile prices, for which ART imposed a 40% call-termination price decrease over three years on mobile network operators Orange France and SFR.

Consumer	2000	2001	2002	2003
Local calls**	100	95	95	95
Long distance calls	100	88	88	88
Fixed-to-mobile calls	100	86	80	70
International calls	100	93	93	93

Sources: ART

(base 100 in 2000) - From the basic France Telecom figures and ART price baskets

Over the period 2000 to 2003, France Telecom consumer prices dropped by:

- 5.2% for local calls
- 12.4% for long distance calls
- 6.7% for international calls
- 30.2% for fixed-to-mobile calls

Businesses	2000	2001	2002	2003
Locals calls**	100	95	95	95
Long distance calls	100	87	87	87
Fixed-to-mobile calls	100	86	80	70
International calls	100	93	93	93

Source: ART

(base 100 in 2000) - From the basic France Telecom figures and ART price baskets

For businesses, the incumbent's yearly average price over the period 2000-2003 fell by:

- 4,9 % for local calls;
- 13,1 % for long distance calls;
- 15,5 % for international calls;
- 30,5 % for fixed-to-mobile calls.

2. Progress and positioning of the main competitors

In the consumer market, competition developed essentially through call-by-call selection, and pre-selection. The bulk of the market is divided between three operators (Cegetel, Neuf Télécom/LDCOM and Télé 2).

For the consumer market, the average price in France in 2003 for local and long distance calls (excluding special price offers?) based on ART simulations for a typical call is shown in the following table:

Consumer market	France Telecom	Operator A	Operator B	Operator C
Local calls	100	103	97	92
Long distance calls	100	72	64	62

Sources: ART

(base 100 in 2003 for France Telecom) - From the basic tariffs of the main operators and ART price baskets

The extension of pre-selection to local calls did not result in notable price differences for the consumer.

In the national call segment, the main competitors' basic tariffs have changed little since 2001 as shown in the following table:

Consumer market	2000	2001	2002	2003
Long distance calls				
Operator A	100	90	90	90
Operator B	100	92	92	87
Operator C	100	93	95	95

Sources: ART

(base 100 in 2000) - From the basic tariffs of the main operators and ART price baskets

III. ART ACTIONS

Given that it is an operator with significant market power in the fixed-telephony market, France Telecom must submit its retail tariffs for universal service, or for services for which there is no competition, to the Minister for the Economy and the Minister responsible for Telecommunications for approval. ART has three weeks in which to provide a recommendation (See Part 2, chapter 3).

A. Access-related tariff decisions

ART made 19 recommendations on access-related tariff decisions. These recommendations can be broken down as follows:

- service activation
- subscription level
- ancillary services

1. Network access charges (service activation)

Concerning service-activation charges for access to the telephone network, ART made a favourable recommendation on modifications to the Numéris Itoo service-access charges (decision n°03-426) and an unfavourable recommendation (decision n° 03-741) on modifications to the tariffs for other Numéris access services, which would have resulted in two to three-fold increases. These increases would have been disadvantageous for consumers. Moreover, the size of these increases could have strongly encouraged customers to limit the impact by committing to a three-year contract instead of one year as is currently the case. Nevertheless, this mechanism is not neutral in terms of competition in so far as the development of local-loop unbundling is concerned. ART does not oppose the revision of tariffs that have remained the same since 1990. However, France Telecom's profit-and-loss accounts for ISDN are positive and ART considered that the Numeris service-activation price increases were not justified by the cost elements.

2. Recurring costs (subscription)

ART made three favourable recommendations on monthly subscriptions and in particular on the subscription reductions for Numeris Grands Sites. Numeris Grands Sites provides digital access to optical fibre rings and is subject to a certain level of competition in some geographical areas.

In its recommendation n°03-891 dated 22 July 2003, ART ruled on residential¹ and professional² subscription tariffs for both metropolitan France and the overseas départements and territories.

The subscription price increases for consumers in metropolitan France are between 2.3% and 2.4% on average. According to France Telecom, this represents an average rise of 1% in the residential subscriber bill. For those qualifying for social tariffs, France Telecom adjusted the amount in the same proportions as for the main subscription. In total, the increase for this category was 2.1%

For subscribers in Guyana, Saint-Pierre and Miquelon, Mayotte and the northern Guadeloupe islands, this measure resulted in:

- an increase in the main subscription price of 14.3%
- an increase of 12.1 % for professional contract subscriptions.

ART estimates that the average increase for households is 7%.

ART considered three main points in its analysis:

- France Telecom's operating accounts;
- changes in the consumer price index;
- International comparisons.

The fact that the operating accounts for analogue access were negative does not in itself justify an increase in the subscription price because these accounts cover all telephone lines whereas a balanced subscription price should be established with reference to the average cost of lines in areas where there is a potential for competition.

¹ Basic telephone subscription (called the "main" subscription) and tariff reductions on the amount of the subscription for certain categories of persons (tariff decision no. 2003062) and Numeris Itoo subscription (tariff decision no.2003070).

² Subscriptions to Professional, Professionnel Présence and Professionnel Numeris contracts (tariff decision no.2003063)

Furthermore, these increases are slightly higher than the annual consumer price index increase (12-month moving average for the index (excluding tobacco) recorded between May 2003 and May 2002.

International comparisons show that:

- for the residential market, France Telecom's tariff is one of the least expensive of the European operators and is lower than the European average for the countries studied, even when the 2.3% increase has been added.
- for the professional market, France Telecom tariffs are higher than the average for European operators.

As a result, ART came down partially in favour of these tariff decisions with the exception of:

- the measures proposed for modifying the monthly price, and in particular the level of the tariff increase, for the Professionnel contracts in Guyana, Saint-Pierre-et-Miquelon, Mayotte and in the northern islands in Guadeloupe.
- the change in the monthly subscription price for the Numéris Professionnel contract

For the professional Numéris contracts, the costs as presented by France Telecom did not appear to justify an increase; this observation was borne out by international comparisons of professional tariffs.

ART handed down an unfavourable recommendation (n° 03-348) on changes to temporary subscriptions. Even though the structural definition of the new offer is more consistent for subscriptions less than or equal to one month, ART questioned the effect that the tariff revision as envisaged by France Telecom would have on users, despite the fact that it was accompanied by additional services. Given the level of the increase for these subscriptions (up to 140% for subscriptions less than one month), and the lack of precise cost data to justify them, ART made an unfavourable recommendation.

3. Access-related services (ancillary services)

France Telecom lodged 11 tariff decisions for so-called «ancillary» services. ART made an unfavourable recommendation (decision n°03-914) on the tariffs for wide-scale introduction of retainer-number services (increase of 70% compared to trials tariffs) given that the trial tariffs were sufficient to balance the operating accounts presented by France Telecom.

ART also made two unfavourable recommendations (n° 03-68 and 03-1070) on call-barring services in the context of transposition of the new regulatory framework given that the second paragraph of article 10 of the universal service directive states: *“Member states shall ensure that designated undertakings with obligations under Articles 4, 5, 6, 7 and 9(2) provide the specific facilities and services set out in Annex I, Part A (2), in order that subscribers can monitor and control expenditure and avoid unwarranted disconnection of service.*

Section A annex I details these services: detailed billing, prepayment facilities, phased connection payments, unpaid accounts and selective outgoing call barring free of charge i.e. *“the facility whereby the subscriber can, on request to the telephone service provider, bar outgoing calls of defined types or to defined types of numbers free of charge”.*

As things stand, ART considers that until the licence specifications for operators responsible for universal service have been transposed, the filtering of defined types of message was comparable to the filtering of certain call categories such as local, regional, national, special service (Audiotel or Télétel), international or fixed-to-mobile calls.

ART had hoped that until the new regulatory framework had been transposed, France Telecom would maintain its current tariff scheme for fixed or flexible selective access in view of the 50/50 breakdown of the installed customer base between fixed and flexible selective-access services.

B. Tariff decisions related to “gifts”

In 2003, France Telecom continued to provide “gifts” as part of its tariff policy. ART was called upon on four occasions to rule on eight France Telecom tariff decisions. According to France Telecom, the objective of these offers was to publicise the new access possibilities for their Service 3000 and Internet services. All of these recommendations were favourable except for the use of the “8” prefix.

C. Call-related tariff decisions

ART made 30 recommendations on France Telecom tariff decisions in 2003 of which nine were unfavourable. They can be broken down as follows:

- metered business calls:
7 of which 3 were unfavourable;
- flat rate tariffs: 14 recommendations of which 4 were unfavourable,
- unlimited time offers 3 recommendations of which
1 was unfavourable,
- non-flat-rate fixed-to-mobile offers. 4 recommendations
of which 1 was unfavourable,
- 2 other favourable recommendations

1. Metered business calls

ART analysed France Telecom's tariff offers primarily on the basis of squeeze-effect tests. These tests seek to establish the extent to which the levels of income generated by the introduction of the tested option are compatible with the costs of an alternative operator, deemed to be efficient and wishing to market an equivalent offer using France Telecom interconnection services. To this end, ART needs to assess both revenues and costs.

As far as revenues are concerned, the assessment takes into account:

- the fact that the Equilibre tariff generates different revenues on average to the basic tariffs used in the professional contracts.
- and the following reductions:
 - network i.e. as a function of the company's total bi-monthly turnover for call types falling within the options of the *Avantage Volume product range*;
 - company location: i.e. as a function of the bi-monthly turnover of a particular location when this option exists in the *Avantage Volume offer*;
 - internal traffic : for company traffic between designated sites under the "*Préférence Entreprise*" option or the corresponding category in the "*Atout RPV*" offers.

To evaluate the costs, ART took into consideration different customer configurations corresponding to sufficiently diverse multi-site configurations so that they would be as close as possible to typical market profiles.

The operator costs taken into account were:

- collection costs using either France Telecom's interconnection offer or a dedicated connection,
- costs of the alternative operators' network (switching and transmission)
- The alternative operator's commercial² costs and overheads
- termination costs paid to France Telecom, to foreign operators for international calls or to mobile operators.

ART compared the combined reductions with the maximum rate of reduction it considered it could authorise in the case of France Telecom without generating a squeeze effect for alternative operators.

Given the progressive nature of the reductions contained in the France Telecom tariff options, the allowable reductions were first calculated for "small" business customer sites assuming that an alternative operator would have to use France Telecom interconnection services to collect the traffic. The reductions were then calculated for "large" sites where the traffic volumes justified a direct connection for traffic collection.

ART then calculated the effects of these offers on several representative customers to take into account the range of possibilities in the France Telecom offers and the different types of potential customer. In particular, ART analysed the following situations:

- a very large customer eligible for the maximum network reduction and requiring traffic collection from both large and small sites
- the effect on a customer that would only benefit from these offers for a limited number of large sites, with service for the rest of the company's sites being available via other France Telecom offers or alternative operators
- the effect of lowering the thresholds required to obtain site reductions for a customer benefiting from a multiple-site offer via France Telecom's interconnection offer.

¹ This case is reserved for large company sites. The squeeze-effect test is carried out with respect to France Telecom's interconnection offers for traffic termination.

² Generally speaking the non-technical costs attributable to the offer.

For national calls, the maximum rates of reduction for 2003 were calculated as:

- 49% for traffic generated by “small” sites
- 54% for traffic generated by “large” sites

The maximum rates of reduction which could be applied to the “*Tarif Equilibre*” offer were calculated to be:

- 46% for traffic generated by “small” sites
- 52% for traffic generated by “large” sites

The maximum reductions which could be applied to the “*Tarif Equilibre*” offer for local calls were calculated to be:

- 26% for traffic generated by “small” sites
- 35% for traffic generated by “large” sites

Moreover, ART noted in its recommendation 03-542 that the tariff squeeze effect in the Avantage Volume local V3 offer could be increased when combined with certain provisions of the “Service Garantie Confiance” offer, which France Telecom planned to propose to customers signing up for the “Avantage Volume local V3” service. In particular, provision was made for a review of the forecast reductions to be carried out after 6 months with the difference between France Telecom’s commitment on the forecast reductions and those actually observed being reimbursed two-fold.

Following these analyses, ART made an unfavourable recommendation on certain parts of the proposed tariffs on three occasions¹. In these cases, France Telecom modified its tariffs to bring them into line with the thresholds calculated by ART and the corresponding tariff decisions were then approved.

2. Flat rate offers

For the flat-rate offers, the same costs were used as previously but the thresholds were not expressed as reductions with respect to the basic tariffs. The average revenues were estimated as a function of the customer volumes that could be expected with an equivalent offer from a France Telecom competitor.

In its recommendation n° 03-633, ART considered that telephony customers benefiting from the Bonus Temps² offer could adapt their effective call duration as a function of the additional minutes credited to their account. The possibility of changing flat-rate packages without losing the benefits

¹ Recommendations 03-232, 03-233 and 03-542

² Which provides 5 to 15 % extra time depending on the length of time the customer contract has been operational.

of “Bonus Temps” will allow certain customers, in particular, to modify their flat rate package to take into account the extra call time available with this offer. This mechanism partly contributes to more effective use of the flat rate package. ART therefore considered that the “Bonus temps” offer would effectively result in a price decrease for calls made using the relevant flat-rate package.

ART recalled that France Telecom had recently lowered prices for calls made using the *Forfait France Pro/PME* package and also planned similar changes for *Forfait Local Pro/PME*¹.

After analysis, ART noted that the tariff levels that would have resulted from the application of this offer to the *Forfait Local Pro/PME* and *Forfait France Pro/PME* flat-rate packages were likely to generate a squeeze effect when using the different bonus-point levels as planned. ART therefore made an unfavourable recommendation.

In its recommendation n°03-737, ART ruled on the tariff levels that resulted from the pricing of the specific *Heures France* and *Heures Locales* flat-rate packages aimed at students. Customers could subscribe to these offers between 30 June 2003 and 30 June 2004. They provided 30% extra call time for the relevant flat-rate packages over a period of 6 to 18 months from the time of subscription. The validity period for these offers, which covered the academic year, was exceptionally long compared to the usual offers, which are generally limited to a few months. Also, the tariff levels gave rise to a squeeze effect for each of the “Heures locales” flat-rate packages in question and resulted in a negative margin of more than 20%. ART therefore made a favourable recommendation on that part of the decision relating to “*Heures France*” and made an unfavourable recommendation on the part concerning the “*Heures locales*” package.

3. Unlimited-time offers

The figures published by ART in its market observatory clearly show the drop in calls between fixed lines. Given the low level of cost elasticity with respect to volumes, a drop in volume causes unit costs to increase. In these circumstances, the main advantage of unlimited-time offers is to boost France Telecom's fixed network usage and lower the usage cost.

¹ See ART recommendations no. 02-1086 and no. 03-507, dated 26 November 2002 and 10 April 2003 respectively.

Notwithstanding the long term effect on volumes, these offers break with current market practices and are a gamble as far as their economic viability is concerned.

For the regulator, three concerns need to be considered.

- the associated revenues must cover the related costs;
- France Telecom's competitors must be able to provide a competing offer under fair commercial conditions.
- the trial must not result in excessive and irreversible customer acquisition, especially for major accounts.

At the end of 2002, ART made a favourable recommendation (02-1200) on widespread introduction of the offer *Trois Numéros Illimités* (3 unlimited numbers). On 10 January 2003, France Telecom lodged a tariff decision to establish an offer combining two separate tariff offers: *Trois numéros Illimités*, and four of the eight flat rate packages in the range of products called *Les Heures France*. This combination was accompanied by a 2 euro price reduction.

As far as any possible squeeze effect was concerned, ART considered that the basic principle of the offer would inevitably cause a price squeeze for high calling rates using the three numbers in question. The result of the trial tended to show, however, that for a sufficiently large population, the effects associated with these usage profiles could be compensated by the number of customers on the one hand and by usage falling outside the *Trois numéros illimités* package on the other. ART therefore assessed the situation of an alternative operator also carrying traffic not included in the *Trois Numéros Illimités* offer. In these conditions, the turnover generated by the overall traffic allowed an alternative operator to cover its costs using France Telecom's interconnection offer.

Furthermore, the offer was limited to off-peak periods and resulted in a significant increase in traffic volumes on the fixed-telephony network, thereby improving fill and lowering call costs.

ART argued during the market release of the *Trois Numéros illimités* offer that the effects associated with this offer could not be compensated entirely by calls not included in the package because of the coupling with the *Les Heures France* flat-rate packages. This was confirmed by the results of the trial provided by France Telecom. ART therefore issued an unfavourable recommendation on France Telecom's tariff decision.

Nevertheless, ART considered that the squeeze effect on the "*Trois Numéros Illimités Heures France*" offer would no longer exist if the price reduction was reduced by at least 50%. Under the circumstances France Telecom modified its tariffs to reduce the reduction to one euro. The modified offer was approved.

4. Calls to mobiles

In its recommendation no. 03-1337 dated 18 December 2003, ART ruled on two France Telecom tariff decisions concerning tariff changes for fixed-to-mobile calls to mobiles on the Orange France and SFR mobile networks for residential, professional and business customers.

The price changes concerned the basic tariffs and Option plus and in the case of professional and business customers, certain options such as *Tarif Equilibre* or the *Forfait Pro/PME vers les mobiles* offer.

ART considered that the retail tariff applicable for fixed-to-mobile calls could be considered to be the sum of the charges for routing calls on the fixed network (which remunerate the fixed-network operator) and call termination charges (which are set by, and remunerate, the mobile-telephone operator).

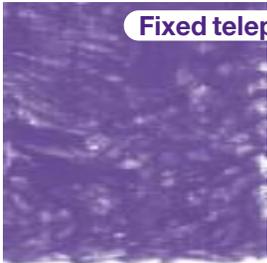
ART recalled that in accordance with its decisions 03-1113 and 03-1114 the mobile operators Orange France and SFR, which are obliged to set cost-oriented interconnection tariffs, had to lower their call termination prices on January 1 2004.

Accordingly, ART expected that the France Telecom retail tariff reductions for fixed-to-mobile calls would be passed on entirely to the consumer. This expectation was based in particular on the fact that this operator, which is considered to have significant market power in the fixed telephone market, has an obligation to set cost-oriented public-telephony-service tariffs¹.

As part of these tariff decisions, France Telecom sent two sets of documents to ART on separate occasions, which provided diverging interpretations of the impact of the planned measures. The second assessment combined three different effects, which respectively took into account, between the two periods in question, an increase in usage for the tariff options, a modification in the usage profiles and changes in the planned tariffs.

ART considered that only the last effect was relevant in measuring the real reduction in fixed-to-mobile call tariffs. It observed that whereas under these conditions, completely passing on the mobile-operator price reductions would have resulted in an average fixed-to-mobile call reduction for the Orange France and SFR networks of approximately 8.8% across all markets, the actual reduction passed on by France Telecom was 4.7%.

¹ See article L.34-1-1 of the Post and Telecommunications Code.



ART expected the Orange France and SFR call termination prices to be passed on entirely in the France Telecom retail tariffs. For the consumer, the fixed-to-mobile call prices should have dropped by 8% instead of only 4.7%

However, to avoid delaying the fixed-to-mobile tariff reductions and the benefits to the consumer, ART did not object to introduction of the planned France Telecom measures.

ART insisted however on the fact that the retail tariff reductions resulting from the proposed measures were insufficient since they did not lead to the call-termination cost reductions due to be introduced by Orange France and SFR on 1 January 2004 being passed on immediately and in their entirety.

In its recommendation no. 03-1010 dated 9 September 2003, ART ruled on the France Telecom tariff decisions concerning:

- the cost of fixed-to-mobile calls for the residential, professional and business markets between metropolitan France and the overseas *départements* and between the different overseas *départements* (4.1),
- the tariffs towards Orange Caraïbes mobiles for internal calls within the overseas *départements* of Martinique, Guadeloupe and Guyana and tariffs for calls to SRR mobiles within La Réunion and Mayotte. (4.2),
- the establishment of a tariff option called *Avantage Mobiles Plus DOM 2* (4.3).

4.1. Fixed-to-mobile tariffs between Metropolitan France and the overseas départements and between the overseas départements

The call tariffs were identical to those for the same type of call towards a fixed line with the exception of calls between the *départements* of the French West Indies and calls destined for operators¹ holding a licence for the islands of Saint-Martin and Saint-Barthélemy for which specific tariffs already exist.

As is the case for all fixed-to-mobile calls, France Telecom nevertheless paid call termination charges to the mobile operators for this type of call.

The France Telecom operating accounts for these calls, which are charged in accordance with the current pricing for calls to fixed lines and modified to include a termination charge to be paid to the mobile operators, showed significant deficits.

France Telecom therefore planned to introduce specific tariffs for this type of call in its tariff decision, to make provision for mobile termination charges.

¹ Dauphin Telecom, Saint-Martin Mobiles and Saint-Martin and Saint-Barthélemy Tel Cell

ART did not object in principle to this being taken into account. It noted that the proposed France Telecom tariffs, which included the mobile termination charge, resulted in significant price increases. ART considered however that based on the information supplied by France Telecom, the margins resulting from these tariffs were no higher than those observed in metropolitan France. After concluding its assessment, ART made a favourable recommendation on the new tariffs.

4.2. The tariffs towards Orange Caraïbes mobiles for calls within the Caribbean départements and for calls to SRR mobiles within the La Réunion and Mayotte districts

In 2003 ART designated these two operators as having significant market power¹. As a result, they are obliged to provide cost-oriented interconnection tariffs. In fact, Orange Caraïbes and SRR had lowered their call-termination tariffs in 2003.

Following these reductions France Telecom decided to reduce its call charges:

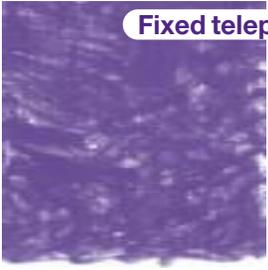
- towards Orange Caraïbes mobiles within the Caribbean départements
- towards SRR mobiles within La Réunion and Mayotte.

ART considered that the proposed reductions for the retail fixed-to-mobile tariffs were consistent with the Orange Caraïbes and SRR call-termination tariffs. ART made a favourable recommendation on the introduction of these new tariffs.

4.3. The establishment of an option called “Avantage Mobiles Plus DOM 2”

The *Avantage Mobiles Plus DOM 2* tariff offer for the professional and business markets offered volume reductions for calls originating from within the overseas départements and Mayotte and destined for the overseas départements and metropolitan France. The maximum reduction available with these options was 12%. ART considered that under these conditions, this offer could generate a squeeze effect on other operators for calls towards mobiles in metropolitan France. As a result, ART made an unfavourable recommendation on the commercial introduction of this offer as it stood.

¹ See decision no. 02-1191 dated 19 December 2002 which completed decision no 02-593, dated 18 July 2002, establishing the list of operators with significant market power in 2003.



ART actions in the different market segments

CHAPTER 2

Mobile telephony

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Mobile Telephony

I. THE MARKET

A. The market (metropolitan France, overseas départements, Mayotte and Saint-Pierre-et-Miquelon)

1. Changes in the customer base

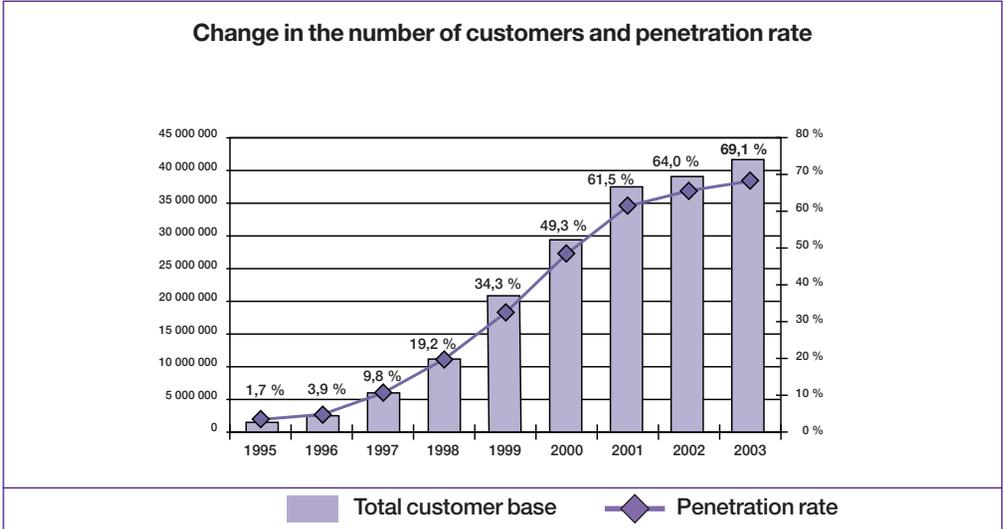
Changes in the customer base	2000	2001	2002	2003	Growth in 2003 (%)
Number of customers	29 681 300	36 997 300	38 585 200	41 683 100	8,0 %
- flat rate	16 403 700	18 936 600	21 479 700	24 536 600	14,2 %

Source: ART

As of 31 December 2003, there were more than 41.6 million people in France with a mobile, corresponding to a penetration of 69.1%¹. The annual mobile-base growth in 2003 was 8% (compared to 4% in 2002) representing more than 3 million new customers.

¹ The penetration rate is obtained by dividing the total number of radiotelephony customers by the French population of 60 323 400 (60 185 800 people according to the INSEE July 1999 census, 131 300 people in the administrative area of Mayotte according to the 1997 INSEE census and 6 300 people for the Saint- Pierre-et-Miquelon administrative area).

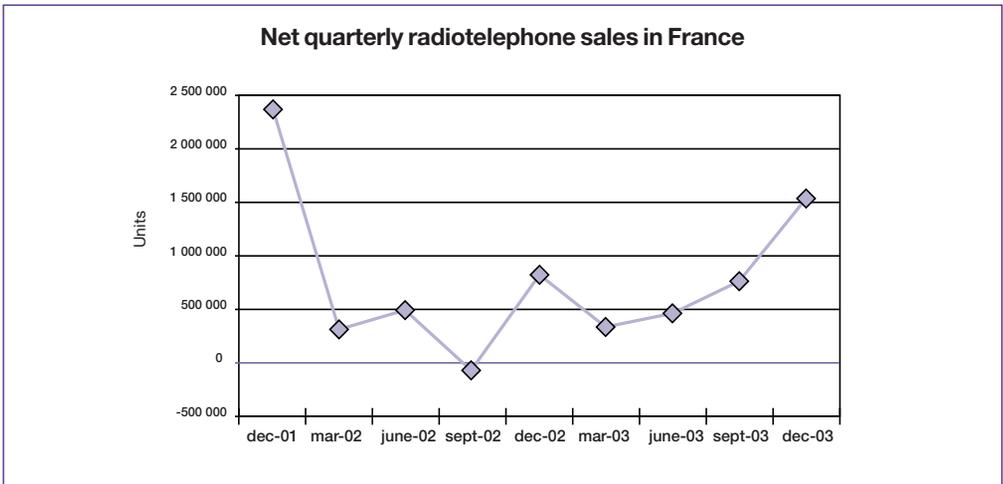
The graph below shows trends in the number of customers and the mobile penetration rate in France.



Source: ART

2003 was marked by strong growth in the number of customers especially compared to the customer base in 2002, which did not grow as quickly as in previous years. Although net growth for the first six months of 2003 was identical to the same period in 2002 at 0.8 million customers, there was a rebound in net growth in the total base for the second six months, with 2.2 million new customers compared to 0.8 million the previous year.

The following graph shows net quarterly growth of the mobile base over the last two years



Source: ART

As of 31 December 2003, Orange France had 20.3 million customers, SFR 14.7 million and Bouygues Télécom 6.6 million.

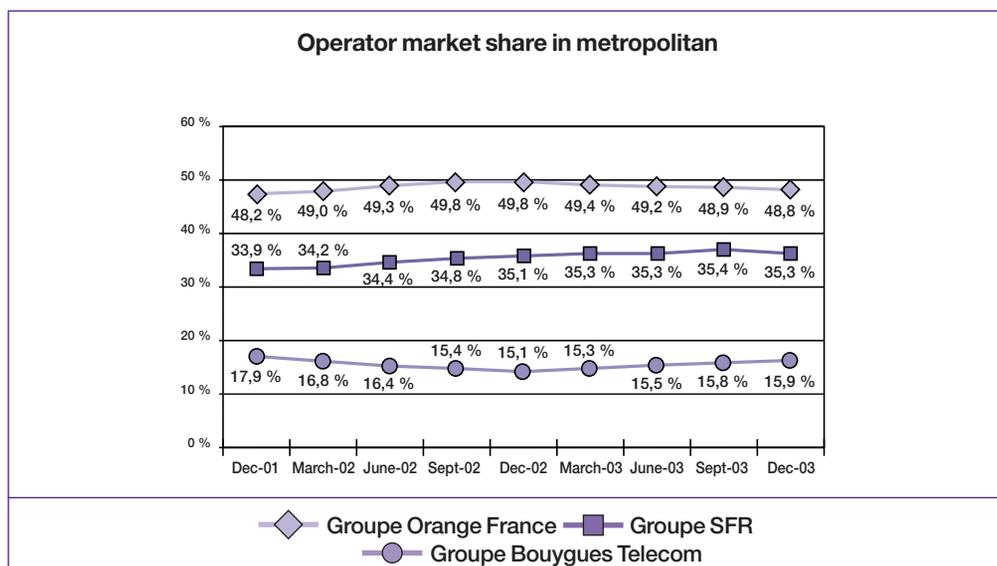
Net customer growth for the three operators between end 2001 and end 2003 is shown in the following table.

Customer-base growth per operator (metropolitan France and overseas départements)	2001	2002	2003
Orange	3 512 000	1 392 800	1 113 100
SFR	2 395 500	991 600	1 177 500
Bouygues Telecom	1 408 700	-796 500	807 300
Total	7 316 200	1 587 900	3 097 900

Source: ART

- Orange France won 1.1 million new customers in 2003 compared with 1.4 million the previous year and had 48.8% of the total mobile customer base as of 31 December 2003,
- SFR, the second operator in terms of market share, grew its customer base by 1.2 million customers in 2003. Its market share stood at 35.3% end 2003,
- Bouygues Telecom, which had registered a drop of 0.8 million customers in 2002 (partly due to the change in the validity period for pre-paid cards from 12 to 8 months), grew its customer base by 0.8 million users. Its market share stood at 15.9% at the end of December 2003.

Changes in the three operators' market share



Source: ART

At the end of 2003, the mobile base in the overseas départements grew from 1.2 to 1.3 million customers or 4.2% (52 000 new customers). 2003 growth in the overseas départements was therefore lower than in 2002 when it reached 15.5%. Overall mobile penetration in the overseas départements is the same as for metropolitan France. It should be noted that the statistics for the Saint Pierre-et-Miquelon administrative area have been included since June 2003.

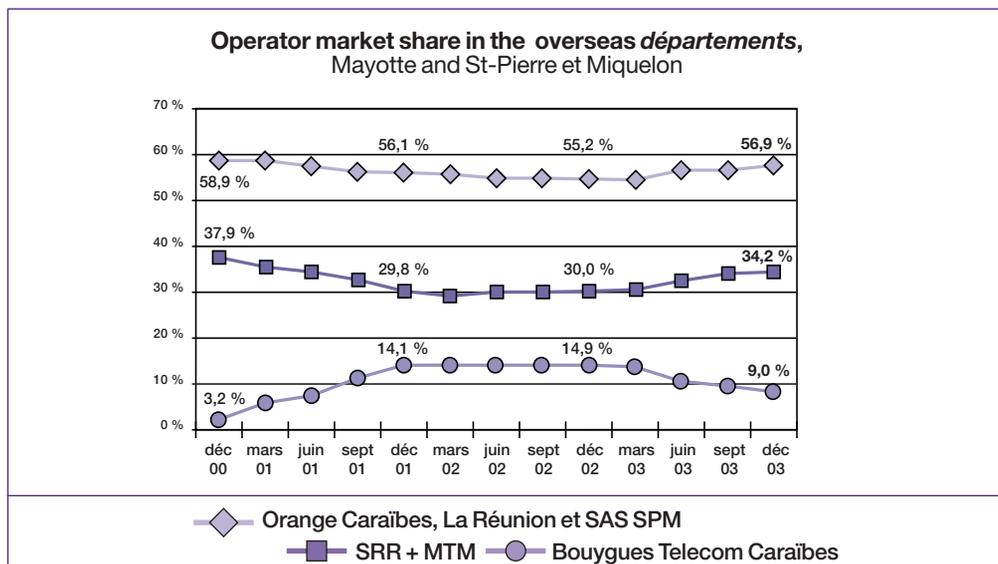
The following table shows the geographical presence of commercial GSM operators in the overseas départements as of 31 December 2003.

Geographic presence of operators offering commercial services				
	Groupe Orange	Groupe SFR	Groupe Bouygues Telecom	Other opérateurs
Guadeloupe(*)	Orange Caraïbes		Bouygues Telecom (Caraïbes)	Dauphin Telecom(*)
Martinique	Orange Caraïbes		Bouygues Telecom (Caraïbes)	
Guyane	Orange Caraïbes			
La Réunion	Orange La Réunion	SRR		
Mayotte		MTM		
St-Pierre et Miquelon	SAS SPM			

Source: ART

(*) Dauphin Telecom opened commercial mobile service in the Saint-Martin and Saint-Barthelemy islands on 15 July 2003

Changes in market share for operators in the overseas *départements* and Mayotte



Source: ART

The other GSM-licence holders in the overseas *départements* (Outremer Télécom, Oceanic Digital, Saint Martin & Saint Barthélemy TelCell) had not launched commercial services in 2003 and therefore do not appear in the data shown above, with the exception of Dauphin Telecom which opened commercial mobile services on 15 July 2003. This operator's GSM activity is limited to the Saint Martin and Saint Barthélemy islands, which means that there is a relatively small number of customers compared to the other operators which are present in one or several overseas *départements*.

2. Subscription cancellations

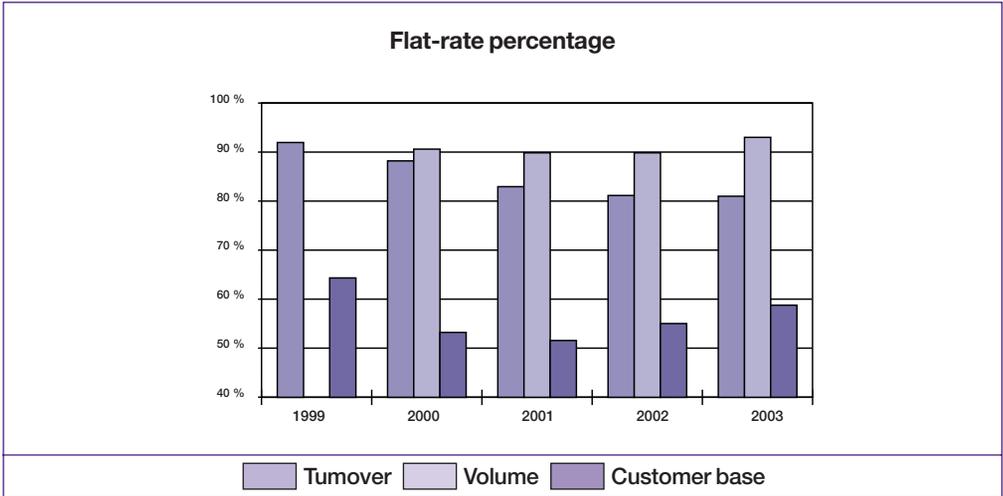
In 2003, a total of 8.1 million customers terminated their subscriptions, compared with 10.7 million in the previous year.

Annual churn is calculated by dividing the number of cancellations for the period in question by the average customer base for the same period. The overall cancellation rate was 21.1% for the full year 2003 compared with 29.2% the previous year. The cancellation rate in metropolitan France for Orange France, SFR and Bouygues Telecom was 18.4%, 23.2% and 24.6% respectively.

It should be noted that the cancellation data provided does not include the overseas *départements*, Mayotte and Saint Pierre-et-Miquelon.

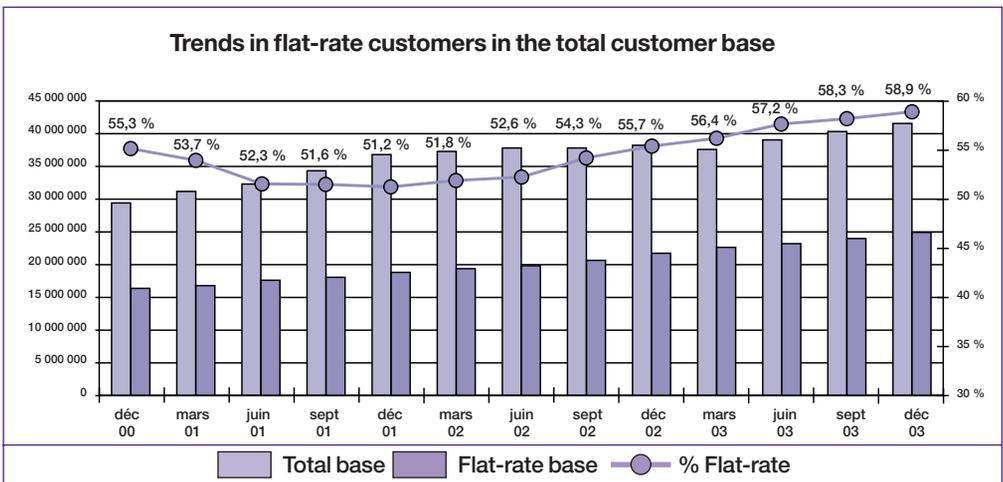
3. Flat-rate tariffs

The number of flat-rate customers in the total customer base increased in 2003 with 58.9% of all customers on flat-rate tariffs (+3.2% compared to the previous year). They accounted for 81% of operators' turnover and 94% of total traffic. This increase in the number of subscribers preferring flat rates reverses the trend observed in 2001 when there was a drop of 4.1%. France had 24.5 million subscribers on flat-rate tariffs as of 31 December compared to approximately 21.5 million the previous year.



Source: ART

The following graph illustrates trends in customers using flat-rate tariffs as a function of the total customer base.



Source: ART

The following table shows trends in flat-rate customers as a function of the total number of customers for each operator between 2002 and 2003. The proportion of flat-rate customers increased significantly for all three operators.

Share of flat-rate customers per operator	December 2002	March 2003	June 2003	September 2003	December 2003
Orange	55,6 %	56,2%	56,6%	57,4%	57,9%
SFR	53,1%	54,2%	55,4%	56,9%	57,7%
Bouygues Telecom	62,0%	62,5%	63,3%	64,0%	64,4%

Source: ART

4. SMS in metropolitan France

Strong SMS-traffic growth in metropolitan France continued in 2003. For the 4th quarter 2003 alone, 2.3 billion SMS were sent, taking the total yearly traffic to more than 8 billion messages. This corresponds to an average of 19.6 SMS messages per customer during the 4th quarter 2003 compared to 16.1 for the same quarter the year before.

B. Changes in turnover and volumes

1. Changes in turnover

(€ millions)	2000	2001	2002	2003	Growth (%)
Mobile telephony (*)	7 761	10 000	11 768	13 257	+12,7%
- Flat rates	6 851	8 360	9 636	10 784	+11,9%
- Pre-paid cards	910	1 640	2 132	2 473	+16,0%

Source: ART

(*) includes data transport on mobile networks.

(€ millions)	2000	2001	2002	2003	Growth (%)
Mobile services	7 761	10 000	11 768	13 257	+12,7%
- telephony	7 609	9 595	11 093	12 192	+9,9%
(international incoming)	269	323	424	460	+8,5%
- data transport	152	405	676	1 065	+57,5%

Source: ART

2. Trends in volumes

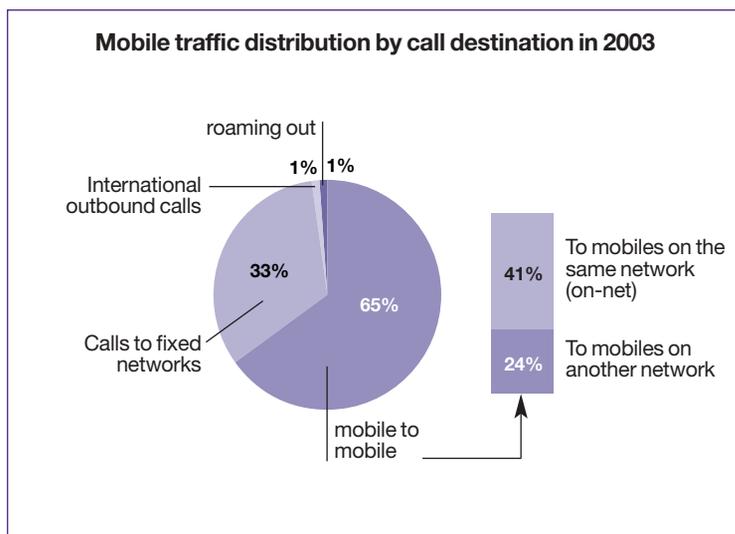
(millions of minutes)	2000	2001	2002	2003	Growth (%)
Mobile telephony	35 437	44 419	51 844	62 821	+21,2 %
- flat rates	31 945	39 793	46 646	59 024	+26,5%
- pre-paid cards	3 492	4 626	5 197	3 797	-26,9%

(millions of minutes)	2000	2001	2002	2003	Growth (%)
Mobile telephony (*)	35 437	44 419	51 844	62 821	+21,2 %
- mobile-to-fixed calls	16 269	17 665	18 710	20 892	+11,7 %
- calls to mobiles on same network	11 715	16 157	19 939	25 116	+26,0 %
- calls to mobiles on third-party network	6 840	9 521	11 973	15 165	+26,7 %
- international mobile calls	498	692	713	833	+16,8 %
- outbound roaming	318	385	509	815	+60,1 %

Source: ART

(*) excl. data transport

Mobile network outbound traffic continues to grow strongly (+21%) indicating that usage is increasing due to fixed/mobile substitution. Volumes have experienced double-digit growth irrespective of the call destination.



Source: ART

Traffic breakdown by call destination highlights the significance of inter-mobile traffic, which represents two thirds of mobile traffic. On-net traffic (towards other mobiles on the same network) forms the bulk of the traffic notably because it includes voice-mail traffic for which the customer is often not charged.

3. Data-service development

Volume (millions of minutes)	2000	2001	2002	2003	Growth
No. SMS	1 471	3 508	5 523	8 490	+53,7 %

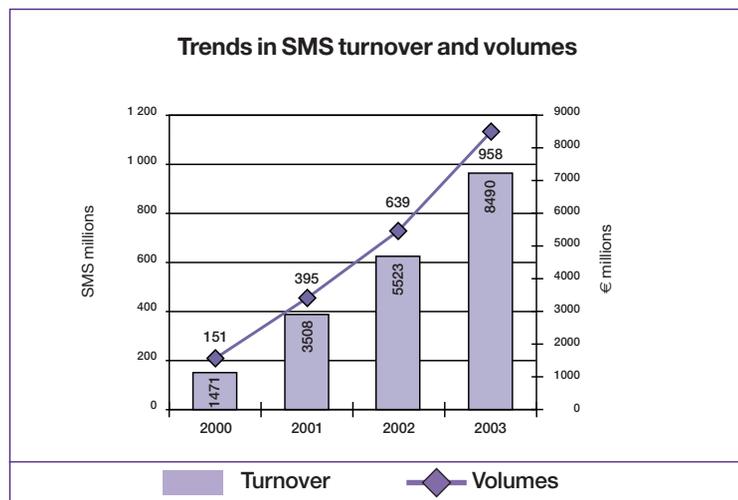
Source: ART

More than 8 billion SMS were sent in 2003 representing an increase of more than 50% over 2002. The very large increase confirms the fact that this market segment is one of the dynamic factors driving growth in the mobile telephony market.

Turnover (€ millions)	2000	2001	2002	2003	Growth
Data transport	152	405	676	1 065	+57,5 %
- SMS	151	395	639	958	+49,9 %

Source: ART

The data-transport share continues to grow steadily and now generates more than 1 billion euros in turnover. This growth is due to the continued success of SMS and new multimedia services such as MMS.



Source: ART

4. Average monthly income from outgoing calls per subscriber

	2000	2001	2002	2003	Growth
Avg monthly revenue/subscriber (*) (€)	25,7	25,1	26,0	27,5	+5,8 %
Avg monthly volume/subscriber (**) (minutes)	117,7	111,3	114,5	130,4	+13,9 %
Avg number SMS per subscriber (units)	4,9	8,8	12,2	17,6	+44,3 %

Source: ART

(*) Average monthly revenue per subscriber is calculated from mobile telephone revenue including data transport as a function of the average annual subscriber base

(**) Average monthly volume per subscriber is calculated using voice traffic only.

More than 17 SMS/subscriber were sent on average in 2003 compared to 12 in 2002, indicating the increasing popularity of this type of communication with an increasing number of users.

(euros)	2000	2001	2002	2003	Growth
Average monthly revenue per subscriber (flat rate)	39,2	40,2	39,8	39,1	-2,0 %
Average monthly revenue per subscriber (pre-paid)	8,2	8,6	10,1	12	+19,0%

(minutes)	2000	2001	2002	2003	Growth
Average monthly volume per subscriber (flat rate)	183,0	191,3	192,8	213,8	+10,9%
Average monthly volume per subscriber (pre-paid)	27,6	24,2	24,7	18,5	-25,1%

Source: ART

C. Data-service development

Dramatic growth in data services is anticipated when UMTS and high performance mobile handsets are introduced. Consumers already have access to an extremely rich and varied range of multimedia mobile services via GSM/GPRS networks, preparing the ground for third-generation services.

There are two drivers in development of 3G services: the first is linked to the use of GPRS-based services, sometimes referred to as “2.5G” services. The second is linked to the use of fixed-Internet services: Indeed a number of consumers are already familiar with the advanced services available using broadband connections.

Comparison of theoretical bit rates likely to be offered (downstream)

theoretical bit rate	GSM	GPRS	EDGE	UMTS
minimum bit rate		21.4 kbps	43.2 kbps	144 kbps
intermediate bit rate		85.6 kbps	172.8 kbps	384 kbps
maximum bit rate	9.6 kbps	171.2 kbps	345.6 kbps	2 Mbps

Sources: ART

This table presents the theoretical bit rates associated with the different technologies used for mobile communications. It should be noted that the bit rates are given in the downstream, or network-to-user direction. The theoretical maximum bit rates allowed in the standard are not achieved in practice.

Today, the use of 2.5G services in multimedia packages seems to be gathering pace. This is due to the availability of new multimedia terminals, compatible with these services and offering new functions such as colour screens, integrated cameras and the possibility of sending MMS (Multimedia Message Services). Demand for this type of terminal increased in 2003 with a wider range of content and services becoming available through offers from Orange World, Vodafone Live and I-Mode as well as from multi-operator kiosks such as Gallery or SMS+

Service packages similar to those offered by French operators are available in other countries. They are often defined and launched at European level with local adaptations for each individual country. They are truly pan-European services: the Orange World offer is being launched in six European countries, Vodafone Live in ten countries and I-Mode in six countries.

At least six pan-European multimedia service packages have already been launched in Europe during the 4th quarter 2003 (*Vodafone Live*, *T-Zone*, *Three*, *mmO2 Active*, *i-Mode* and *Orange World*). They are available to customers in 16 European countries.

Country	Operator
Germany	Vodafone
	mmO2
	T-Mobile
Austria	i-Mode (E-Plus)
	T-Mobile
Belgium	Hi3G
	Orange
Denmark	i-Mode (Base)
	Orange
Spain	Vodafone
	i-Mode (Telefonica)
France	Orange
	Vodafone
	i-Mode (Bouygues Telecom)
Greece	Vodafone
Hungary	Vodafone
Ireland	Vodafone
	mmO2
Italy	Vodafone
	i-Mode (Wind)
	Hi3G
Netherlands	Orange
	Vodafone
	T-Mobile
	i-Mode (KPN)
Portugal	Vodafone
Czech Republic	T-Mobile
United Kingdom	Orange
	Vodafone
	mmO2
	T-Mobile
	Hi3G
Sweden	Vodafone
	Hi3G
Switzerland	Orange

II. ART ACTIONS

A. GSM

1. Designation of operators with significant market power

In 2003, ART published a list of operators considered to have significant market power (SMP) in the public mobile-telephony market. This list is valid for 2004 until the new regulatory framework comes into force. (See part 3, chapter 4). The following were declared to be SMP operators:

- In metropolitan France: Orange France and SFR
- in Martinique, Guadeloupe and Guyana: Orange Caraïbes
- in la Réunion: SRR

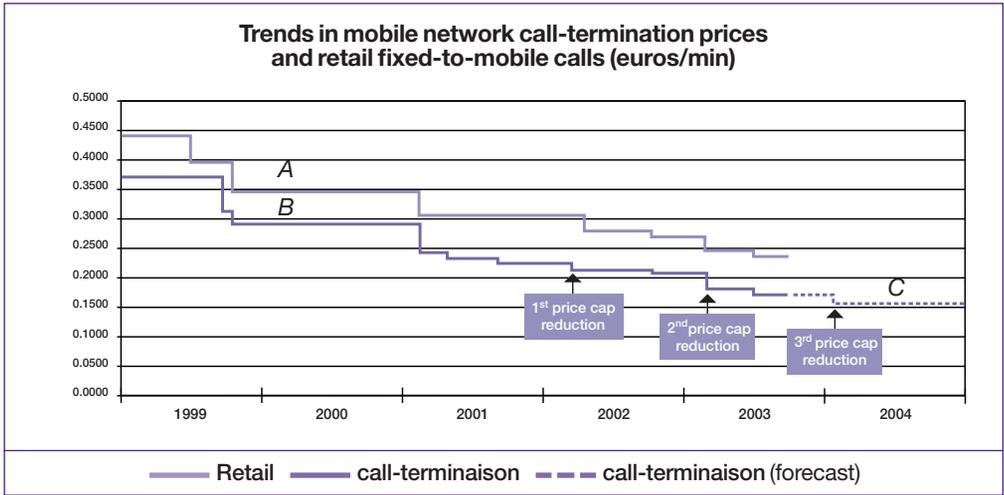
2. Fixed-to-mobile calls

2-1. Price cap

In November 2001, ART decided to lower average call-termination charges by 40% over a period of three years for SMP operators in the interconnection market. ART indicated that its objective in lowering call-termination charges was to allow the savings for fixed-to-mobile calls to be passed on to customers.

- 16 November 2001: ART set a price cap for 2002, 2003 and 2004 (decisions 01-970 and 01-971 dated 16 November 2001)
- 1 March 2002: first price-cap reduction
- 1 January 2003: second price-cap reduction
- 18 December 2003: ART ruled on two France Telecom tariff decisions concerning tariff changes for fixed-to-mobile calls on the Orange France and SFR mobile networks, (recommendation n°03-1337)
- 1 January 2004: third price-cap reduction, (ART ruled on two France Telecom tariff decisions)

2.2. Trends in fixed-to-mobile tariffs



Source: European Commission

Curve A represents the average per-minute price of a retail call from a France Telecom fixed line to the three mobile operators. The average prices were calculated using a basket containing 75% peak-hour calls and a statistically average call time of 100 seconds.

Curve B represents the average per-minute price of call termination (TA) for the three mobile operators (interconnection tariff).

The discontinuous curve C shows the forecast average price for call termination on the three mobile operators' networks taking into account the 2004 price cap for Orange and SFR (2003 and 2004 public tariffs for Orange France and SFR and July 2003 tariffs for Bouygues Telecom).

3. Service quality

For the 7th consecutive year, ART carried out a survey to assess the quality of service offered by second-generation mobile networks in metropolitan France as perceived by users of the three operators' networks on a daily basis. Apart from service availability, the survey also sought to assess call continuity and audio quality. Quality measurements were also carried out on short message services (SMS) and for the first time this year, on packet mode data transfer.

The survey was carried out by the consultancy Directique using the methodology and specifications defined by a working group made up of the mobile operators and consumer and user groups.

The survey was launched in November 2003 and continued into 2004. The results will be published mid 2004.

The main changes compared to the 2003 quality-of-service survey are as follows:

- packet mode data transfer service: for the first time the quality of service parameters for GPRS were measured in urban areas with more than 400 000 inhabitants.
- mobile telephony service: the mobile-telephony-service assessment was enhanced this year to take into account urban areas with 20 000 to 50 000 inhabitants (experimental measurements were carried out in 2001) and high-traffic motorways.
- Survey period: the measurement campaign takes place over a 6-month period with over 11 000 measurements being made on each operator's network so that the results are representative of customer use throughout the year.

4. Mobile coverage

During the interministerial committee meetings on regional development (CIADT), which took place from July 2001 to December 2002, the government launched a programme to extend national mobile-telephony coverage. An interministerial steering committee chaired by the Minister for Regional Development was set up to define and rapidly implement the programme for extending GSM coverage in the "dead zones"¹ in collaboration with the mobile operators and local authorities. ART is an active contributor to this committee.

The government programme resulted in a national agreement being signed on 15 July 2003 between the government, associations of elected representatives and the operators. The objective of this agreement is to cover town centres, major roads and busy tourist areas lying within the "dead zones".

The first step of the governmental action plan was to send an interministerial memorandum to the regional *Préfets* on 25 November 2002 requesting them to update the coverage requirements identified during the winter of 2001-2002 in collaboration with the operators and elected representatives. As a result of this survey approximately 3000 communes meeting the action-plan requirements were identified.

¹ "Dead zones" are areas not covered by any one of the three mobile operators.



The first deployment phase comprising 1 250 sites was launched on 15 July 2003 to enable over half of the identified communes to receive coverage. The rollout was in accordance with the technical and financial terms defined in the national agreement and in particular, allowed the mobile operators to install active equipment on the vantage points provided by the local bodies. The terms have yet to be defined for the second phase, which will cover the remaining communes as identified above and is planned for 2005-2006. Approximately 920 sites have been identified for phase 2.

There are two possible technical solutions for providing service from a site: local roaming and infrastructure sharing. In the first case, a single operator installs its active equipment on the passive infrastructure provided by the local authorities; the operator then offers roaming facilities to the other two operators for the area covered. In the second case, each operator installs its active equipment on the passive infrastructure provided by the local authorities.

The local roaming solution is most commonly used; the infrastructure-sharing solution is used only when technically or financially justified.

The main steps for commissioning the sites planned in phase 1 of the “dead-zone” programme are as follows:

- Identify sites where active infrastructure can be installed to cover the area in question. This phase is the operators' responsibility.
- Locate a site within the above zone (i.e. vantage point) with passive infrastructure on which the active equipment can be installed. The local authorities are required to submit a proposal to the operators, which then identify a given site as being acceptable. Responsibility for this phase is shared between the operators and the local authorities
- Make passive infrastructure and any required works available to operators for installation of active equipment. This phase is the responsibility of the local authorities.
- Launch commercial service from the site following equipment installation and commissioning tests by the operators. This phase is the responsibility of the operators.

4.1. Implementation of local roaming

Local roaming is operational when the site is first put into service. Osne-le-Val (Haute Marne) will be operational on 5 February 2004.

Dead zones will be covered with local roaming for 70% of the areas identified. This solution is generally the least expensive way of achieving the public-interest objective of improving coverage.

ART pays particular attention to ensuring that roaming users have access to the main services provided by their operator under tariff and access conditions that are as transparent as possible.

In this respect, it is important that customers can not only access their operator's traditional voice services (including calling number display and call waiting etc) when in a roaming zone served by another operator, but that they can also exchange short messages (SMS), access data services, or consult their voice mailbox.

4.2. Adoption of cost and revenue-calculation mechanisms

In accordance with the provisions of the 15 July agreement and the ministerial decree dated 14 November 2003 concerning aid for local authorities leasing infrastructure destined for mobile telephony networks, ART developed a draft method in the second half of 2003 for calculating the costs and revenues associated with the operation of this type of infrastructure. ART will adopt the proposed calculation method in the first half of 2004 after consulting the players involved, and in particular the operators and associations representing elected local-authority representatives. The calculation methodology will therefore be ready for the first assessment, which will be carried out in 2004.

Assessing the national costs and revenues for each operator will make it possible to calculate the rental fee payable for the use of the infrastructure in accordance with the above decree.

If the costs are greater than revenues on a national basis, the rental fee will be set at the nominal sum of 1 euro per site. If the costs are lower than revenue, the rental fee will be calculated such that the cost of operating sites in the dead zones will be financially neutral for each operator.

5. Mobile number portability

Mobile number portability is a mechanism that allows a subscriber to change mobile operators while keeping the mobile telephone number allocated by the original operator. Being able to change service providers without changing telephone number frees up the market by increasing competition. Mobile number portability has been operational in France since 1 July 2003 for all customers irrespective of the mobile subscription type (pre-paid or flat-rate subscription). There had been 100 000 number portability transactions as of 1 May 2004. (See Part 3, chapter 2, B3)

6. MVNOs

MVNOs are virtual mobile network operators that do not have their own infrastructure or frequencies but propose services comparable to those

provided by the mobile operators. They are therefore obliged to use the mobile operators' installations. They purchase wholesale services from network-based mobile operators and resell them in the retail market. This type of operator has developed in a number of European countries particularly the UK, the Netherlands and in the Nordic countries etc. MVNOs are either distributors (for example the Virgin Group or Carphone Warehouse/The Phone House in the UK), or fixed-network operators (for example Tele2 which is an MVNO in 7 European countries) wishing to expand their service offering to include mobile.

ART wished to assess the economic and regulatory issues for this type of player early on and commissioned a study from the CCR (Radiocommunications Consultative Committee), which was published on its website in March 2002.

ART made a recommendation on MVNOs during the settlement of a dispute between Tele2 France and Orange France occurring after the breakdown of negotiations between the two companies. In its decision, which was adopted on 17 December 2002¹, ART considered that irrespective of the technical and financial issues raised by the parties, ART could not oblige Orange to open its network to an MVNO under the regulatory framework in force at the time but that the new legal framework resulting from the transposition of the “telecom package” could allow ART to rule on the relevance of such an obligation.

This is because the Commission has defined 18 relevant markets in accordance with the European directives adopted in 2002 for which the national regulatory authorities can exercise ex-ante control. These include the wholesale access and originating-call markets for mobile networks. This is the market that supplies companies wishing to become MVNOs. It is only after analysing this market that existing mobile operators can be obliged, as the case may be, to accept an MVNO.

In any case, ART remains favourable to commercial MVNO agreements being concluded between mobile operators and companies wishing to distribute mobile services.

¹ Decision no.02-1192 dated 17 December 2002

7. Mobiles and disabled persons

ART launched an initiative end 2002 in association with key industry players to improve the accessibility of mobile telephone and multimedia services for disabled persons. This initiative is part of the European Year of People with Disabilities and was presented to the CCR, (Radio-communications Consultative Committee) which comprises representatives of operators, users and key experts, particularly manufacturer representatives.

At the beginning of April 2003, ART asked Philippe Balin, a member of the CCR, to chair a working group comprising operators and manufacturers interested by this question and to present a report on the current situation and thinking on accessibility for mobile services.

The purpose of this report, which was presented to the CCR in October 2003, was to provide input to the various parties in both the public and private sector working on technology accessibility for disabled people.

In particular, it highlighted a certain number of existing initiatives, such as operator invoices in Braille, which are worth continuing. In this respect, it is encouraging to note the marked commitment of the operators and manufacturers taking part in the working group and their willingness to produce tangible results within reasonable timeframes.

The working group made a certain number of recommendations aimed at the players, in the following two areas particularly: improvements in terminal accessibility and implementation of adapted services on the operators' networks.

Finally, the rapporteur proposed a certain number of actions in the report, which were well received overall by all the CRR members. ART published this report on its web site in November 2003 so that it could be consulted by all those interested in the issues surrounding accessibility.

ART plans to follow up implementation of the commitments made in the context of the working group in collaboration with the CCR.

B. GSM licence renewals

France is the first European Union country to have given notice of GSM licence-renewal conditions.

The 15-year GSM licences for Orange France and SFR will expire on 25 March 2006. In accordance with the Post and Telecommunications Code, ART proposed a set of renewal conditions to the Minister responsible for

Telecommunications, who in turn notified the two operators on 25 March 2004 i.e. two years before the expiry date of their existing licences. The financial terms of these renewals are set by the government.

1. Two-part annual fee

The fee-mechanism retained by the government for operators using GSM frequencies is based on a two-part annual fee:

- the first consists of a fixed annual component of 25 million euros.
- the second is an additional fee equivalent to 1% of the turnover generated by the GSM activity, similar to the mechanism planned for UMTS frequencies. ART was pleased with the decision to set licence fees at a reasonable level. This decision will encourage investment and allow customers to benefit from improved networks and services since it is neutral from a technological point of view. i.e. 2nd and 3rd generation mobiles are treated in the same way.

2. Renewal of the Orange and SFR licences

ART has been preparing the licence-renewal conditions openly and in consultation with the industry since the beginning of 2003. The summary of the public consultation held in July 2003 was published in January 2004 and revealed that no new players were planning to request GSM frequencies in metropolitan France. ART proposed licence renewals with unchanged frequency allocations for those operators wishing to continue offering GSM/GPRS services in the 900 MHz and 1800 MHz bands that had been fully allocated to them under the terms of the existing licences.

3. New obligations resulting from the “telecom package”

The new framework resulting from the telecom-package directives currently being transposed into national law, requires operators to comply with the provisions for general authorisations. Therefore, GSM and UMTS mobile operators in metropolitan France or in the overseas départements must comply with the new obligations.

Accordingly, they will be required to report on improvements in mobile telephony accessibility for disabled persons on an annual basis and establish a system for identifying the terminals and services best suited for different types of disability.

This obligation follows on from the initiative launched by ART end 2002 setting up a working group of operators and manufacturers chaired by Philippe Balin (see above).

The practice of blocking terminals should also be limited (SIM card blockage). Currently, operators are obliged to systematically provide subscribers with the code for unblocking the SIM card free of charge after a period of 6 months. From now on, this obligation will apply as soon as the contractual commitment between the operator and the customer has expired or at the end of six months at the latest. Customers subscribing to an offer without commitments will be able to obtain the code for unblocking their terminal immediately.

Environmental protection constraints will also be imposed on operators. Accordingly, they will be obliged to make an up-to-date list of radio sites available to the public and to provide information to the mayor on radio installations in any particular commune if requested.

Operators will also be required to allow customer terminals to be configured freely to facilitate access to other access or service suppliers.

Finally, anti-theft measures have been reinforced for improved effectiveness. Operators in metropolitan France will therefore be obliged to put the IMEI numbers in a data base for identifying terminals that have been declared stolen and to block the terminals accordingly.

4. Reinforced coverage obligations

Operators will also be required to respect the provisions of their individual licences for the use of frequency resources. In this respect, two main changes should be noted. First, GSM operators in metropolitan France will be required to ensure coverage of “dead zones” as identified in the second phase of the government programme (see above). Consequently, when these obligations have been taken into account, Orange France and SFR will have covered 99% of the population in metropolitan France as opposed to 90% at present as well as the main roads in each département. Finally, they will be required to provide information openly to the public on network coverage.

The second change will require operators to provide a minimum offer including an interpersonal messaging service (SMS, MMS, email, etc.) and packet mode data services (using GPRS for example), which comply with the minimum quality of service requirements in addition to telephony services. Finally, they will be required to supply at least one service based on user localisation.

These new obligations are aimed at taking user interests into account and ensuring favourable conditions for the continued success of mobile telephony and the transition to third-generation services.

C. UMTS

1. Verifying operators' obligations

On 11 March 2004, ART reported on the procedure, initiated in August 2003, for verifying Orange France and SFR's compliance with their UMTS rollout obligations. The UMTS licence conditions for the two operators required SFR to launch commercial service in March 2002 and Orange France in June 2002. Furthermore, the minimum population coverage was set at 58% for Orange France and 75% for SFR.

ART noted that the two operators had not launched commercial 3G services on the planned dates and that the coverage requirements had not been satisfied as of 21 August 2003. ART considered that the prevailing technical and economic conditions prevented the operators from complying with their rollout obligations.

In order to have as comprehensive a picture as possible of the technical and economical situation ART used information on real and forecast network rollout provided by the operators, and interviewed ten or so industry players including Orange France, SFR, Bouygues Telecom and most of the industry players

The information supplied by the two UMTS operators and the industry players showed that there was a discrepancy between the UMTS network rollout dates initially planned in the licence conditions and the dates that can reasonably be envisaged today. This delay has been estimated as being between 24 and 30 months and can be objectively explained by conditions that exist Europe-wide.

The reasons are primarily industrial in nature and are linked in particular to the difficulties encountered in manufacturing the dual mode GSM/UMTS terminals, which contain, for instance, a "handover" function and have battery autonomy equivalent to GSM terminals. Moreover, weak economic conditions in this sector also had an impact on the investments required to iron out technology and network problems. Finally, the operators ran into operational difficulties during network rollout.

Consequently, the regulator has revised the obligations for the two 3G network operators.

2. New obligations for operators

The new rollout obligations for SFR and Orange France are as follows:

- commercial service launch has been put back to 31 December 2004 for both operators. As of this date, each operator must provide service in at least 12 of the largest urban areas.
- The first due date for verifying Orange France and SFR network coverage obligations has been put back to 31 December 2005. Each operator will be required to cover a minimum of 58% of the population by this date. During the call for candidates, ART highlighted the importance of providing 3G services to as many people as possible and considers that this objective should still be met.

3. International 3G service launch

The initial data received from countries where 3G has been launched provides an indication of the success that UMTS-based services are likely to encounter.

Number of WCDMA (UMTS) service subscribers in Europe and in the world in Jan.2004		
Country	Operator	Number of subscribers
Japan	DoCoMo	2 014 000
Japan	Vodafone KK	123 000
Australia	Hutchison	109 000
Italy	Hutchison	376 000
UK	Hutchison	321 000
Sweden	Hutchison	26 000
Denmark	Hutchison	8 000
Austria	Hutchison	13 000
Austria	Mobilkom	2 000

Source: ART

More than 30 commercial service launches are planned in 2004 including those of the French operators SFR and Orange France. Therefore, 2004 should be the year when UMTS truly takes off. The fact that the standard has been harmonised will naturally facilitate the international use of mobile services in Europe, as well as on UMTS networks in the rest of the world.

D. Satellites

At the end of 2002, ART authorised the company Connexion by Boeing Ireland Ltd. to operate a satellite telecommunications network for two years to provide aircraft passengers with Internet telecommunications services in metropolitan France and in the associated airspace. This licence was supplemented in 2003 by a decision allocating the frequencies

required for the operation of this activity to the company concerned. The planned service will allow a true real-time Internet connection.

The use of radio frequencies in the 14/14.25 GHz band for transmitting from aircraft to satellites required modifications to the ITU (International Telecommunications Union) rules. For this reason, only a temporary licence was awarded. The World Radiocommunications Conference, which took place at the beginning of summer in 2003 (WRC 03) authorised the use of the band for these applications and opened up the possibility of extending the licence for using these frequencies once the decision has been adopted by the CEPT, which will establish the technical conditions for using this band in Europe.

In 2003, ART authorised the company ELTA SA to use radio frequencies to operate a satellite telecommunications network in metropolitan France, the overseas départements and the administrative areas of Mayotte and Saint-Pierre-et-Miquelon. This licence was awarded following approval by the Minister of Defence, which has priority over the use of the frequency bands in question.

The network uses ORBCOMM, a constellation of 35 low-earth-orbit satellites that are already operational and provide links between terrestrial and maritime terminal equipment. The proposed services include data acquisition, position and status tracking, remote measurement and control and two-way messaging. The targeted market segments include: commercial fishing, public works companies, transport companies operating trucks, trailers, wagons or containers as well as companies operating LPG tankers, remote metering systems etc.

The licences awarded to ELTA SA fall under the new regulatory framework in accordance with the guidelines for the legal framework applicable from 25 July 2003 until the adoption of the transposition texts for the European directives on electronic communications, which were published on 2 July 2003 by the Minister responsible for Industry and ART.

E. Radio Paging

Radio paging services allow users with pocket receivers to receive messages in the form of a beep or alphanumeric characters. The use of a dedicated network makes radio paging particularly suited for instant communication instantly with groups of people especially in times of crisis (natural disasters, terrorist attacks etc).

In view of these characteristics, French radio-paging operators started to reposition their activities towards the professional market from 2001 onwards.

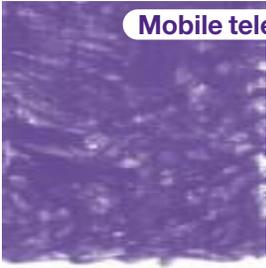
The following table summarises the number of radio paging users in France:

1995	1996	1997	1998	1999	2000	2001	2002	2003
360000	1000000	2000000	2400000	1900000	1800000	190000	159960	155640

Source : ART

There are two public-radio-paging-network operators in France: e*Message (POCSAG specifications) and Infomobile (ERMES standard).

In 2003 ART modified e*Message's licence for the 87 MHz band at e*Message's request following its decision to stop operating the Biplus (former Eurosignal) network. The company is now operating the "POCSAG" network in the 466 MHz band as well as the "OPERATOR" network, which uses RDS sub carriers in the FM broadcast band, on behalf of TDF.

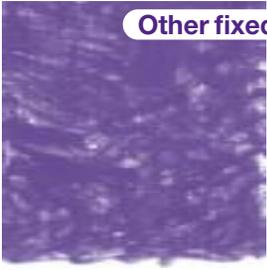


ART actions in the different market segments

CHAPTER 3

Other fixed and mobile-network services

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Other fixed and mobile-network services

These services, which are available to fixed and mobile customers, include:

- advanced services, which include free calls for the calling party, shared-cost calls, calls to shared-revenue audio-kiosk or teletext services and special-routing services.
- directory enquiry services
- telephone and teletext terminal rental, sale and maintenance services.

I. MARKET FIGURES

A. Advanced services

These services allow companies to provide access to company-provided services via a fixed or mobile terminal. The company or administration wishing to provide the service can choose between:

- allowing the consumer to call free of charge or for a price lower than the normal call cost with the company paying all or part of the actual cost (so-called free-phone or shared-cost services).
- allowing the operator to bill the subscriber at a cost that is higher than the normal call tariff and pass on part of the proceeds to the company (so-called shared-revenue numbers).

Turnover (€ millions)	2000	2001	2002	2003*	Growth
Total advanced services					
- fixed operators	1 603	1 451	1 494	1 355	-9.3 %
Total advanced services					
- mobile operators	239	359	368	448	+21.7 %
Total advanced services	1 842	1 810	1 862	1 803	-3.2 %

Source: ART

*Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q 2005

Volumes (millions of minutes)	2000	2001	2002	2003*	Growth
Total advanced services					
- fixed operators	9 144	9 342	8 750	9 101	+4.0 %
Total advanced services					
- Mobile operators	661	1 083	1 163	1 335	+14.8 %
Total advanced services	9 805	10 425	9 913	10 435	+5.3 %

Source : ART

*Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q 2005

Strong growth in advanced services from mobiles is an indication of the dynamic trends in the mobile telephony market.

B. Directory-enquiry services

Turnover (€ millions)	2000	2001	2002	2003*	Growth
Fixed operators**	277	278	279	287	+2.9 %
Mobile operators***	43	55	64	71	+10.9 %
Total directory-enquiry services	319	342	344	358	+4.1 %

Source: ART

* Provisional estimate. The definitive estimation will be published in the 2003 market observatory report due to be released 1Q 2005

** For the fixed-line operators, the turnover includes directory enquiries, directories and associated revenues.

*** For mobile operators, the turnover includes only directory-enquiry revenues.

C. Terminal sales, rental and maintenance

Turnover (€ millions)	2000	2001	2002	2003*	Growth
Fixed operators	673	809	633	610	-3.6 %
Mobile operators	1 087	1 240	1 120	1 208	+7.9 %
Total sales, rental and maintenance	1 760	2 049	1 753	1 817	+3.7 %

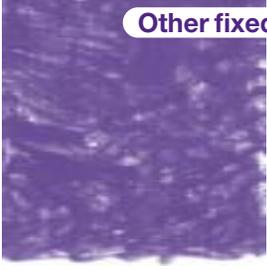
Source: ART

*Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q 2005

Turnover from the sale, rental and maintenance of telephone or teletext terminals increased 3.7% to 1.8 billion euros in 2003. This growth comes entirely from the mobile operators, which benefited from a number of mobile terminal innovations introduced by the manufacturers in 2003. Colour screens and built-in cameras among other things became widespread in 2003. It should be noted however, that the above figures do not cover the total market and only include telecommunications operators that have notified their activity with ART.

II. ART ACTIONS

ART was called upon on six occasions to rule on different France Telecom tariff recommendations concerning advanced services. A favourable recommendation was made on each occasion. The three tariff recommendations presented by the incumbent on directory-enquiry services also received favourable recommendations.

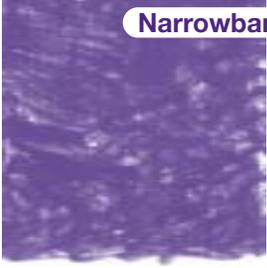


ART actions in the different market segments

CHAPTER 4

Narrowband Internet

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Narrowband Internet

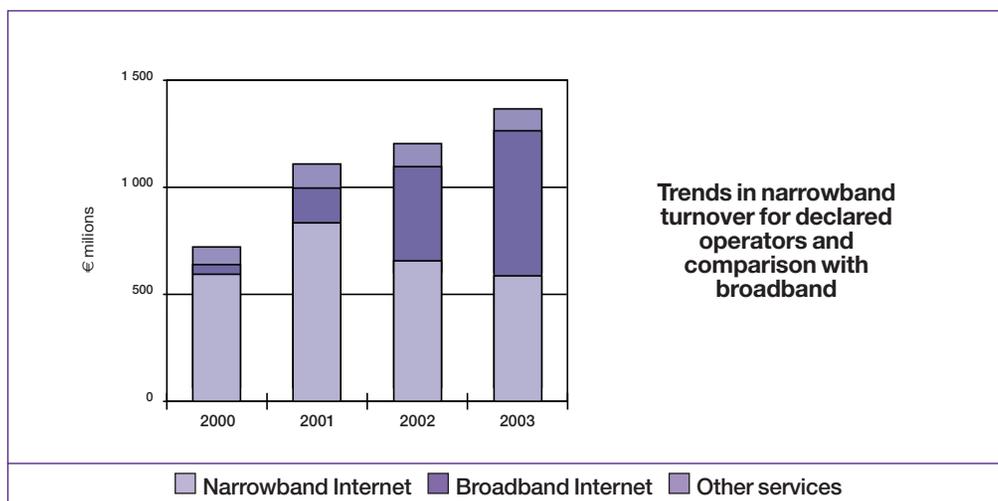
I. MARKET FIGURES

A. Trends in licensed operators' turnover

(€ millions)	2000	2001	2002	2003*	Growth 2002-2003 (%)
Narrowband Internet revenues	600	815	670	569	-15,1 %
- dial access	208	392	313	255	-18,5 %
- Internet collection services	390	412	314	254	-19,1 %
- low-speed connections	3	11	43	61	+41,9 %
Broadband Internet revenues	59	182	417	681	+63,3 %
Other Internet-access revenues	72	122	99	76	-23,2 %
TOTAL Internet revenues	731	1119	1 186	1 326	+11,8 %

Source: ART

*Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q 2005



Source: ART

Turnover for the Internet-access market grew by 12% in 2003 and was essentially driven by broadband growth, which was more than 63% (figures include only suppliers questioned by ART and exclude ISPs such as Wanadoo, AOL & Club Internet). Broadband has therefore undisputedly become the growth driver in the Internet sector. Narrowband Internet access has stabilised after having given rise to rapid development of household Internet use.

B. Trends in licensed operators' volumes

(millions of minutes)	2000	2001	2002	2003*	Growth
Narrowband Internet volume	28 903	52 446	66 831	71 072	+6,3 %
- dial access	6 743	14 251	16 516	15 817	-4,2%
- Internet collection services	22 160	38 195	50 315	55 255	+9,8%

Source: ART

*Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q 2005

Narrowband traffic continued to grow in 2003 although the trend began to change towards the end of the year. Most of this traffic is generated by monthly flat-rate subscriptions as opposed to non-subscription, per-minute charging.

C. Trends in the narrowband subscriber base

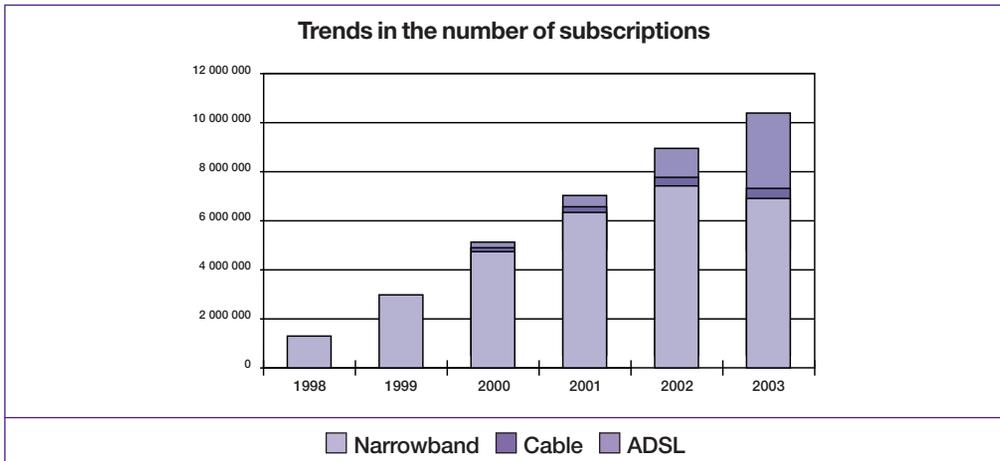
(millions of minutes)	31/12/00	31/12/01	31/12/02	31/12/03*	Growth
Number of narrowband Internet subscribers **	5 263 000	6 385 000	7 469 000	7 000 000	-6,3%
- licensed operators	1 447 631	2 128 521	2 691 103	2 495 700	-7,3%

Source: ART

* Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q 2005

** Source: AFA. Figures provided by following ISPs: 9 Online, AOL France, Club Internet, Free (dial access only), Inter PC, NC, Noos, Tiscali France, UPC France, Wanadoo. includes free access or usage-based accounts which have made at least one connection in the last 40 days as well as monthly subscription accounts with or without flat-rate telephony packages (private or business). Subscriber base end 2003: ART estimation. (figures not available from AFA for the number of narrowband Internet subscribers end 2003)

D. Trends in the number of Internet users

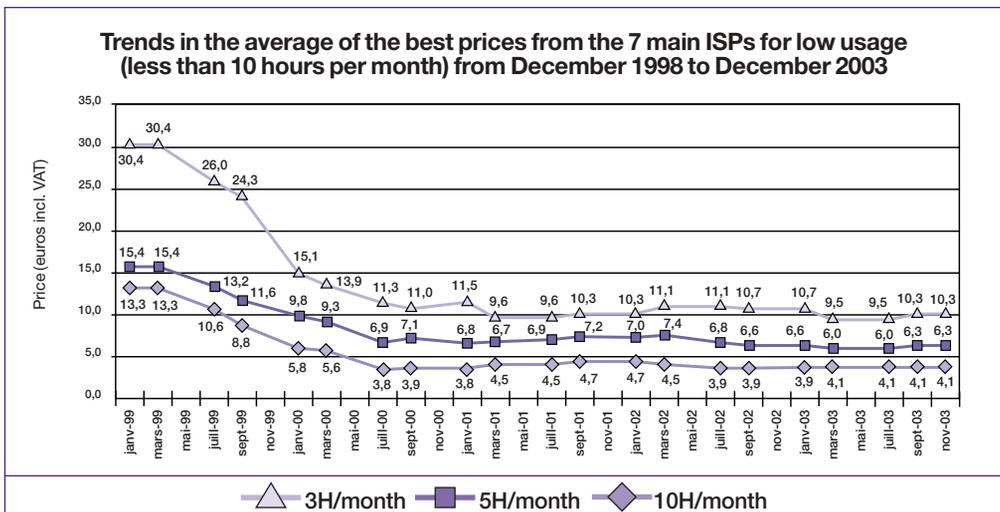


Source: ART/AFA/AFORM

II. TRENDS IN INTERNET-CONNECTION PRICES

Narrowband Internet-connection prices dropped sharply in the French market between 1 January 1999 and the end of 2003, irrespective of connection time.

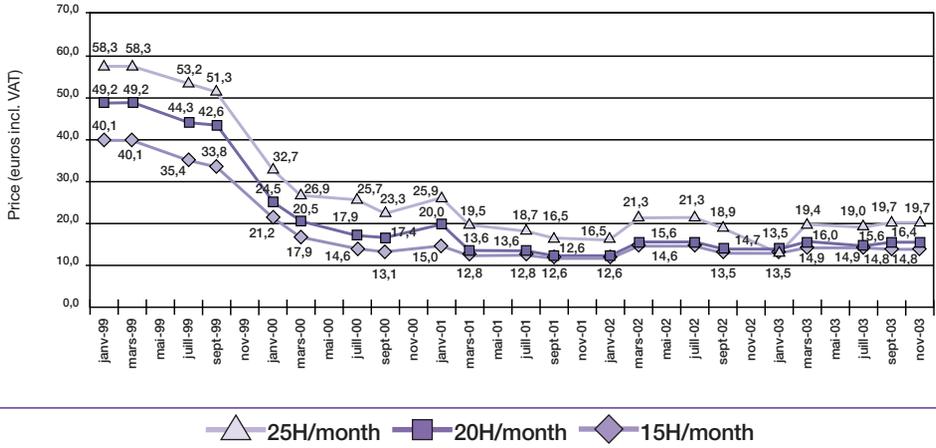
The following three graphs show trends in average market price (average of the best prices from the 7 main residential-market ISPs) with a time-of-day distribution in accordance with the ART price basket for Internet traffic interconnection (65% off-peak and 35% peak) between 1 January 1999 and 31 December 2003.



Source: ART

The prices in the low-usage basket dropped significantly in 1999 but the rate of decline slowed at the beginning of 2000. Prices have clearly stabilised since the beginning of 2001 and even showed a slight upward trend in 2003. In all, price reductions for low usage between the beginning of 1999 and the end of 2003 were between 59% and 70% depending on the number of hours in the monthly flat-rate packages in question.

Trends in the average of the best prices from the 7 main ISPs for medium usage (between 15 and 25 hours per/month) from December 1998 to December 2003

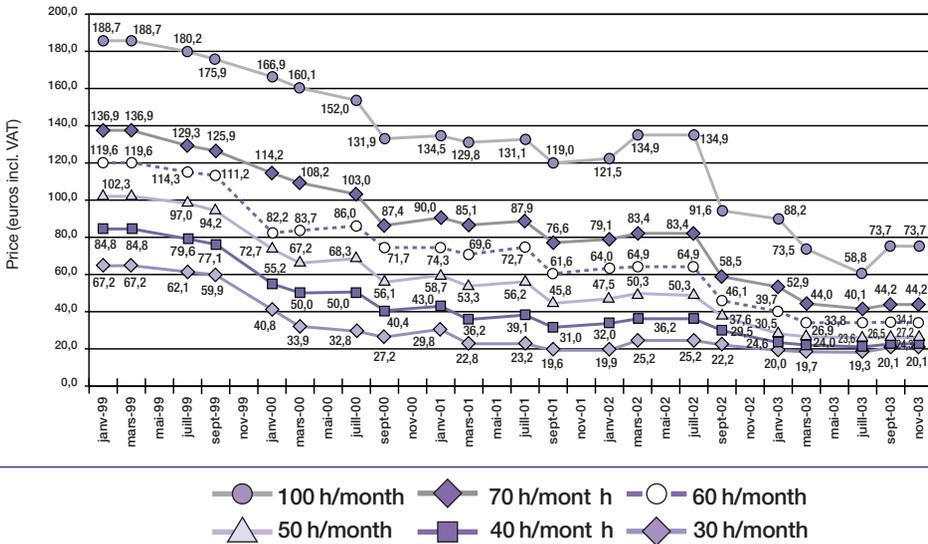


Source: ART

Price reductions for the “medium-usage» basket occurred later than for the low-usage basket. Prices have tended to rise from mid 2001 and “free-free”¹ offers have disappeared. In total, price reductions for medium usage between the beginning of 1999 and the end of 2003 were between 63% and 67%, depending on the number of hours in the monthly flat-rate packages in question.

1 Free-free offers have a limited number of hours for which there is no charge; both subscription and calls are free of charge with only those calls exceeding the number of hours provided being charged at a fixed per-minute price.

Trends in the average of the best prices from the 7 main ISPs for high usage (more than 30 hours per /month) from December 1998 to December 2003



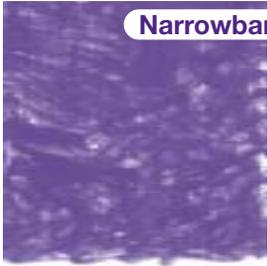
Source: ART

Price reductions for high usage were steady from the middle of 1999 onwards, with periods when the drop was more pronounced e.g. the middle of 2000 when the first unlimited flat-rate offers appeared. The trend continued in autumn 2002 with the second wave of unlimited flat-rate offers, which were encouraged by the adoption of the flat-rate unlimited interconnection (IFI) offer in France Telecom's interconnection catalogue. In total, price reductions for high usage between the beginning of 1999 and the end of 2003 were between 61% and 73% depending on the number of hours in the monthly flat-rate packages in question.

III. ART ACTIONS

ART made favourable recommendations on three tariff decisions concerning so-called "free" Internet access in 2003. Wholesale offers to ISPs are not subject to approval because the market is considered to be sufficiently competitive. A fortiori, retail market offers are not regulated. Tariff control is therefore limited to call charges invoiced by France Telecom to subscribers using the switched network for Internet connection. ART highlights the fact that these calls make up only a very small part of the Internet market.

Narrowband Internet



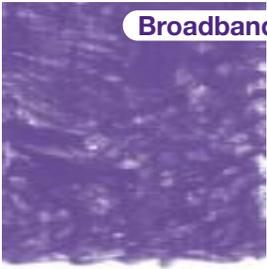
In 2003, France Telecom modified the tariffs for Internet-access calls to non-geographical numbers for residential (recommendation no. 03-632) and professional customers (recommendation no. 03-846). In both cases, the modification involved removing the time credit, which slightly increased the average price for a given call duration.

ART actions in the different market segments

CHAPTER 5

Broadband

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Broadband

Encouraging vigorous competition

With nearly 3.5 million broadband subscribers and growth of more than 100% in 2003, France is well on the way to making up lost ground and is now in third place in terms of the number of access connections in Europe. ADSL is still the dominant technology, although cable is also developing with 393 000 subscribers, along with alternative technologies such as WiFi, WLL (wireless local loop), PLC (power-line carrier) and satellite. The challenge for ART is to ensure that broadband develops rapidly on a nationwide basis under the same conditions as in densely populated areas and to accompany the emergence of innovative services such as TV over ADSL while at the same time maintaining a dynamic, competitive environment.

To this end, it is essential to maintain competition between ISPs in the retail market as well as between operators in the intermediate wholesale market, notably through local loop unbundling, which now stands at 280 000 lines. This is the way to ensure that customers benefit from sustained tariff reductions.

Editorial by Gabriele Gauthey, ART Board member, in issue no. 36 of ART's newsletter "La lettre de l'ART" published in February 2004.

The notion of broadband is relative. In France, the generic term "broadband" is often used for all bit rates strictly above or equal to 128 kbps. This definition varies from country to country and will no doubt evolve over time. Already, consumers consider broadband to be 512 kbps (70% of the French market) or even 1 mbps. In Germany, it is generally accepted to be 768 kbps, in Spain, 256 kbps while in Brussels it cannot be below 3 mbps. The French operators and ISPs are increasingly segmenting the market with an entry-level "medium-speed" offer of 128 kbps. At least two ISPs already propose a 2 mbps residential offer.

I. BROADBAND MARKET FIGURES

A. Trends in licensed operator turnover

(€ millions)	2000	2001	2002	2003*	Growth
Broadband internet revenues	59	182	417	681	+63,3 %

Source: ART

*Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released Q1 2005

Broadband revenues in 2003 were, for the first time, higher than narrow-band revenues, which are now declining at 569 million euros. The drop in retail prices and the innovative and varied products proposed by operators in the broadband sector have stimulated the Internet market.

B. Trends in subscriber base

(Unit)	31/12/00	31/12/01	31/12/02	31/12/03*	Growth
Number of broadband subscribers	197 911	601 500	1 590 975	3 524 727	+121,5 %

Source : ART

*Provisional estimate. The definitive estimates will be published in the 2003 market observatory report due to be released 1Q 2005

(Unit)	31/12/00	31/12/01	31/12/02	31/12/03*	Growth
Câble**	121 911	190 322	282 992	393 854	+39,2 %
ADSL***	67 532	408 386	1 361 377	3 043 000	+123,5 %

Sources : ART

* Estimation provisoire, les estimations définitives seront publiées dans l'observatoire des marchés 2003 au 1^{er} trimestre 2005

** Source AFORM

*** Source : ART

The broadband subscriber base more than doubled in 2003 with nearly two million new subscriptions. This growth rate reflects strong operator competition at several levels:

- access tariffs, which dropped significantly. Consequently 512 kbps broadband was being offered at €30 beginning 2003 and then at less than €20 at the beginning of 2004, compared to an average price of €45 in 2002.
- the diversity of services on offer to customers: very high speed offers at attractive prices, Internet telephony, Internet TV etc.

Overall trends in ADSL tariffs*

	March 2003	December 2003	March 2004
128 kbit/s	30 €	from 19.8 € to 29.9 €	from 19.8 € to 27.5 €
512 kbit/s	from 29,9 € to 45 €	from 19.9 € to 34.9 €	from 15.7 € to 34.9 €
1024 kbit/s	from 39,9 € to 80 €	from 25.7 € to 44.9 €	from 20.7 € to 44.9 €

Sources ART

*excluding special offers, access costs and modem included, minimum 1 year contract

In France, ADSL technology largely dominates the broadband Internet market, far ahead of cable and other technologies. There were just over 3 million ADSL subscribers at the end of 2003, representing 84% of all broadband Internet subscribers. ADSL growth in the French market in 2003 was the highest of all the European countries.

ADSL growth in the French market in 2003 was the highest of all the European countries.

The large majority (60%) of broadband Internet access connections use 512 kbps xDSL followed by 128 kbps (25%). The higher bit rates (1024 kbps, 2048 kbps and over) made up 10% of access connections beginning 2004.

II. xDSL

A. The technology

xDSL or digital-subscriber-line technologies allow the copper pairs in the “last mile” of the incumbent's telephone network to be used for broadband connections. Upstream (request to network) and downstream (response to subscriber) data rates can be symmetrical (same bit rate in both directions) or asymmetrical (downstream higher than upstream).

At the end of 2003 nearly 80% of the French population had access to ADSL

SDSL technology uses all the available frequencies over the copper pair and allows symmetrical connections to be established.

ADSL technology uses the telephone-line frequencies above 4000 Hz, which have not been used until now. The ADSL modem installed in the user's premises allows the telephone to use the low frequencies and broadband to use the high frequencies. ADSL technology therefore provides a permanent Internet connection independent of telephone use. The ADSL connection is asymmetric and is particularly well adapted to Internet use. For a subscriber to be able to access ADSL, the corresponding local telephone exchange must be equipped with a DSLAM by either France Telecom or one of its competitors using local loop unbundling. At the end of 2003, 80% of the population could potentially access ADSL.

B. ADSL access modes

Definitions

Option 1 (unbundling)

- two modes of access to copper pair (full unbundling or shared access),
- allows the ULL operator to have complete control of the end-user service,
- regulatory status: France Telecom reference offer upon which ART can impose modifications pursuant to European regulation no.2887/2000 dated December 2000.

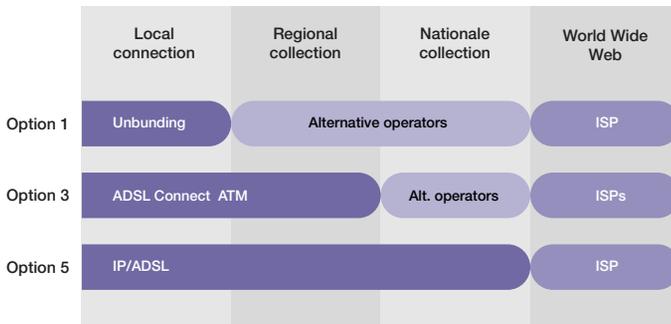
Option 3 (ADSL Connect ATM)

- ADSL access resale and traffic collection at intermediate points in France Telecom network (regional hub, 1st cross-connect switch),
- allows an operator to use its own network to develop competitive IP/ADSL offers aimed at ISPs (Internet service providers) nationwide (complementary to unbundling),
- regulatory status : special access offer. ART can in particular settle disputes over technical and tariff conditions between operators.

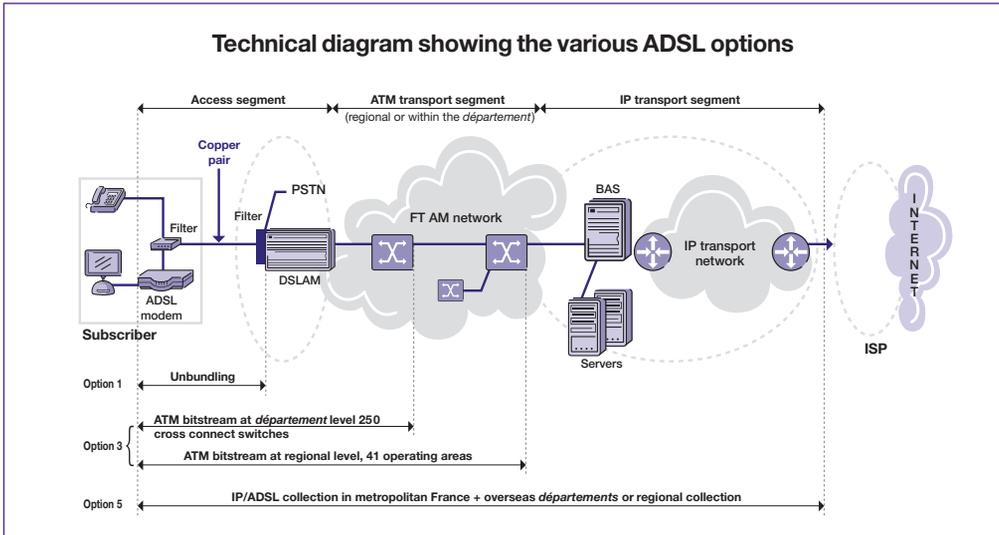
Option 5 (IP/ADSL)

- Two components : IP/ADSL access (resale of France Telecom' *ligne ADSL* offer) and IP/ADSL collection traffic), at national and now also at regional level.
- regulatory status : offer subject to ART approval (ART makes a public recommendation prior to ministerial approval)

Simplified diagram of the different ADSL



Source: ART



Source: ART

1. Unbundling (option 1)

1.1 Definition

Local loop unbundling, also known as unbundled access to the local network, allows operators to use the incumbent's local network to serve their subscribers directly in return for a fee.

The local loop is the part of the telecommunications network located between the end-subscriber's telephone outlet and the local telephone exchange. The physical support for the subscriber connection is generally a twisted copper pair.

The local network in France is owned by France Telecom and it would not be economically feasible for a new operator to duplicate it completely. However, direct access to the customer is strategically important for new-entrant telecommunications operators because it allows the operator to manage the customer network from end to end and to differentiate the service offer. Consequently, it has been decided at European level that the incumbent must provide its competitors with direct access to the local loop; this is known as local loop unbundling.

Unbundled access to the local network involves providing bare copper pairs to the alternative operator which then installs its own transmission equipment at each end so that the copper pair can be linked to the rest of the operator's network. This means that equipment-housing space is required next to the incumbent's MDF (main distribution frame) i.e. co-location in the incumbent's premises must be provided to alternative

operators as part of the unbundling offer. The incumbent is of course remunerated for allowing the new-entrant operator to use the local network and co-location facilities.

Until July 2003, when the licensing regime changed, a telecommunications operator was required to hold a licence in accordance with article L.33-1 of the Post and Telecommunications Code to be able to use unbundling facilities.

There are two types of unbundling:

- Fully unbundled local-loop access makes the entire copper-pair frequency band available for use. The end-user is then connected to the new entrant's network and no longer to the France Telecom network.
- Partial unbundling or shared-local-loop unbundling allows the alternative operator to use the "high"-frequency band transmitted over the copper pair for services such as ADSL. France Telecom continues to manage the low-frequency band (traditionally used for telephony) and provide telephony service to the subscriber.

1.2. Background to unbundling implementation

ART started the preparatory work for unbundling in 1999 by launching a public consultation on the development of the local market in France to identify key issues and possible approaches.

Following this consultation, the actual unbundling studies were initiated rapidly. On ART's initiative, the decision was made to set up a working group with the objective of establishing the technical and tariff conditions that would initially allow access trials on copper pairs to be carried out followed by commercial implementation. Alain Bravo (Alcatel) chaired the group meetings until the beginning of 2002.

During 2001 ART called upon France Telecom on several occasions to modify its reference offer so that the barriers to implementing unbundling could be removed, notably in the following areas:

- supply of preliminary information for rollout planning to interested operators
- addition of a service for creating new unbundled lines
- modification of several tariffs to bring them into line with costs
- fair and objective treatment of co-location requests.

During 2002, ART continued the work on tariffs and the analysis of unbundling costs. For the operational conditions, ART adopted a pragmatic approach drawing on the lessons learned from experience, the results of discussions with each of the operators, particularly in the context of the

group chaired by Alain Bravo, and the exchange of views with France Telecom. On 8 April 2002, ART published its decision on the dispute between LDCOM and France Telecom over certain technical and tariff conditions in the agreement on local loop access¹. This decision was followed by ART decision no. 02-323 dated 16 April 2002, requiring France Telecom to modify its reference offer. In particular, the unbundling tariffs for full unbundling and shared access were lowered and operators were given the possibility of co-locating their equipment in the existing France Telecom equipment rooms rather than simply being authorised to construct new equipment rooms for their requirements.

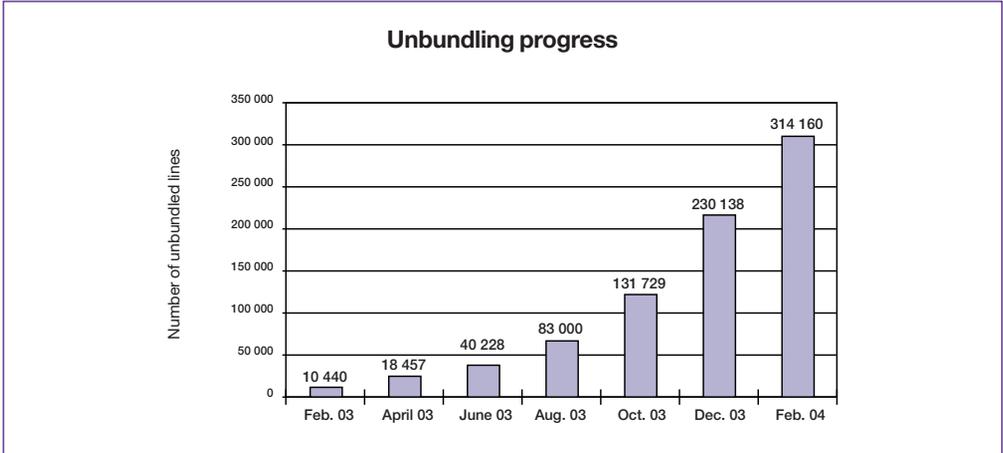
The cost of fully-unbundled access was set at 10.5 euros and 2.86 euros for shared access, while commissioning costs were reduced to 78.7 euros. Concerning the operational conditions for implementing co-location rooms, the offer included the possibility of connecting to the “local sub loop” with tariffs slightly below the local loop and with similar operational conditions. A co-location offer using already existing equipment rooms in France Telecom sites was also established for operators (co-location offer in “dedicated areas”).

1.3. Unbundling progress in 2003

The new unbundling terms were included in France Telecom's reference offer on 14 June 2002. They helped boost the unbundling process in the largest areas and opened the way for unbundling to be extended to residential customers.

Consequently, Free and LDCOM launched the first broadband Internet offers for residential customers based on unbundled local loop at the end of 2002. The tariffs for these offers were particularly competitive and helped stimulate the broadband market. Throughout 2003, these offers met with increasing success and the number of unbundled lines increased rapidly, reaching 300 000 in January 2004.

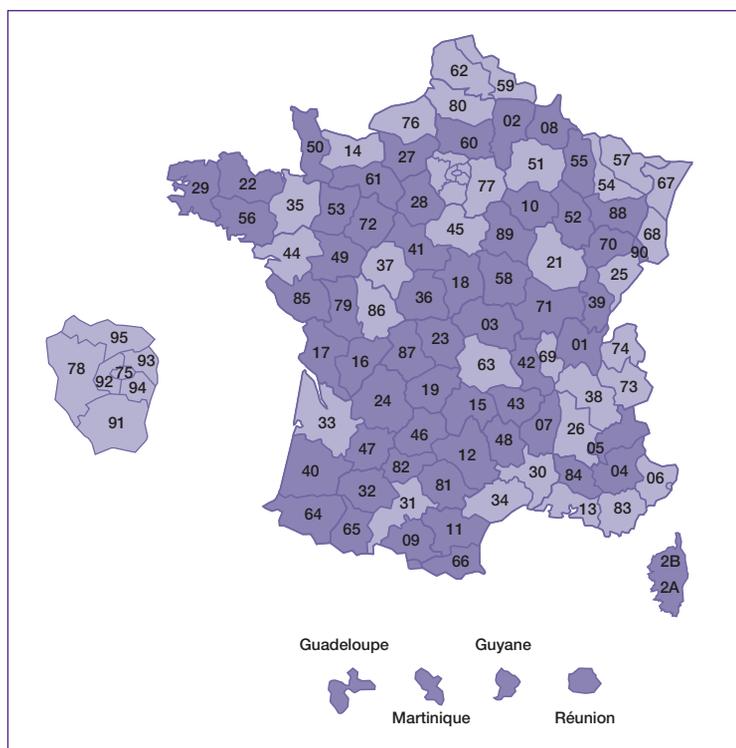
¹ On 28 March 2002, ART published its decision no. 02-278 on the dispute between LDCOM and France Telecom over certain technical and tariff conditions in the agreement on local loop access.



Source: ART

The two operators providing shared-local-loop “consumer” services (LD Com and Free) relaunched geographical rollout of their DSL networks beginning 2003 following ART decision no. 02-323. This decision allowed new co-location possibilities to be provided on France Telecom sites more cost effectively than previous solutions. New unbundling sites were equipped throughout the year. The number of France Telecom sites equipped for unbundling was 130 at the beginning of the year progressing to over 300 sites delivered to operators at the end of 2003. Unbundling now extends well beyond the initial coverage in Paris and the inner suburbs with nearly 40 cities either equipped or in the process of being equipped for unbundling as of 1 January 2004.

The map below clearly shows the départements where unbundling was operational in at least one town at the end of 2003 (sites delivered by France Telecom).



The sustained growth in the number of unbundled access lines in 2003 can be explained not only by the increase in geographical reach, but also by migration of previous option 5 ADSL lines to technical solutions based on unbundling (option 1). In fact, unbundling allows wholesale ADSL access offers targeting ISPs to be provided in competition with France Telecom. The ISPs can choose to use unbundling for new customers as well as existing customers who already have broadband access based on France Telecom's IP/ADSL offer. The technical changeover from IP/ADSL to shared local loop has to be carried out in the France Telecom telephone exchange.

Competition in both the retail and wholesale markets develops in tandem with the development of unbundling. At the end of 2003, 9% of the ADSL wholesale market in France was based on unbundling.

Full unbundling represents only a very small share of these access lines. It rose from 1400 lines at the beginning of 2003 to 3800 lines at the end of 2003.

The end of 2003 saw new players entering the unbundling arena. Thirteen unbundling agreements had been signed as of 1 February 2004 compared to only five players using unbundling at the beginning of 2003. The agreements include, inter alia, national operators such as TD/Cegetel for example, already active in other telecommunications markets in France, as well as operators new to the French market such as Telecom Italia. Regional players have also signed an unbundling agreement. All these operators have contributed to the acceleration in geographic rollout of unbundling, which will be capable of serving more than half of the French population in 2004.

2. Wholesale offers

2.1. Option 3: the “ADSL Connect ATM” offer

ADSL Connect ATM is a broadband ATM service offer that allows alternative operators to collect Internet traffic at different regional points in the France Telecom network and then use their own infrastructure to deliver all of the traffic to different ISPs from a single national point.

This offer is used by alternative operators to complement unbundling in areas where they have yet to deploy their own ADSL (DSLAM) equipment. It is aimed primarily at residential customers.

■ Changes in the *ADSL Connect ATM* offer in 2003

The breakdown in bi-lateral negotiations between LD Com and France Telecom on the required technical and financial changes in the *ADSL Connect ATM* led LD Com to refer the dispute for settlement to ART on 10 July 2002.

ART ruled on the dispute, which related to the tariff, technical and operating conditions of the *ADSL Connect ATM* Offer, on 9 January 2003¹. In this decision (no. 03-27), ART defined what it considered to be fair conditions allowing alternative operators to offer ADSL to ISPs under the same economic conditions as those used internally by France Telecom.

¹ Decision no. 03-27 dated 9 January ruling on the dispute between LD Com and France telecom.

This decision resulted in France Telecom introducing a new ADSL Connect ATM offer corresponding to the requirements set forth in ART's decision.

Following settlement of the dispute, LD Com decided not to take up the new France Telecom offer, preferring instead the IP/ADSL option 5 offer to complete its unbundling coverage. However Télécom Développement decided to connect to all the regional access points in the spring of 2003.

The option 3 tariffs subsequently fell in December 2003 at the same time as the option 5 reduction requested by France Telecom for which ART had published a favourable recommendation on 12 December 2003¹.

2.2. Option 5 (structure of the offer prior to December 2003)

The incumbent France Telecom's *IP/ADSL*, the so-called option 5 offer, was proposed to ISPs so that they could resell broadband access to their customers under their own brand. Technically, option 5 allows the ISP's IP-data traffic from a customer's ADSL access to be conveyed to a national collection point. The offer is available in metropolitan France and the overseas départements.

L'offre IP/ADSL se décompose en deux prestations :

- An *Accès IP/ADSL* offer which provides ADSL access to the ISP's customer up to the DSLAM (the DSLAM is the equipment located in France Telecom's MDF which concentrates the data traffic from several ADSL access lines). France Telecom differentiates option-5 tariffs as a function of the peak bit rate (maximum bit rate) of the end-user connection (128 kbps, 512 kbps and 1024 kbps).
- A *Collecte IP/ADSL* offer which allows IP traffic from the DSLAM to be conveyed to the ISP delivery point. The offer is broken down into a collection offer for metropolitan France, a specific collection offer for the overseas départements and a national collection offer, which includes traffic routed from the overseas *départements*.

Apart from the France Telecom offer, the option-5 market includes any offer combining access and traffic collection. Traffic is delivered to the ISP at a single national point to provide end-to-end IP transport between a user and the ISP, which in turn provides Internet connectivity.

These offers notably include alternative-operator offers based on option 1 unbundling or on collection at an intermediate level (option 3) as described previously and completed by transport offers.

¹ ART recommendation no. 03-1298 dated 9 December 2003 covering the France Telecom tariff decisions no. 2003144 and no. 2003145 relating to tariff changes for the *Collecte IP/ADSL* and the *Accès IP/ADSL* offers.

Consequently, most ISPs use France Telecom for a major part of their requirements with an increasing part coming from alternative operators. In 2003, Wanadoo used option 5 almost exclusively for its wholesale traffic purchases from France Telecom.

France Telecom's option 5 offers and those proposed by the alternative operators are not however completely interchangeable.

There are two main differences:

- only 35% of lines can potentially be unbundled at present, probably rising to 50% end 2004. ISPs wishing to have a consistent offer nationwide are therefore obliged to purchase option 5 or option 3 for 50% of their customers.
- Unbundling service quality is not yet the same as option 5 in terms of delivery time and failure rate on delivery. This difference creates extra customer-service costs.

Option 5 is available for all access lines nationwide which can be equipped with ADSL, or approximately 80% of the population at the end of 2003. Customers can purchase broadband packages containing a connection kit and a modem directly from their ISP without having to purchase additional ADSL connection services from France Telecom.

C. Services

There was an increase in the number of services available via DSL-type broadband access lines available on the market in 2003.

In addition to Internet access, consumers now have access to voice-over-IP services or even television using ADSL access technology.

In 2002 and 2003, commercial television-over-ADSL offers were launched not only in Asia (Hong Kong and Japan in particular) but also in Europe. The company called Fastweb in Italy, which had started to deploy fibre to the home, has completed its network using ADSL to offer pay-television services. It now has as many customers on fibre as it has on ADSL. Other offers exist in Spain (Imagenio service launched in 2002 by Telefonica) and in the UK (Kingston Interactive Television in Kingston-Upon-Hull).

■ Television over ADSL

In France, the end of 2003 was noteworthy for the launch of the first television-over-ADSL offers, first by Free and then by France Telecom. Other offers are planned for 2004.

On 1 December 2003, Free offered a so-called "triple play" offer for a flat rate of 29.99 euros/month to all its unbundled-access customers possessing a "Freebox" modem/decoder. The offer included unlimited broadband Internet access (2048 kbps upstream), free calls to other customers

equipped with a freebox and to fixed telephone numbers in metropolitan France, as well as a certain number of TV channels which could be purchased separately or as part of a package without any time commitment on the subscription. The connection equipment ("Freebox" modem/decoder) is included in the monthly flat-rate charge. Access to television over ADSL is complementary to Free's broadband Internet access offer.

France Telecom launched an offer called *Ma Ligne TV* on 18 December 2003 in Lyon providing access to TV content and video on demand services over ADSL. The subscription charge for this offer is 16 euros incl. VAT per month. There is also a 64 euros incl. VAT service-access charge and a 75-euro incl. VAT bond for the decoder. Customers wishing to access the multi-channel TV package must take out a subscription with a content distributor. France Telecom has signed an initial partnership with TPS, which distributes a multi-channel TV package via satellite. TPS offers a single flat-rate formula called TPS L to *Ma Ligne TV* customers for 21 euros per month incl. VAT. The subscription access charges for TPS L are 40 euros incl. VAT. The TPS and France Telecom offers have been available since 29 March 2004 in the greater Paris area. Furthermore, France Telecom has also signed a partnership agreement with Canal Plus. Subscription to the *Ma Ligne TV* offer is independent of the subscription to the broadband Internet access offer over ADSL. However, the ADSL Internet access offers based on local loop unbundling are not compatible with *Ma Ligne TV*.

Triple play offer:
Broadband Internet access
+ telephone
+ audiovisual services

Voice over IP (VoIP) over ADSL outside France

The old economic models based on call duration and distance, are being replaced by new varied and innovative billing schemes: unlimited flat rates, unlimited free calls between customers on the same network etc. These new VOIP services have met with enormous success notably in Japan where Yahoo BB claims to have nearly 3.5 million subscribers on its VoIP offer/DSL-packaged offer. Similarly in the USA, Vonage is offering unlimited voice calls over the entire country for a single flat rate. To be able to use this offer, an adapter is required so that the traditional telephone can be connected to the broadband ADSL access.

Supplying triple play offers in the residential market, made possible by shared local loop access, allows operators to get the most out of their access investments and is the reason why alternative operators are getting ready to launch TV access services.

Neuf Telecom (LD Com), France Telecom and Cegetel have signed agreements with the Canal Plus group to supply the Canal Satellite multi-channel package to their ADSL customers. Consequently, Canal Satellite launched the multichannel package *CANALSATDSL* in Marseille on 22 March 2004 on the Neuf Telecom network. There are four different flat-rate packages ranging from 17.99 euros incl. VAT to 27.90 euros per month incl. VAT. In addition, there is a 40 euro incl. VAT subscription access charge, a 64 euro incl. VAT service access charge, a 75 euro incl. VAT bond, an 8 euros incl. VAT rental per month for the digital ADSL terminal plus 8 euros incl. VAT per month for the ADSL line rental. Neuf Telecom supplies the modem free of charge to subscribers. This offer highlights a third type of contractual model for television over ADSL. i.e. it is possible to subscribe to this offer without having, or having to subscribe to a broadband Internet ADSL access offer. However, a customer wishing to access broadband Internet as well has to subscribe to an access offer that does not involve local loop unbundling from another operator. Furthermore, customers can only sign up for the multi-channel TV package with the distributor as is the case for the Free offer. On 17 May 2004, Canal Plus plans to launch "*CANALSATDSL*" in Paris and the greater Paris area in partnership with Neuf Telecom and France Telecom.

D. ART actions

1. Local loop unbundling

1.1. Ordering and delivery procedures

In 2003, ART worked with the industry players on an ongoing basis to improve operational procedures so that unbundling would be ready for volume production.

Accordingly, ART chairs a working group each month bringing together representatives of France Telecom and operators involved in unbundling to find and present solutions to operational problems encountered in the field. Drawing upon the considerable feedback from the field, the group has in particular:

- drawn up a list of quality-of-service indicators to measure the effectiveness of the operational procedures
- carried out the initial indicator measurements, which are now made on a monthly basis
- decided to set up a system for testing lines so that the number of unbundled-pair failures on delivery can be reduced
- added new functions to the preliminary-information system for unbundling (eligibility).

1.2. Reference unbundling offer

Given the importance of wholesale broadband offers, ART decided in summer 2003 to include a regular update on the broadband situation in the interconnection committee meeting agenda. It was in this forum that the regulator advised the industry players that the operators would be consulted regarding possible changes to the 2004 reference offer for unbundling. ART wished to ensure that the improvements to the operational procedures for unbundling would continue on an ongoing basis based on feedback from the unbundling operators and France Telecom after several months experience with ever-increasing volumes. The consultation identified the operators' requirements particularly with respect to:

- the procedures for sharing France Telecom sites given that certain sites were full
- the quality of the unbundling service and the need for a penalty mechanism in the reference offer when France Telecom did not meet the contractual delivery times
- the procedures for unbundling in small sites
- the equipment allowed in the unbundling equipment rooms
- the unbundling tariffs.

On 12 December 2003, France Telecom published a new unbundled-local-loop-access offer with several improvements, notably for the penalties that would be applied if there were delays in delivering unbundled lines to the operators.

1.3. Expert committee

An expert committee for introducing new techniques into the local loop was set up following ART decision no. 02-752 dated 19 September 2002¹. The establishment of this group resulted from ART recommendations on the subject on 21 June 2001.

It comprises experts from France Telecom, new-entrant operators having signed the unbundling agreement, relevant manufacturers and independent individuals appointed by ART as required. Its mission was to provide an advisory recommendation on whether requests by operators for the introduction of new technologies in the local loop would be technically acceptable. Mme Mancini of Lucent Technologies chaired the committee.

There were two reasons for setting up such a committee: to ensure that innovative new technology was introduced in a non-discriminatory fashion and that the techniques used would be compatible with the France Telecom network.

In autumn 2002, ART sought the advice of the expert committee on two questions concerning the technical details that needed to be submitted and the list of authorised techniques for accessing the sub local loop.

In April 2003, the requirements for the technical submission were finalised based on the committee's work. The list of the various access techniques for the sub local loop required further work. A work plan was set up to investigate several technologies and the authorisation required for installation on the sub-distribution cabinet: ADS L/ADSL 2, ADSL 2+, SHDSL, VDSL and HDSL on two pairs.

Furthermore, work was carried out to define the conditions for allowing ADSL2 and READSL (reach-extended ADSL) at the distribution frame. READSL allows the geographic reach for broadband to be increased significantly from the distribution frame.

Trials of different technologies in the sub local loop should be carried out in 2004.

1.4. Publication of the unbundled local loop report

The unbundled local loop report was created on 31 October 2001 to present progress in local loop access nationwide. It is updated and published bi-monthly based on data received from the relevant operators.

¹ ART decision no. 02-752 dated 12 September 2002 concerning the establishment of an expert committee for introducing new techniques into the local loop.

The report includes the sites and lines delivered by France Telecom over the last two months. These are illustrated on a map showing the *départements* and *communes* where unbundling sites have been installed and in a table giving the numbers of delivered unbundled lines. The unbundling inventory is accompanied by an analysis covering the various events that have taken place during the period: ART decisions, modifications to the reference offer, changes in company structure for the operators etc.

The monitoring process highlighted the rapid development of unbundling in 2003 with 400 sites (equipment rooms and dedicated areas) being delivered by France Telecom and the sharp rise in line orders placed on France Telecom by the alternative operators (270 000 lines).

Analysis of the figures reveals not only the number of new broadband Internet access lines created but also the migration of certain former option-5 lines to unbundling. The analysis also confirms that the establishment of dedicated space in the incumbent's distribution-frame rooms has been a success (270 during 2003).

Furthermore, the table informs consumers on the state of competition by indicating the number of alternative operators having signed a local loop access agreement (13 end 2003).

1.5. Ad hoc working groups

Given the extended rollout by the operators and the beginning of competition in the wholesale market for option-5 type offers, the question arose in spring 2003 regarding the migration of existing option 5 access lines towards solutions based on shared local loop.

Several technical problems (minimising the outage time, evaluating the requirements for coordinating the migration process between the various parties involved i.e. France Telecom, operators, ISP) were highlighted during the changeover, along with contractual problems (need for the customer to sign an authorisation to unbundle the line).

ART set up a working group made up of ISPs and the ULL operators to define a migration agreement which was adopted as an amendment to the unbundling agreement in April 2003.

2. Tariff approvals

2.1. Changes in Option 5 in 2003

France Telecom's option 5 is subject to tariff approval in accordance with the provisions of the Post and Telecommunications Code, which requires that services for which France Telecom has no real competition be approved prior to commercial launch.

The approval process allows ART to ensure that the proposed commercial tariff does not prevent similarly priced offers being provided by alternative operators. The regulator is required to ensure that the France Telecom offer does not create a squeeze effect with regard to the wholesale offers of alternative operators using unbundling or option 3.

2.1.1. Tariff changes

France Telecom submitted changes to the “option 5” offer end 2003 for approval. There were three main changes in the France Telecom tariff decision:

- a drop in option 5 wholesale tariffs:
 - the price remained unchanged for the 128 kbps access but dropped 16% and 65% respectively for access speeds of 512 kbps and 1024 kbps when connected to distribution frames with more than 20 000 lines. For distribution frames with less than 20 000 lines, the price remained unchanged for access at 128 kbps and 512 kbps and dropped 46% for 1024 kbps only. The collection tariff fell by 26%.
- introduction of differentiated tariffs depending on the distribution frame to which the customer is connected:
 - it should be noted that price differentiation already existed because nearly all ISPs, with the exception of Wanadoo, were already purchasing wholesale traffic as a function of distribution frame size prior to the introduction of the France Telecom offer. This is because ISPs purchase traffic at the lowest possible cost using unbundling offers from alternative operators for the large distribution frames and on options 3 or 5 for the distribution frames where unbundling is not available.
- the 1024 kbps tariffs moved closer to the 512 kbps tariffs:
 - as concerns reducing the difference between tariffs, ART had noted that differentiating tariffs as a function of the peak, or maximum bit rate customer connection, was not justified technically given that access production costs were similar whatever the bit rate offered to the customer.

2.1.2. Structural changes

Furthermore, France Telecom's new “option 5” offer included a significant change. From now on, a regional collection option will be available to operators allowing them to collect their traffic in the 17 regions and 4 overseas départements in addition to the national collection available in the Paris region.

As a result, operators with 40 delivery points located in the geographic operating areas can provide national coverage. This offer is financially attractive particularly for operators with a countrywide presence. Regional collection is only available from 16 February 2004¹.

2.2. Turbo DSL

The France Telecom Turbo DSL offer is provided either directly or through a third-party operator and allows broadband services to be offered to businesses and local authorities (Internet access at guaranteed bit rates and virtual private networks). Technically, this offer is made up of subscriber links and a central site. There is a wide range of products in the *Turbo DSL* offer. Some are similar to residential offers (608 kbps downstream and 160 kbps upstream with a guaranteed bit rate of 75 kbps in both directions) whereas others are specifically designed for the professional market (symmetrical 4096 kbps with guaranteed bit rate). The offer is very similar to *ADSL Connect ATM* from a technical point of view and could be described as a professional version of “option 3”.

From now on, a regional collection option is available to operators.

In December 2003, France Telecom submitted two tariff decisions to ART concerning an overall price reduction of approximately 10% for the *Turbo DSL* offer. ART made a favourable recommendation for this tariff decision on 10 February 2004.

3. Competition Authority recommendations

3.1. AFORS submission on unbundling authorisation

On 9 July 2002, AFORS (association of French network and services operators) submitted a case to the French Competition Authority requesting a recommendation on certain contractual issues relating to local loop unbundling. ART was called upon to make a recommendation to the competition authority on this matter.

On 8 January 2004, the Competition Authority made a recommendation² concerning in particular, the unbundling authorisation, unbundling equipment hosted by the incumbent and restrictions on unbundling use that remained in the reference offer for local loop access.

¹ ART recommendation no.03-1298 dated 9 December 2003 in favour of the France Telecom tariff decisions no. 2003144 and no. 2003145 relating to tariff changes for the Collecte IP/ADSL and the IP/ADSL offers.

² Competition Authority recommendation no. 04-A-01 dated 8 January 2004, concerning the AFNORS request for a recommendation on the general principles governing the contractual relationship between users and the various unbundling players.

3.2. Competition problems raised by TV-over-ADSL offers

In December 2003, the Competition Authority asked ART for a recommendation on the cases submitted by Iliad and Free, and LD Com and 9 Télécom (now called Neuf Télécom), concerning the implementation of certain practices linked to the *Ma Ligne TV* and *TPS L* offers by TF1 and Métropole Télévision (M6) on the one hand and France Telecom on the other, which they considered to be anti-competitive.

ART wished to clarify the fact that if France Telecom planned to propose its *Ma Ligne TV* offer in areas where there are likely to be operators using unbundling, this would justify the regulator's attention, given the particularity of France Telecom's position in the local loop. This is because it is ART's responsibility to ensure that alternative operators are able to duplicate the *Ma Ligne TV* offer using unbundling such that true competition can develop for this new service.

III. OTHER ACCESS MODES

A. Wireline technologies

1. Cable

The cable operators were the first to offer permanent Internet access. To achieve this, they had to upgrade the networks that were originally designed for broadcasting audiovisual programmes. Until 2003, cable development was curbed by a specific legal scheme, which imposed specific constraints. The Act of 31 December 2003 on telecommunications public service obligations and France Telecom's status removed the threshold of 8 million inhabitants for areas that could be served by the same cable operator (article 11 deleting article 41 of the Act of 30 September 1986 on the freedom of communication). The new regulatory framework resulting from the transposition of the European directives should harmonise cable and telecommunications networks from a legal point of view by virtue of the principle of technological neutrality. This is because the "framework" directive specifies that "convergence of telecommunications, media and information technologies implies that all transmission networks and associated services must be subject to the same regulatory framework".

2003 : +39% Internet
subscribers on cable
in 12 months.

On 31 December 2003, there were 393 854 Internet subscribers (up 39% over the previous year) served by cable out of a total of 3.7 million subscribers all services combined.

3. Optical fibre

Users requiring very high bit rates (typically large companies) are connected using optical fibre. In these cases the bit rate can potentially exceed 1 gbps

Optical fibre is still an expensive way of providing residential access because in most cases civil engineering work is required to connect the customer. This type of access is generally used for large office-block areas. In addition, the bit rate potential of xDSL technologies has reduced the attractiveness of investing in optical fibre for residential customer connections.

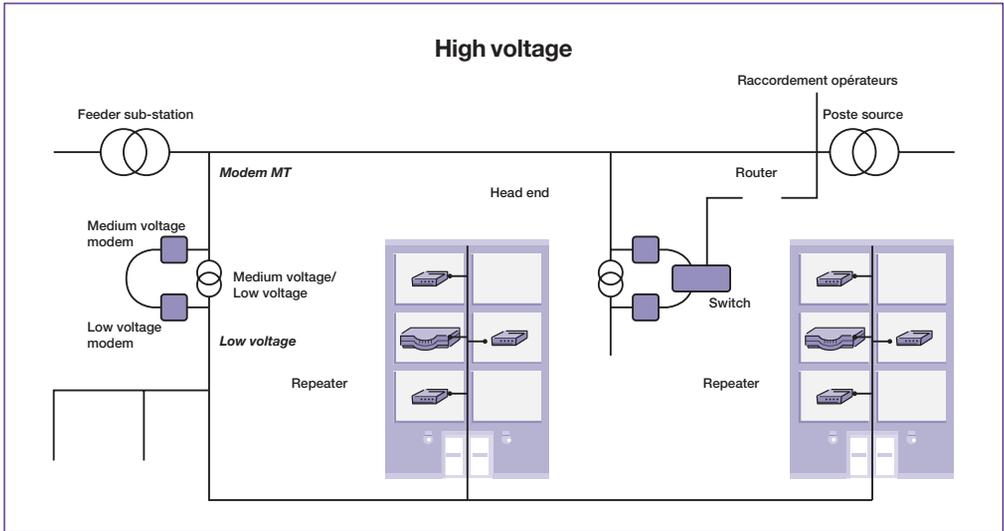
However, certain local authorities have already launched end-to-end fibre-based high-capacity broadband links using FTTH (fibre to the home) technology with a minimum symmetrical bit rate of 10 mbps. For example, the urban authorities for the Pau Pyrénées area have launched their “Pau Broadband Country” initiative to connect 80% of houses in the Pau Pyrénées area with fibre and use broadband ADSL for the rest.

3. Powerline carrier systems (PLC)

In 2003 there was renewed interest in using the electricity-supply network as an alternative not only to the copper local loop used for the telephone network or the co-axial cable used for cable TV, but also to private local area networks (eLAN).

Power-line-carrier technology uses the electricity supply network (medium and low voltage networks) as a wave-guide to transport telecommunication signals.

A traditional transmission channel (telephone line, cable, optical fibre etc.) is used for communications upstream of the low-voltage transformer in the electricity distribution network. A head-end modem downstream of the transformer is used to inject the telecommunications signals into the electrical lines at high frequency (between 1 MHz and 30 MHz), which are in turn recovered via a second modem plugged into any electrical outlet in the building. (see schematic diagram below).



Source : ART

This technology supports two main applications.

- eLAN or “PLC indoor”: uses the electrical installation in a private home or business premises as a local network, thus avoiding the requirement for specific building cabling.
- Electrical local loop: the electrical network is used to connect subscribers to telecommunications operators' infrastructure.

One of the potential areas of interest for PLC technology is in the implementation of an alternative local loop capable of being integrated into alternative operators' networks. This new access method could provide alternative operators with an opportunity to develop new offers if the economic and operational conditions for using this network suited their requirements.

3.1. The network

The electrical network is divided up into three layers: the high voltage network managed by RTE (electricity transport network) and the medium and low voltage networks managed by EDF.

Until now, PLC trials have been limited to the low-voltage network (so-called “low voltage” architecture), which allows up to 200 potential customers to be served via the neighbourhood sub-station. The technology has now progressed to the extent where it could be used in the medium-voltage network (“medium voltage” architecture) and feed up to five neighbourhood sub-stations, potentially providing telecommunications services to a much greater number of users (approximately 1000).

With the equipment currently available on the market, the bit rates that can be transmitted over the low-voltage network are in the order of 2 mbps which then has to be shared between all the users linked to the same dry riser in the building. The technical improvements currently being developed should see improvements in the performance and allow user bit rates similar to those available over a “medium-voltage” architecture.

Bit rates for the medium-voltage network are currently 2 mbps (4 to 6 mbps in the future) providing 128 kbps to 512 kbps services per user (1 mbps in the future). The bits rates achieved by PLC technology are comparable to other high-speed Internet-access methods (ADSL, satellite, cable, WLL).

3.2. Trials

Several trials have taken place in France, notably in 2003 and often on the initiative of local bodies .

Licence holder	Trial licence date	Duration	Area
Est Videocommunication	Ministerial order dated 18/07/2001	24 months	Mundolsheim
Tele 2 (SIPEREC)	Trial begins 26 Junes 2002 under the Tele 2 L. 33-1 licence	24 months	Courbevoie
ADP Telecom (SIPEREC)	Début de l'expérimentation le 26 juin 2002 dans le cadre de la licence L. 33-1 de ADP Telecom	24 months	Rosny-sous-Bois
Infosat	4 novembre 2003	6 months	Haye du Puys Département de l'Isère

Source : ART

The different trials allowed the players to test the technical potential of PLC technology, with around 20 test customers in most cases. The trial results appeared to confirm the technical feasibility of deploying PLC over an area some 200 to 300 metres from the medium voltage/low voltage transformer.

B. Wireless technologies (satellite, WLL, WiFi)

1. Satellite

1.1. Broadband satellite access

Satellite is seen today as a broadband-access method particularly suited to isolated areas not compatible with use of other types of infrastructure. As such, it is a useful tool for opening up isolated areas. Certain local bodies combine satellite with other technologies such as WiFi in their regional development plans (four areas in the Midi-Pyrénées region, the communauté de communes de la Lomagne gersoise, the Chaumière broadband association, Mane) or PLC (régie du pays chartrain). Others combine satellite with WiFi and PLC (Haute Vallée de l'Aspe in the Pyrénées).

The cost of equipment has dropped sharply as have the market prices proposed by the current operators (Aramiska, Divona, Satlynx, Eutelsat). Satellite services can provide much higher bit rates than ADSL (up to 34 mbps).

1.2. ART actions

The regulations governing licence fees and charges for frequency for operators offering satellite broadband Internet access are designed to encourage regional development.

The licence application fee was abolished on 25 July 2003 and the annual fee for L 33-1 "satellite" operators is fixed at 19 056 euros per year. This is an advantage for satellite operators compared to other L 33-1 operators, which pay coverage-based fees that can amount to 134 000 euros for coverage in more than 5 regions.

Furthermore, the system of fees for allocating and managing frequencies for satellite-based broadband Internet access is no longer restrictive. ART supported these measures. The fee for frequency allocation is now fixed for frequencies in dedicated bands and is independent of the number of sites or the number of earth stations per site. The annual management fee is set at 6710 euros and is fixed and independent of the number of sites or the number of earth stations per site, which encourages regional development.

Furthermore, ART welcomes the tax measures adopted by Parliament in December 2003 following the CIADT decision on 3 December 2003, which introduced a special amortisation mechanism providing tax deductions from year one onwards for satellite-based broadband-Internet-access terminals.

2. Wireless local loop (WLL)

Wireless local loop (WLL) is wireless technology that allows fixed customers equipped with an antenna to be connected to an access point in the operator's network via a microwave radio link. It is an important building block in the network because it allows an operator to connect customers directly and control services from end to end.

The recognised frequency bands for WLL networks are in the 3.5 GHz and 26 GHz bands in metropolitan France and in the 3.5 GHz band for the overseas départements.

The commercial offers currently available provide bit rates from 64 kbps to 34 mbps and are designed primarily for businesses.

2.1. WLL operators as of 31 December 2003

At the end of 2003, the number of operators in both metropolitan France and the overseas départements rose from 5 to 6 compared with the previous year, following establishment of a new operator in the overseas *départements*.

- there are two national operators in metropolitan France: 9 Telecom Entreprise (LD Com group) and Altitude Telecom.
- there is one regional operator in metropolitan France: Broadnet France (subsidiary of Altitude Telecom)
- there are three operators in the overseas départements: Cegetel La Réunion, Mediaserv and XTS Network (with two subsidiaries: XTS Network Caraïbes and XTS Network Océan Indien).

In spite of the difficulties encountered by the players, ART is still convinced that this technology allows alternative offers to be established for small and medium businesses particularly with the development of Wimax technology.

*2.2. Summary of allocated frequencies
(on 31 December 2003)*

In metropolitan France

Regions	Allocated band					
	3,5 GHz band			26 GHz band		
	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6
	15 MHz duplex	15 MHz duplex	112 MHz duplex	112 MHz duplex	112 MHz duplex	112 MHz duplex
Alsace	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Aquitaine	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Auvergne	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Basse-Normandie	Available	Altitude Telecom	9 Telecom Entreprise	Altitude Telecom	Available	Available
Bourgogne	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Bretagne	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Centre	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Champagne-Ardenne	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Corse	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Franche-Comté	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Haute-Normandie	Available	Altitude Telecom	9 Telecom Entreprise	Altitude Telecom	Available	Available
Ile-de-France	Available	Altitude Telecom	9 Telecom Entreprise	Broadnet France*	Available	Available
Languedoc-Roussillon	Disponible Telecom	Altitude Entreprise	9 Telecom	Available	Available	Available
Limousin	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Lorraine	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Midi-Pyrénées	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Nord-Pas-de-Calais	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Pays de la Loire	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available

	Allocated band					
	3,5 GHz band			26 GHz band		
	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6
Regions	15 MHz duplex	15 MHz duplex	112 MHz duplex	112 MHz duplex	112 MHz duplex	112 MHz duplex
Picardie	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Poitou-Charentes	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Provence Alpes Côtes d'Azur	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available
Rhône-Alpes	Available	Altitude Telecom	9 Telecom Entreprise	Available	Available	Available

Source: ART

* Altitude Telecom subsidiary

In the overseas départements

	Allocated band	
	3,5 GHz	
	Band 1	Band 2
Regions	42 MHz duplex	42 MHz duplex
Guadeloupe	XTS Network Caraïbes	Mediaserv
Guyane	XTS Network Caraïbes	Disponible
Martinique	XTS Network Caraïbes	Mediaserv
Réunion	XTS Network Océan Indien	Cegetel la Réunion

Source: ART

2.3. ART actions

2.3.1. WLL-operator licences

■ In metropolitan France

In 2001 and 2002, the WLL market went through a consolidation period which saw the two national operators, FirstMark and Fortel, merging (to become Squadran) and then being taken over by the LD Com group. Following this operation, ART asked LD Com in June 2002 to ensure that a WLL offer would be available in all French regions by the end of 2002. In September 2002, the Squadran licence was revoked following the merger of the two national operators and all the allocated frequencies in the 26 GHz and 3.5 GHz bands reverted to ART (decision 02-730 dated 5 September 2002). FirstMark, which by then was the only national operator, was renamed 9 Telecom Entreprise¹ in March 2003. In December 2003, 9Telecom Enterprise returned the frequencies in the 3.5 GHz band for all of France (decision no. 03-1296 dated 9 December 2003).

Following the consolidation in this sector, ART launched a public consultation in November 2002 to gather opinions from the relevant players on the use and allocation of the available frequencies and in particular, for those used for wireless local loop in the 3.5 GHz and 26 GHz bands. This consultation also covered the 28 GHz and 32 GHz bands.

The objective was to assess the likely demand for these frequencies and to establish a technical organisational structure that would take into account the available resources, the players' requirements and prepare the frequency-allocation procedures.

The summary of this consultation was published in March 2003. The contributions received by ART showed that demand for the available resources was limited.

In view of this, the coverage area for the regional operator Altitude in the 3.5 GHz band was extended to all of metropolitan France in 2003 given that it was the only player to have shown an interest in the frequencies in the 3.5 GHz band (decision 03-1294 dated 9 December 2003). Furthermore, Altitude, which was now a national operator, kept its frequencies in the 26 GHz band in two regions in Normandy as well as in the greater Paris area via its subsidiary Broadnet .

¹ Ministerial order dated 25 March 2003, modifying the ministerial order dated 4 August 2000, authorising Firstmark Communication France SAS to establish and operate a public telecommunications network and provide a public telephony service. Official Journal (OJ) dated 3 April 2003, p. 5896.

- In the overseas territories

A new player called Mediaserv, subsidiary of the Loret group, came onto the scene in 2003. Decision no. 03-1247 dated 25 November 2003 authorised Mediaserv to use WLL frequencies in the 3.5 GHz band in Guadeloupe and Martinique.

2.3.2. Verifying operator obligations in 2003

ART carried out a second verification of WLL operator rollout as of 30 June 2003 against the licence specification obligations. The rollout commitments were first verified on 31 December 2001.

The results showed that despite the difficulties in the telecommunications sector, the operators had started rollout within 18 months of receiving their licences.

For the latest verification, ART asked the operators to provide the rollout status and carried out checks in the field. The ensuing rollout-rate calculations allowed the WLL operators' radio coverage in the different regions to be determined.

The situation observed in 2003 showed a contrasting picture:

- The WLL operators had deployed around 170 base stations
- 19 regions in metropolitan France and one overseas département had at least one WLL operator
- One WLL offer was available in 23% of urban areas with more than 50000 inhabitants
- In total, there were around 1500 professional customers using WLL as of 30 June 2003.

At the same time that the verification was being carried out, 9Telecom Entreprises returned the frequencies in the 3.5 GHz band for the whole of France, which had been allocated but were unused.

2.3.3. Outlook

Because of the technical weaknesses in WiFi, manufacturers have set up a consortium to establish a new standard combining the advantages of WiFi (low-cost products, ease of use etc.) with high quality of service. The IEEE 802.16a standard, which is in the process of being finalised, can be used for frequencies between 2 GHz and 11 GHz. The manufacturers claim a number of worthwhile advantages: high bit rates (several tens of mbps), the possibility of transmitting without line of sight over distances of 10 to 15 km and with line of site over several tens of kms, high quality of service,

possibility of prioritising the data streams etc. In Europe, ETSI is managing the standardisation work on Hiperlan technology, which has more or less the same advantages as the 801.16a standard.

Operators such as Altitude, which has announced Wimax trials in the 3.5 GHz WLL frequency band, or France Telecom, which is trialing Wimax in the 3.6-3.8 GHz band, have expressed interest in this technology, which is expected to stabilise in 2005. This new technology could rekindle interest in WLL. For this reason, manufacturers are taking a close look at developing products in the 5 GHz band.

The 5 GHz band is reserved for other uses in France, notably military. If the 5.8 GHz band is adopted for the European Wimax market, then it will be necessary to enter into negotiations with the Ministry of Defence in order to free up the band, as was the case for the use of 3.5 GHz for WLL.

Since 1Q 2004, the emergence of these new technologies has generated renewed interest on the part of the players in rolling out WLL networks. In view of this, ART will hold consultations with the players in 2004 to assess the real frequency requirements.

3. WLAN or WiFi¹

Independent wireless local area networks or WLAN (also known as WiFi) are networks that can be made up of several cells using frequencies which have not been specifically assigned to the user. This means that there is no guaranteed protection or immunity from interference. The networks use frequencies in the 2.4 GHz band for which there are no licence fees. They are used either for private use (internal and residential networks) or by operators supplying public telecommunications services. These latter can be used to provide broadband Internet in public passageways or hot spots such as railway stations, airports, hotels etc. The bit rates vary depending on the WLAN technology used and can reach several mbps shared between users in the same micro cell.

WiFi and broadband

In 2002, ART introduced several measures to liberalise WiFi. This technology is currently meeting with resounding success and facilitates broadband Internet usage, which is developing particularly rapidly. Indeed, the number of broadband subscribers has tripled in less than two years in Europe. In France, which has recorded one of the highest rates of growth, there will be nearly 3 million subscribers at the end of the year compared to 500 000 two years ago.

This enthusiasm for broadband is of course due to progress in technologies such as ADSL, but it is also the result of decisions taken by ART which have led to a sharp fall in tariffs for all the various technical options, both in access and traffic collection.

As a result, the French retail tariffs are currently among the lowest in Europe, averaging 30 euros per month compared with 38 euros in Germany and 43 in the UK.

WiFi therefore will reinforce this trend by opening up new applications -we can say that the "Internet nouveau" has arrived.

Editorial in ART's newsletter "la lettre de l'ART" no. 34 September 2003 by Dominique Roux, ART Board member.

3.1 ART Actions

On 3 February 2003, the initial list of 38 départements, where WLAN operating conditions were eased after the ART guidelines dated 7 November 2002 had been adopted, was extended to 20 new départements following a Ministry of Defence proposal.

¹ WLAN or WiFi report available on ART's website (<http://www.art-telecom.fr>)

The liberalisation of the 2.4 GHz frequency band and the new licensing regime should help public WiFi to take off.

On 24 July 2003, ART published new guidelines on the WLAN licensing scheme. The negotiations between ART and the Ministry of Defence extended the applicable conditions which had been in force since 1 January 2003 for 58 départements, to all départements in metropolitan France. The WLAN frequencies are now available for use on condition that certain transmitted-power restrictions are observed. In the overseas départements, the technical conditions, which were already very favourable, remain unchanged. By the same token, the technical conditions for use of the 5GHz band, currently being used by the armed forces, remain unchanged.

From 25 July 2003, the current system requiring a simple notification applies to trial public WLAN network operators provided that the technical conditions are strictly adhered to, notably in terms of power limits.

ART plans to maintain the framework for trial public WLAN networks at least until the end of 2004 to allow the development of original initiatives with minimum constraints and facilitate the development of durable technical and commercial service offerings in this emerging market. ART will endeavour to follow up these trials in collaboration with the operators concerned and carry out a global assessment to determine any modifications that may be required to the trial licensing scheme after 2004 within the framework defined by the future legislation on electronic communications.

From 1 January 2003 to 24 July 2003, 12 experimental licences were awarded by ministerial order. Between 25 July 2003 and 31 December 2003, 71 operators notified their activity so that they could deploy a trial WLAN network.

WiFi and health

In June 2003, ART launched a study to evaluate electromagnetic field levels generated by wireless LAN (WLAN) technologies. The objective was to compare the actual levels generated by the WiFi wireless access points and PC cards (for different manufacturers and in configurations representing working conditions) with the limits for public exposure set by ministerial order on 3 May 2002.

This study is a further example of ART's policy of providing open information and follows on from the previously published overview of scientific studies on the possible effects of electromagnetic fields generated by GSM antennas and terminals as well as the legal situation on measures limiting antennas and relays.

3.2. Technical conditions for the use of WLAN frequencies

In metropolitan France

Frequency bands	Maximum power indoors	Maximum power outdoors
2400-2454 MHz	100 mW	100 mW
2454-2483,5 MHz	100 mW	10 mW
5150-5250 MHz	200 mW	impossible
5250-5350 MHz	200 mW with DFS/TPC or équivalent or 100 mW avec DFS only	impossible
5470-5725 MHz	impossible	impossible

Source: ART

In Guadeloupe, Martinique, St Pierre-et-Miquelon, Mayotte

Frequency bands	Maximum power indoors	Maximum power outdoors
2400-2483.5 MHz	100 mW	100 mW

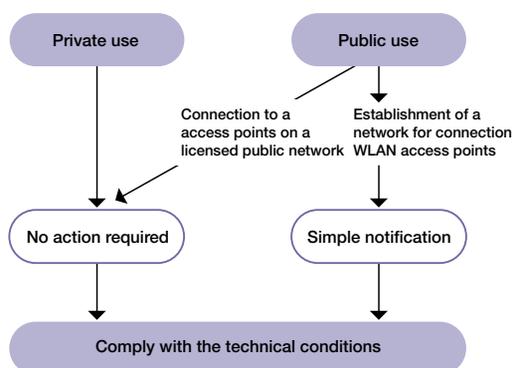
Source: ART

In la Réunion et in French Guyana

Frequency bands	Maximum power indoors	Maximum power outdoors
2400-2420 MHz	100 mW	Impossible
2420-2483.5 MHz	100 mW	100 mW

Source: ART

Summary of the regulatory framework for WLAN at 2.4 GHz and 5 GHz from 25 July 2003



3.3. Trial WLAN/WiFi licences

On 12 February 2004, 74 operators were carrying out public WiFi trials in France mainly to connect customers in small rural areas (often on the initiative of local authorities), or for niche markets (WiFi for leisure craft owners)

IV. ACCESS TECHNOLOGY COMPARISON

		Symmetrical or asymmetrical	Possible bit rates : (order of magnitude)	Possible coverage
Trial technology	PLC	Shared bit rate ¹	from 128 kbps to 1 mbps ²	Local (trial)
	Wifi	Shared bit rate ¹	Possible bit rates range from 64 kbps to maximum bit rate ³	Local (trial)
Radio access technologies	Satellite	Asymmetrical	from 128 kbps -512 kbps to 2 mbps - 34 mbps	National
	WLL	Symmetrical	from 128 kbps to 10 mbps	Presence in 19 regions (accessible by approx 10% of the french population)
Wireline access technologies	PSTN/ ISND	Asymmetrical	less than 128 kbps	
	ADSL	Asymmetrical	from 64 - 128 kbps	Virtually national (80% of the population)
			to 640 kbps - 8 mbps	
	HDSL	Symmetrical	up to 2 Mbps	
	SDSL	Symmetrical	from 192 kbps	
			to 2.3 mbps	
Câble	Asymmetrical	from 160-640 kbps	6,2 million outlets installed for Internet access	
		to 1280 kbps-2560 kbps		
Fibre	—	Theoretical bit rate up to 100 mbps	—	

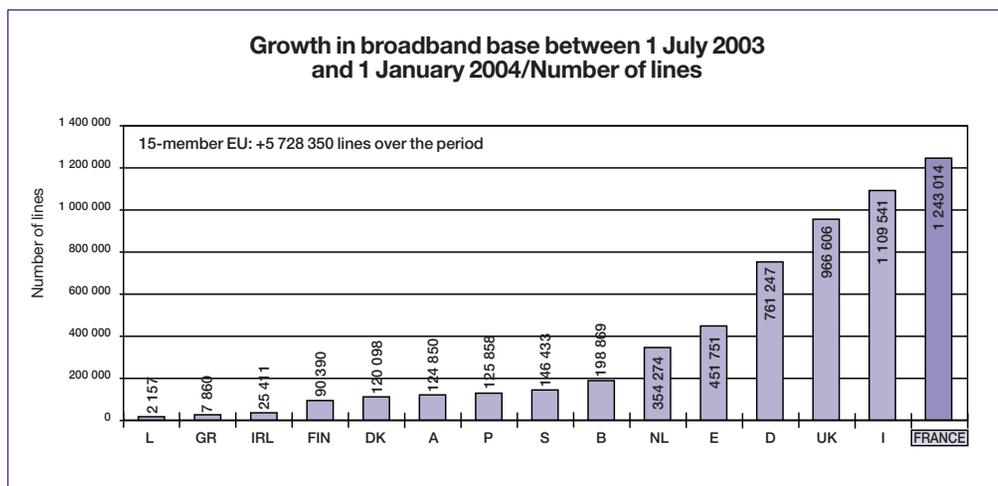
Sources: ART

- 1 WiFi customers connected to the same access point or PCL customers connected to the same transformer share the available bit rate.
- 2 From 1 to 5 mbps at the transformer shared between the users.
- 3 The 802.11g standard provides a theoretical 3.54 mbps (30 mbps actual) This bit rate is available in the coverage area for a given access point and is shared by all users connected to it.

V. INTERNATIONAL COMPARISONS

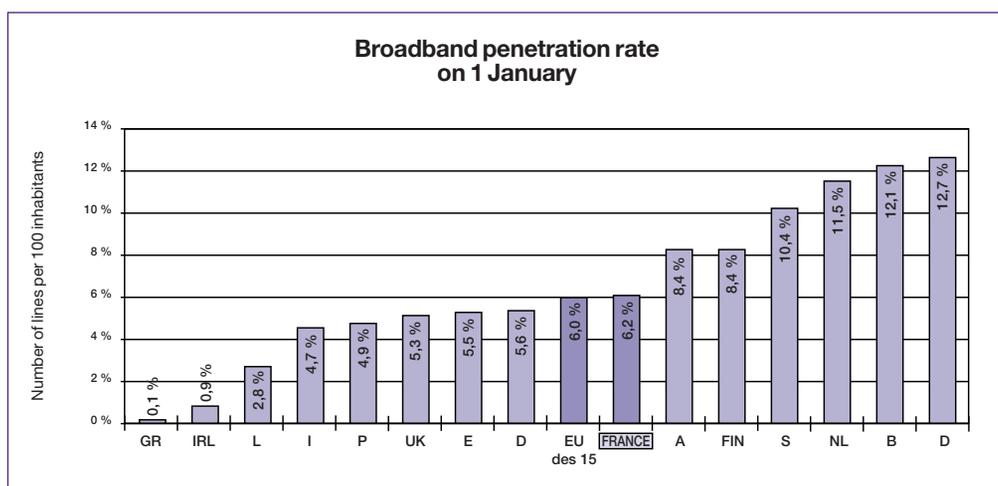
A. Market development

Broadband continued to develop rapidly in most European countries during the second half of 2003. The French market appeared to be particularly dynamic with the highest growth in the subscriber base occurring over the last 6 months.

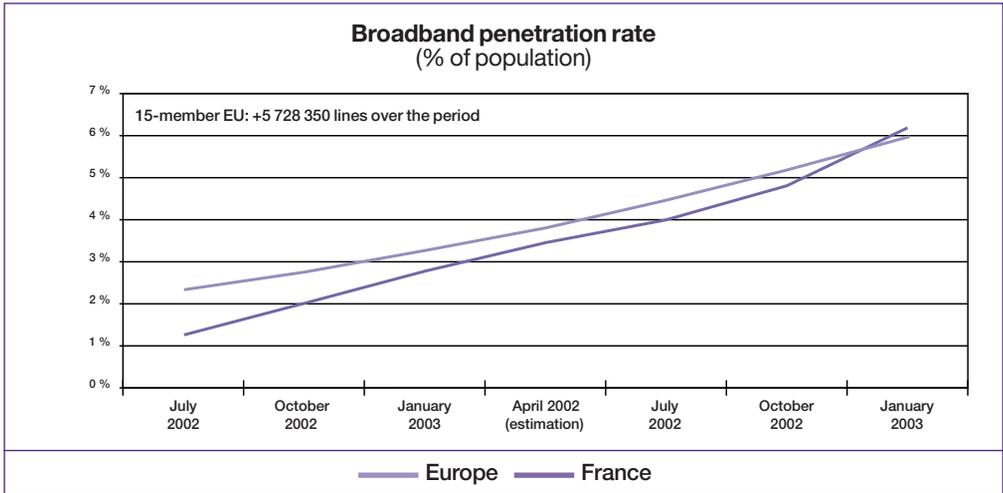


Source: European Commission

The French penetration rate (number of broadband lines per head of population) is in line with the European average, which it has exceeded for the first time.



Source: European Commission



Source: European Commission

B. Competing with infrastructure

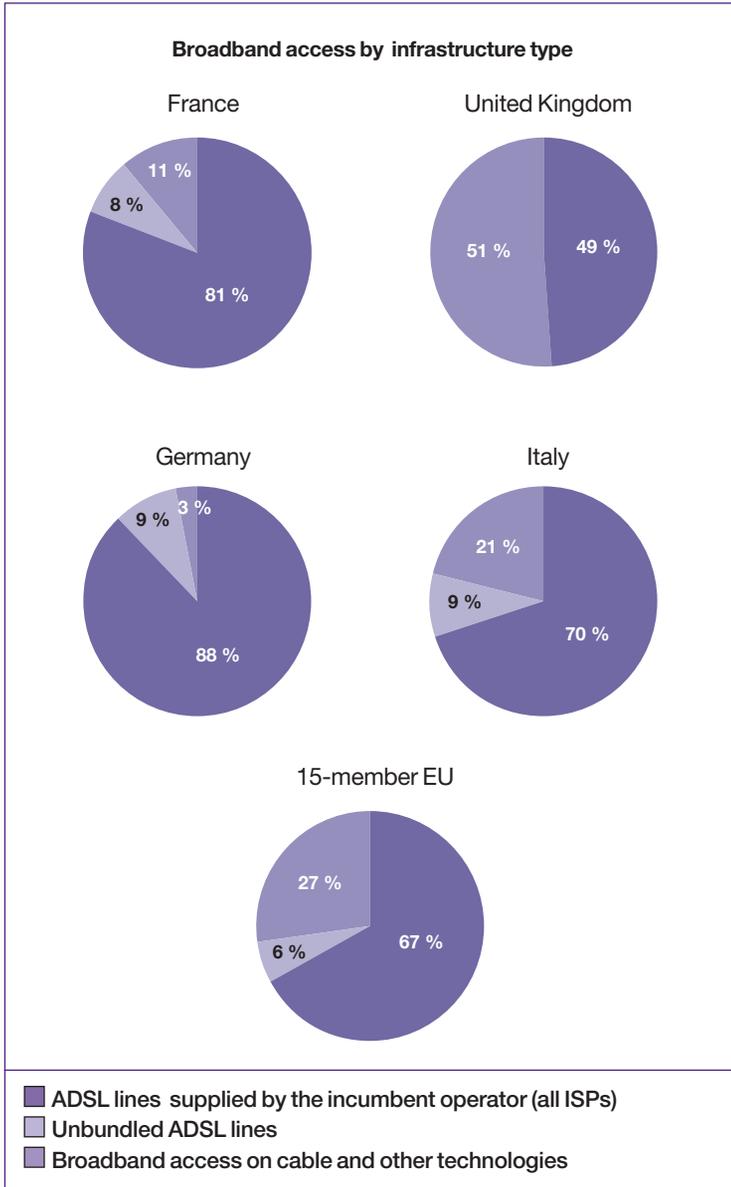
Supplying a broadband service to end users requires:

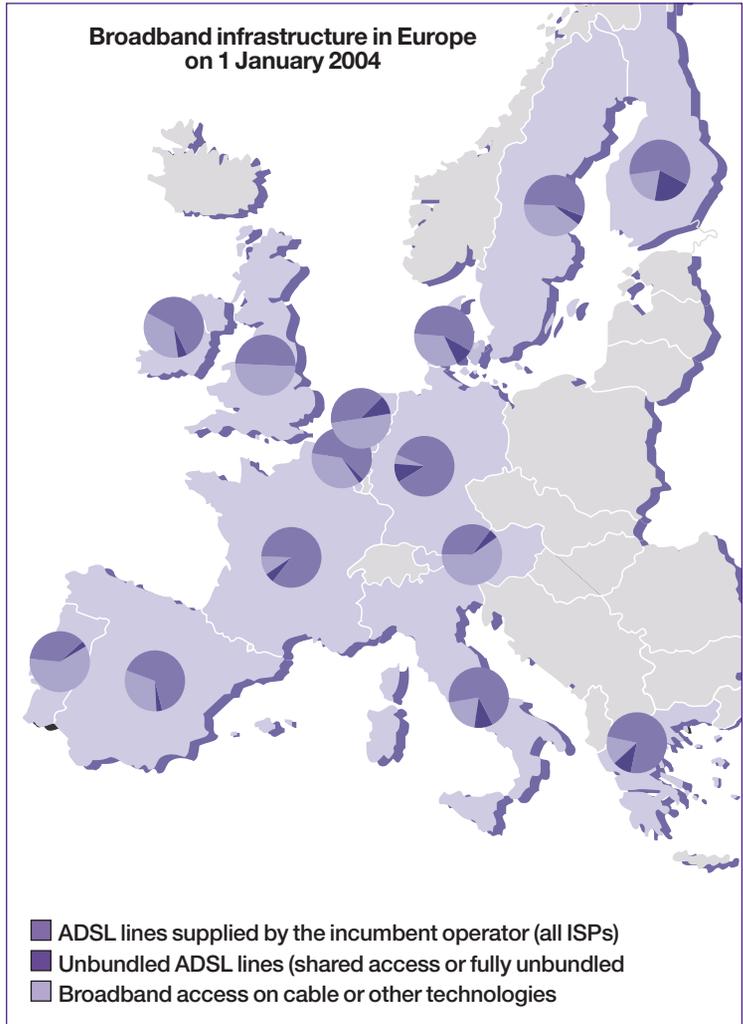
- broadband infrastructure including the last mile to the subscriber which is generally provided on cable or copper networks (ADSL and IP) and data transport.
- supplying a certain number of associated services, generally managed by an ISP, which include, notably, customer relationship management, an Internet gateway, personal web page hosting and an email service.

The infrastructure costs represent nearly two thirds of the retail tariff with the production costs of associated services taking up the other third. Using infrastructure to compete is all the more important as a way of stimulating the market because it encourages technological innovation and makes it possible to provide complementary services such as voice over ADSL or audiovisual broadcasting.

In most European countries, competition to the incumbent's ADSL network is provided by cable networks. In France, the cable operators' market share has always been relatively small.

Since the beginning of 2003, unbundling or “renting” the local loop to alternative operators so that they can provide their own ADSL services has particularly stimulated competition. Using infrastructure as a means of competition in France is relatively infrequent in France compared to other European countries where cable has developed to a greater extent.



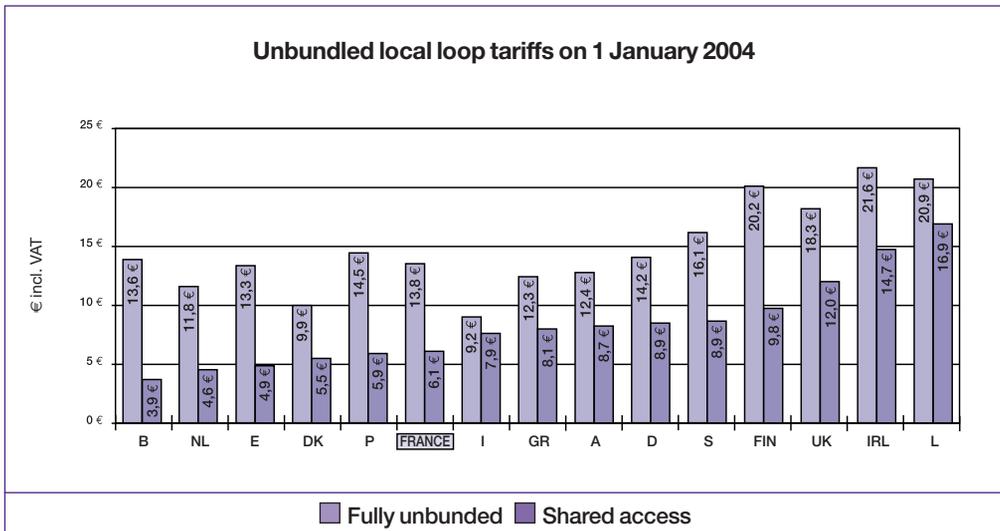


Source: European Commission

C. Unbundling tariffs

Providing unbundled access means that the access has to be ordered (and the installation costs paid), rented for a certain period (at the monthly ULL tariff) and then cancelled (and the access-disconnection costs paid). ART generally uses a 36-month fixed-cost amortisation period for broadband markets. The monthly cost of shared access or partially unbundled local loop is €6.1/month in France comprising €2.85 monthly rental plus $(€78+€40)/36 = €3.25$, which corresponds to the copper pair installation and disconnection costs.

Furthermore, the shared local loop requires the installation of a filter to separate the voice frequencies (used by France Telecom to continue providing telephony services) from the frequencies used by the unbundling operator for the provision of broadband Internet access. In France this filter is included in the monthly tariff for shared access. For comparison purposes, the cost of the filter needs to be added to the ULL tariffs for countries where it is not supplied. The cost can be estimated at 0.2€ per month¹.



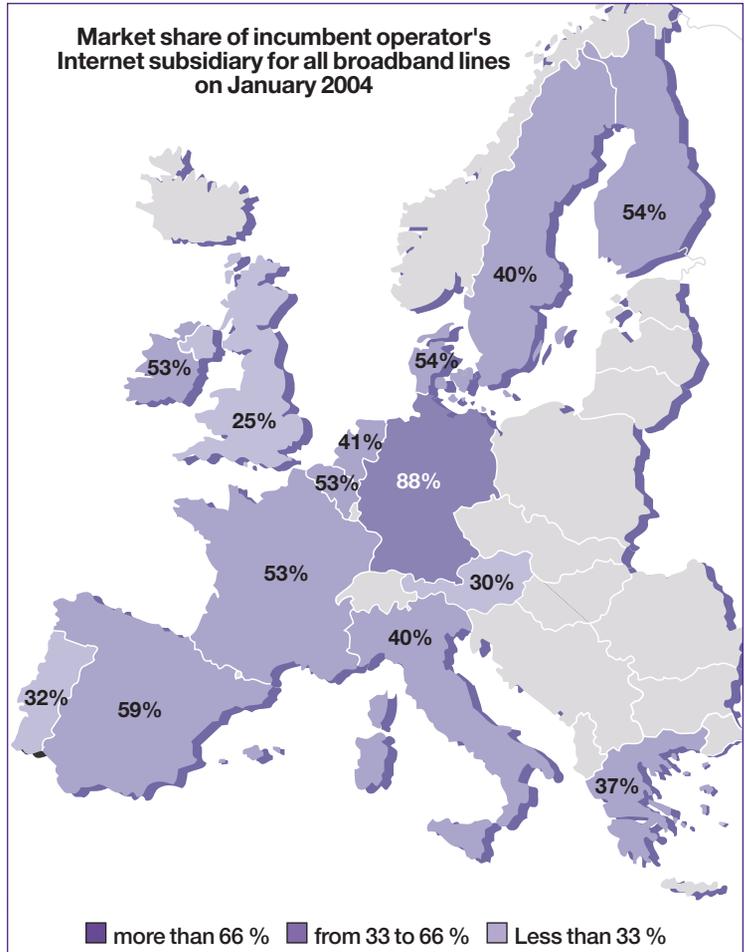
Source: ART

¹ Corresponds to €20 amortized over 36 months which is the same as the Belgacom tariff for the same service in its ULL offer (€131 per year for 48 filters).

D. Competing with services

Most incumbents have established an Internet subsidiary, which supplies broadband services and subscriptions to the retail market. The particular circumstances for these subsidiaries explains why they generally have a significant retail market share in most European countries.

France is about average in this respect with Wanadoo's broadband market share standing at approximately 46%.



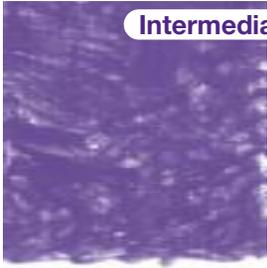
Source: European Commission

ART actions in the different market segments

CHAPTER 6

Intermediate markets

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Intermediate markets

I. INTERCONNECTION

Interconnection allows different networks to be connected together so that all users can communicate freely and is one of the essential technical conditions for competition in telecommunications markets.

A. Market Figures

1. Total interconnection services

(€ millions)	2000	2001	2002	2003*	Growth
Turnover for interconnection services	6 000	7 127	6 558	6 083	-7,2%
International incoming traffic	886	1 100	948	884	-6,8 %

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory reports due to be released 1Q 2005

(in millions of minutes)	2000	2001	2002	2003*	Growth
Interconnection-service volumes	94 091	145 054	174 540	186 267	+ 6,7%
International incoming traffic	6 287	7 408	6 935	6 568	-5,3%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory reports due to be released 1Q 2005

Interconnection represents an overall market of 6 billion euros and 186 billion minutes. Traffic terminating on mobiles represents 15% of volumes in minutes and 46% of turnover. Narrowband Internet traffic collection amounts to 26% of volumes in minutes and 4% of total turnover. The 6.8% drop in the total interconnection-market turnover is mainly due to the drop in Orange and SFR mobile network termination charges set by ART.

2. Fixed-operator interconnection

(€ millions)	2000	2001	2002	2003*	Growth
Turnover for interconnection services	2 679	3 290	3 033	3 030	-0,1%
International traffic incoming	707	798	715	697	-2,5%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

(in millions of minutes)	2000	2001	2002	2003*	Growth
Interconnection-service volumes	60 191	84 403	105 866	110 301	+4,2%
International traffic incoming	5 225	5 817	5 728	5 550	-3,1%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

3. Mobile operator interconnection

(€ millions)	2000	2001	2002	2003*	Growth
Turnover for interconnection services	3 148	3 484	3 290	2 820	-14,3%
International traffic incoming	179	302	233	186	-20,2%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

(in millions of minutes)	2000	2001	2002	2003*	Growth
Interconnection services volumes	16 836	21 288	24 751	27 533	+11,2%
International traffic incoming	1 062	1 592	1 207	1 016	-15,8%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

The drop in call-termination charges on the Orange and SFR mobile networks on 1 January 2003 following action by ART is the main reason behind the drop in the mobile operators interconnection-service revenues.

4. Internet access traffic interconnection

(€ millions)	2000	2001	2002	2003*	Growth
Internet interconnection turnover	173	352	235	233	-0,9%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

(in millions of minutes)	2000	2001	2002	2003*	Growth
Internet interconnection turnover	17 064	39 363	43 924	48 433	+10,3%

Sources: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

B. ART actions

The technical and tariff conditions of France Telecom's standard interconnection offer (so-called interconnection catalogue) for 2004 were approved by ART in its decision no. 03-1231 dated 13 November 2003.

The standard interconnection offer specifies the technical and tariff conditions for the wholesale services that France Telecom is required to provide to other network and service operators due to the fact that it is an SMP (significant market power) operator in the telephony and leased-line markets.

The offer must meet the regulatory objectives, which are designed to ensure the development of fair and sustainable competition in the relevant markets.

Consequently, it covers a wide range of France Telecom activities in metropolitan France and in the overseas départements and administrative areas. In particular, it describes the technical and tariff conditions for call termination, carrier selection and pre-selection, collection of switched traffic for ISPs and special voice and data services, leased lines used for interconnection, geographic and non-geographic number portability and payphone-traffic collection for telephone-card services.

Each year, there are long and detailed consultations with all operators, notably during the interconnection committee meetings and negotiations between France Telecom and ART before the standard interconnection offer is finalised.

1. The main changes to the standard interconnection offer compared to 2003

1.1. Third-party billing for calls to alternative-operator shared-revenue services

During the interconnection committee meeting on 1 July 2003, ART presented an economic analysis of the current system for delivering and billing calls to alternative-operator shared-revenue services on behalf of third parties.

The analysis showed that the commercial conditions applicable to alternative operators in the service-provider market were not comparable with those available to France Telecom in the same circumstances.

However, France Telecom estimated that the existing remuneration for its third-party-billing services for calls to special services provided by alternative operators did not allow it to cover the actual costs involved in supplying these services.

France Telecom therefore made a proposal to ART, which was accepted, to modify its third-party-billing services for calls towards alternative-operator shared-revenue services to take into account the cost of sending out reminders (with no distinction being made between France Telecom and alternative-operator revenues) for unpaid bills, in addition to the cost of billing and collecting the invoiced amount.

With this new service, which must come into effect end June 2004 at the latest, operators should see a significant improvement in debt-collection levels compared to the current situation.

1.2. Third-party billing for calls to charged Internet services and alternative-operator shared-cost services

Third-party-billing tariffs for calls to alternative-operator charged-Internet and shared-cost services have changed as shown in the following table:

	Previous rates	New rates
Charged Internet services	2% of the average revenue transferred to the operators	4% of the average revenue transferred to the operators
– Shared cost services below or equal to the local call tariff	2% of the billed revenue less interconnection charges	4% of billed revenue less interconnection charges
– Shared cost services higher than the local call tariff		

Source: ART

1.3. Interconnection quality of service (QOS)

The various commercial players in a competitive market usually provide QOS guarantees with the services they offer. If need be, they are also prepared to provide compensation in the case of service failure.

Quality of service is even more important in wholesale markets because it directly influences the quality of service that can be offered in the corresponding retail market.

Therefore, ART considered that France Telecom should modify its interconnection offer firstly to specify the QOS commitments for the different services and secondly to propose a compensation scheme that would provide the appropriate incentives and be suitable for ensuring effective competition in the retail markets in question.

For the first time therefore, there were financial penalties in the catalogue for failing to meet the maximum delivery times for implementing pre-selection and providing the interconnection tie lines. There were also “stop gap” measures for access to congested cross-connect sites.

1.4. Other measures

The 2004 catalogue also includes the possibility of sending interconnect traffic on 155 mbps tie lines, which were previously reserved exclusively for traffic from partial leased lines used for termination .

Furthermore, France Telecom introduced a 10-hour guaranteed restore time for faults on interconnection-link services.

Finally, it should be noted France Telecom proposed reductions in average delivery times for interconnection resources at operator-connection points (PRO) as well as at the local exchange.

The delivery-time reductions, which are particularly significant for the PRO (operator interconnection point), reflect the drop in the number of orders placed by the operators for establishing new interconnection links to the France Telecom network.

2. Relatively stable tariffs

The tariffs for delivering voice and Internet traffic have remained stable overall because the collection and local termination (so called intra-local switch) tariffs have been maintained at 2003 levels as opposed to the increase initially proposed by France Telecom.

There is a significant reduction in the pre-selection tariffs in the 2004 catalogue, which amounts to approximately 16% on the flat-rate wholesale price invoiced by France Telecom for each new line with pre-selection.

The tariffs for partial leased lines (LPT) also dropped significantly with reductions in monthly tariffs of approximately 15 to 25% and an average 10% for service access charges.

II. LEASED LINES AND DATA TRANSPORT

A. The market

1. Leased lines

(€ millions)	2000	2001	2002	2003*	Growth
Leased line revenues	2 011	2 328	2 261	2 273	+0,6%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

(Units)	31/12/00	31/12/01	31/12/02	31/12/03*	Growth
Number of leased lines	357 916	399 919	391 169	351 347	-10,2%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

2. Data transport over fixed networks (declared operators)

(€ millions)	2000	2001	2002	2003*	Growth
Data transport revenues	681	676	506	536	+5,9%

Source: ART

*Provisional estimate. The definitive estimates will be provided in the 2003 market observatory report due to be released 1Q 2005

Note : The revenues do not include Transpac (France Telecom group) or other non-licensed operators.

B. ART actions

France Telecom presented 8 tariff decisions on leased line and other capacity services in 2003. Five of these were significant.

The first concerned changes in tariffs for analogue and both very-low-speed (less than 19.2 kbps) and 2 mbps digital leased lines. In the decision no. 03-425 dated 24 March 2003, ART made a favourable recommendation on the tariff increases for the analogue and low-speed digital lines so that they would be more in line with the costs (reduction in operating losses). However, it made a negative recommendation on the proposed reduction in the 2 mbps digital leased line prices on the grounds that there was insufficient information to verify the consistency of the tariffs in this offer with the interconnection offer for partial leased lines (LPT) at the same bit rate in the approved standard interconnection offer .

Two tariff decisions concerned changes to the Inter LAN 1.0 service prices for broadband capacity over optical fibre in the main administrative centres in each département (approximately 100 urban areas) for business LAN interconnection. The tariff decisions proposed a drop in prices and a reduction in the number of geographic areas where tariff approvals would be required for the Inter LAN 1.0 service. ART made an unfavourable recommendation regarding France Telecom's request to waive the obligation to submit the Inter LAN service for approval in the four main urban areas in France (recommendation no. 03-986 dated 9 September 2003)¹, and a favourable recommendation on the tariff levels proposed for the total number of administrative centres (recommendation 03-1163 dated 30 October 2003). Through these tariff decisions, ART reaffirmed the principle of tariff approval for the whole of France despite the appearance of pockets of competition in certain urban areas (observed during the broadband competition study) because of the risk of cross subsidies between areas with and without competition. This requirement will remain until the market analyses allow a re-examination of the state of competition in these areas.

ART also made a favourable recommendation (recommendation 03-70 dated 16 January 2003) on a tariff decision concerning leased lines between metropolitan France and the overseas départements and between overseas départements. The tariff decision introduced price reductions (around 20%) for the leased lines concerned.

¹ Urban areas in Paris, Lyon, Marseille and Lille

Finally, ART made a favourable recommendation on the increase in geographic coverage and service scope for the Réseau intra Cité offer (recommendation 03-582 dated 24 April 2003). The offer provides broadband-capacity services (essentially data) over optical fibre for local authorities. The Réseau intra-Cité network, which previously had been limited to urban areas with more than 20 000 inhabitants, has been extended to towns with a population between 10 000 and 20 000 inhabitants. In terms of reach, the service, which had previously been limited to 3km within a given commune, was extended to the boundaries of the département.

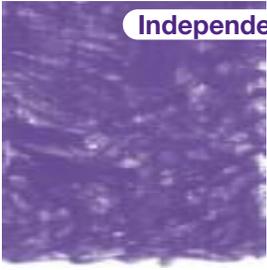
ART actions in the different market segments

CHAPTER 7

Independent networks PMR

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Independent networks PMR



Independent Networks PMR

In 2003, more than one third of ART decisions concerned independent networks or radio installations.

GLOSSARY

SNG: *(SATELLITE NEWS GATHERING): ground stations for temporary satellite-video links.*

VSAT: *Very Small Aperture Terminal. Satellite telecommunications services using a narrow part of the total satellite bandwidth and a very small transmitter receiver (parabola) for low or medium speed data transmission.*

2RP: *private radio networks (for internal company requirements).*

2RC: *radio network with common repeaters (network shared between several users).*

RPNP: *Professional digital networks for private use.*

RPX: *Professional radio network (new network category assigned to an installer supplying services to its customers)*

GU: *large users*

3RPC: *trunked radio network (for commercial use).*

RPN: *Tetra or Tetrapol L.33-1 type professional digital networks*

I. NETWORK LICENCES AWARDED UNDER ARTICLE L.33-2

In 2003, ART adopted 435 decisions on independent networks. Since 25 July 2003, when provisional measures were introduced pending transposition of the European directives, individual licences are no longer required for independent networks and approval is only required for frequency allocations.

There are two main reasons for the 16% increase in the number of decisions adopted in 2002, despite the fact that decisions on wireline networks were no longer required after 25 July. Frequency allocations for 3RP networks or temporary allocations increased following the closure of Dolphin's analogue and digital networks. This was followed by the frequency-modification decisions for independent radio networks following an exchange of frequencies between ART and the Ministry of Defence and the Interior Ministry in the 450 - 470 MHz band, which in turn required changes to be made to the allocated frequency pairs to avoid interference problems.

Around 40 of these decisions did not directly concern frequency allocation but were related to allocations being revoked (29 decisions) and changes in company name (9 decisions). The 88 2RP decisions concerned the allocation or modification of frequencies for 3300 networks.

Decisions on independent networks

	Number of decisions*	Wireline	MW	SNG	VSAT	2RP	RRI Mob
1997	159	14	93	16	11		25
1998	215	21	79	27	8		80
1999	278	29	145	12	9		83
2000	334	28	99	18	8	82	99
2001	400	59	92	11	12	90	136
2002	376	40	95	19	14	90	118
2003	435	25	88	24	29	88	181

Source: ART

*Total decisions, including frequency allocations

All independent networks (excl. 2RP) can be found on ART's website (www.art-telecom.fr) Searches can be carried out by type of activity or type of network.

Number of independent networks

		Fin 2002	Fin 2003
Wireline		400	NA ¹
FH		350	357
Satellites	SNG	80	78
	VSAT	36	40
	Mobiles by Satellite	4	4
Independent radio networks	2RP ²	33 100	31 666
	2RC/3R2P	85	98
	RPNP	10	21
	RPX	59	82
	GU	16	18
	3RPC	3	1
	Loc	1	1
	RPN ³	1	0
	Divers ⁴	16	21

Source: ART

Comments on professional networks

Dolphin Telecom was put into liquidation in 2003, resulting in closure of the two national networks (analogue VHF and digital UHF using the Tetra standard).

Microwave radio: There were 88 decisions in 2003 for 171 frequency allocations of which 62 were in the 1.5 GHz band, 41 in the 38 GHz band, 33 in the 23 GHz band, 18 in the 13 GHz band and 17 in the 26 GHz band. There were approximately 1200 links in the 360 microwave radio networks.

RPX: The number of RPX networks (frequency assigned to an installer for a region) increased by 50% in 2003 (82 compared to 59 at the end of 2002). There is at least one network of this type licensed in each of 19 separate regions in metropolitan France and two overseas, although a third of these are in the greater Paris area.

RPNP: the number of digital networks for private use doubled in 2003 (21 at the end of 2003 compared to 10 at the end of 2002). As in 2002, a certain number of requests are on hold due to frequency shortages in the Paris metropolitan area and near the Belgian border.

Wireline networks: Single CUG (closed user group) wireline networks can be established freely since 25 July 2003.

¹ Figures not available; these networks can be freely established since 25 July 2003.

² Networks managed by ANFR on behalf of ART.

³ Type L.33-1 professional digital network.

⁴ Trial or temporary networks or with particular frequencies.

VSAT and SNG : In 2003 the number of VSAT and SNG networks stabilised. Two decisions are currently being prepared for SNG, which when approved by the Minister, will allow this type of installation to be used in dedicated frequency bands or on pre-determined sites without requiring an individual licence.

II. NETWORK LICENCES AWARDED UNDER ARTICLE L.33-3

Eleven decisions were adopted in 2003.

Radio installations, which do not use specific user-assigned frequencies, can be freely established under the provisions of article L. 33-3 (para.5) of the Post and Telecommunications Code. ART adopted various decisions defining or modifying the conditions of use and the allocation of frequencies for these installations in 2003.

The conditions for using WLAN (more commonly known as WiFi) in the 2.4 GHz band were modified in 2003 (decision 03-908 dated 22 July 2003) to align them more closely with conditions in Europe.

The conditions for using low-power and low-range radio installations in the 2.4 GHz band were modified in 2003 (decision 03-1224 dated 18 November) and now comply with the European conditions.

Several low-power, low-range applications were licensed in accordance with the European regulations:

- Non-specific low-power and low-range radio installations in the 6765-6795 kHz and 13.553-13.567 MHz (decisions no. 03-401 and 03-402 dated 18 March 2003) and 40.660-40.700 MHz bands (decisions no.03-403 et 03-404 dated 18 March 2003).
- Avalanche victim detectors in the 457 kHz band (decisions no. 03-405 and 03-406 dated 18 March 2003).

In addition, decisions were adopted to harmonise radio spectrum use in France with European spectrum use. As a result, the use of the following frequencies will be prohibited:

- 2275 Hz will no longer be allocated to avalanche victim detectors (decision no. 03-830 dated 15 July 2003).
- non-specific installations will no longer be allowed to operate on 3 frequencies in each of the 30, 71 and 407 MHz bands (decision no. 03-831 dated 15 July 2003).
- CT2 telecommunications equipment will no longer be able to operate in the 864.1-868.1 MHz bands (decision no. 03-832 dated 15 July 2003).

In 2004, decisions are due to be adopted on:

- the use of SNG installations in dedicated frequency bands or on pre-determined sites without requiring an individual licence,
- the modification of conditions of use for amateur radio stations to take into account the 2003 WRC resolutions,
- low power and low range devices

III. REALLOCATION OF THE “DOLPHIN” FREQUENCIES

Following the ART call for comments in 2002 on the modifications requested by the company Dolphin Telecom to the licence awarded on 30 March 2000 (Official Journal dated 10 May 2000), ART concluded that the licence changes as requested by Dolphin were not justified at this stage and were not extremely urgent.

In the context of Dolphin Telecom's submission to the Minister responsible for Telecommunications to reconsider its decision, ART made a further unfavourable recommendation (decision no. 03-578 dated 24 April 2003) rejecting the Dolphin Telecom request, which was adopted by the Minister.

The Nanterre commercial court ordered the liquidation of the company Dolphin Telecom on 12 June 2003. The licence is null and void as of this date. The frequencies for both the 3RP analogue network and the digital Tetra network were returned to ART.

ART launched a public consultation aimed at industry professionals to determine the method for reallocating the frequencies in an objective, transparent and non-discriminatory manner.

There were 41 contributions in response to the call for comments including 7 operators (covering both the general public and the professional markets), 14 users (mostly motorway and transport companies), 5 manufacturers, 9 installers or consultants and 2 other contributors. The participation indicated the importance which industry players attached to the frequency reallocation process.

A wide range of requirements for the frequency was revealed in the call for comments, notably for professional radiocommunications networks (PMR) and particularly in the UHF band and in the greater Paris area.

The requirements voiced by the industry players targeted applications using all of the PMR functions and frequently included the need for continuous service where security was an issue.

This issue, the importance of which the players had already highlighted during the Dolphin Telecom call for comments, was also raised for another application. Consequently, ART drew the attention of the public authorities to uses of PPDR (public protection and disaster relief), for which a band had been identified during the World Radiocommunications Conference in 2003..

Given the complexity of the subject highlighted by the consultation and the issues raised by PPDR networks, ART will endeavour in 2004 to define the frequency reallocation procedures for the two bands, which could be subject to separate decisions, in collaboration with the industry

Until the definitive procedure has been established, ART has extended the temporary frequency allocations to companies requiring service continuity following the closure of the Dolphin Telecom network.

ART methods and resources

CHAPTER 1

Communication

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Communication

I. EXTERNAL SURVEYS AND STUDIES

Rapid changes in the sector and the highly technical nature and importance of issues related to regulation mean that ART is obliged to rely on expert technical, economic, statistical and legal studies. Since 1997, ART has developed a sizeable activity carrying out studies in the sector. The work carried out by consulting firms has allowed ART to benefit from specialist expertise and external unbiased recommendations on an ongoing basis.

The studies are rigorously monitored and followed up by a cross-functional steering committee. The scope of each study, the time allotted for completion and the documents to be submitted are determined at a preliminary meeting. Meetings are held at each stage of the study to review progress reports and, if necessary, to refocus the work. A final report and summary is produced for each study along with electronic copies of back-up material.

In 2003, ART's budget for studies totalled 924 003 euros. Some twenty studies were undertaken at an average cost of 46 200 euros with each taking four months on average to complete.

The topics covered are drawn from all areas of the telecommunications sector. In 2003, the subjects covered were divided into seven broad categories.

Universal service
Network deployment costs and determining geographical and technological factors
2002 traffic volume audit
Costing of certain intangible benefits
Economics and networks (technical outlook)
Instant messaging service: development and revenue outlook for players in the value chain*
Economics of TV-over-ADSL projects
M-commerce: Regulatory issues and outlook*
Status and issues for peer-to-peer development
Regulatory policies
Networks for the "Conseils régionaux": issues and trends
Installation of telecommunications networks on the public and private domain*.
Local authority intervention in broadband telecommunications infrastructures*
Economies
Support for economic deliberation: Support in developing market analysis methodology
Markets
Regional telecommunications observatory
Residential market tariff monitoring
Professional market tariff monitoring
Comparative measurements of mobile market competition indicators in 2002*
Dissemination of information technologies in French society; a study undertaken jointly by the "Conseil général des technologies de l'information" (CGTI) and ART*
Quality
Service quality on mobile telephony networks
Others
Electromagnetic fields arising from wireless local area network technologies (WLAN)
*These studies are available on ART's website: http://www.art-telecom.fr

Several 2002 studies were published in 2003. They can also be consulted and downloaded from the website: <http://www.art-telecom.fr>:

- GPRS roaming ;
- French household perception and awareness of the telecommunications sector.

Throughout the year, the division responsible for external studies and surveys meets consultants wishing to present their expertise and also examines the reference lists received from them, which are continuously updated.

II. DOCUMENTATION CENTRE

The documentation centre was set up when ART was established to meet the information requirements of ART staff. Over the years it has built up highly specialised documentary resources which are continuously updated and which trace the changes in the industry over the years.

Information is available in the regulatory, legal, economic and technical fields and covers Europe and beyond.

The ART documentation department is the only specialised telecommunications documentation centre open to the public. Access to public information is available during the afternoon by telephoning 01 40 47 70 48 for an appointment. The public can consult reports on particular topics, specialised reviews published in France and abroad as well as reference works on telecommunications.

A third of external requests come from companies in the telecommunications industry and two thirds from the legal profession, government departments, students, universities, consultants, banks, journalists and private individuals.

The centre is also responsible for tracking legal, economic and technical developments on behalf of the organisation, ensuring that up-to-date information is always available. The documentation centre is also in contact with consultants for the purchase of multi-customer studies.

The ART documentation department is the only specialised telecommunications documentation centre open to the public.

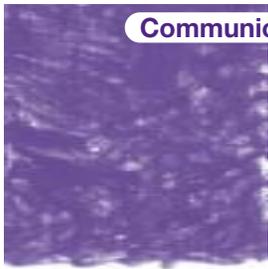
III. COMMUNICATIONS DEPARTMENT

A. Communications department activities

Besides the usual communications department activities (press contacts, website, speech and annual report writing, managing appearances at conferences and symposiums etc), 2003 was a noteworthy year for ART's communications department in three areas:

- redesign of "*La Lettre de l'ART*" (ART's newsletter)
- participation in the first FRATEL meeting in Bamako
- participation in Telecom 2003 organised by the ITU in Geneva.

The communications department also organised an information day as part of an internal communication exercise to present the ART reorganisation to staff. The reorganisation became necessary after implementation of the new regulatory and legal framework resulting from the trans-



position of the European Union “telecom package” directives. A video showing industry players’ assessment of the regulator’s work was produced for this occasion.

1. Redesign of “*La Lettre de l’Autorité*” (ART’s newsletter)

Five years after it was launched, “*La Lettre de l’Autorité*”, which is sent to more than 5 000 readers every two months, has undergone major changes:

- there is now a special feature comprising several pages in each issue containing the views of industry players (operators, manufacturers, elected representatives, consumer associations etc) in addition to those of ART. There are also a number of illustrations to improve overall clarity. Several topics have been covered in the last two issues in 2003 with the new format: WiFi liberalization, WRC 2003, market analysis and local loop unbundling.
- editorials for greater input from board members.

The change in the editorial format has been accompanied by changes to the layout: the new format is in colour, is clearer and more up to date; the number of pages has also been increased ranging from 16 to 20 depending on events. It should be noted that the changes were implemented without any increase in the budget.



2. Fratel network meeting in Bamako

The first meeting of Fratel, the telecommunications regulation network for French-speaking countries, was held in Bamako, Mali on 27 and 28 October 2003. ART’s communications department was keen to contribute to the success of this event. A 20-minute video was produced containing some ten or so interviews with key figures attending the conference, which had as its theme “good regulatory governance in the face of the challenges of globalisation” A special report of around 10 pages with reprints of the interviews was produced and distributed to participants at the colloquium. The French regulator was represented by ART board member, Dominique Roux..

3. ITU Telecom 2003 in Geneva

ART was keen to mark its presence at Telecom 2003; the 9th “universal exhibition” for telecommunications organised by the International Telecommunications Union once every four years in Geneva and attracting tens of thousands of professionals from all over the world.

ART’s chairman, Paul Champsaur, therefore delivered an address at the opening forum, which took place in the city of Protestant reformer Calvin from 11 to 18 October 2003. ART was also present at the centre of the French pavilion on a stand decorated in the French colours and

shared with Digitip, the ANFr, the CGTI, the Groupe des Ecoles des Télécommunications and the CFCE.

B. ART's website

1. Nearly one million unique visitors in 2003

In 2003, the number of unique visitors¹ for the year doubled to reach an annual total of 962 546 compared to 421 061 in 2002. The number of visitors has largely exceeded the 2-million mark since the site opened in March 1998.

On average there were more than 80 000 unique visitor connections each month. The trend shows a marked increase for the first quarter 2004 with the number of unique visitors already at 145 000 per month on average. There are already more than 13 000 Internet users on the mailing list for the French site and more than 600 for the English site. The average connection time in 2003 was unchanged at around 13.5 minutes per session. The pages devoted to broadband Internet access (ADSL, WiFi, UMTS etc) received the highest number of visits.

2003 Month visitors	Total unique	Monthly total views	Total page	Monthly total	Total hits	Monthly total
January	1 514 094	50 645	40 064 089	760 748	102 560 603	4 372 122
February	1 564 229	50 135	40 735 249	671 160	106 499 450	3 938 847
March	1 616 003	51 774	41 415 201	679 952	110 426 132	3 926 682
April	1 685 642	69 639	42 124 442	709 241	114 563 701	4 137 569
May	1 760 607	74 965	42 796 159	671 717	118 379 073	3 815 372
June	1 823 291	62 684	43 447 167	651 008	122 289 208	3 910 135
July	1 882 590	59 299	44 121 459	674 292	126 404 552	4 115 344
August	1 950 936	68 346	44 796 436	674 977	129 968 531	3 563 979
September	2 050 917	99 981	45 631 182	834 746	135 002 142	5 033 611
October	2 150 924	100 007	46 535 239	904 057	140 600 992	5 598 850
November	2 271 066	120 142	47 412 378	877 139	146 058 245	5 457 253
December	2 425 995	154 929	48 356 330	943 952	152 836 885	6 778 640
Yearly total		962 546		9 052 989		54 648 404

¹ Unique visitor : each different IP address connected to the site is counted independent of the number of visits from the same address.

2. Video, chats and changes in content

The website is a major part of ART's communication strategy. All information is communicated via the ART website which also serves as a symbol of the authority's policy of transparency vis-à-vis the industry. It is updated daily and contains content that has been provided continuously since it was established in March 1998. As a result, it has become an archive for tracing all ART actions and decisions.

For the last two years, there has been a policy of putting highly topical content on line. In 2003, ART's communication department focused on interactive communication and organised several online chats on mobile number portability, special numbers and broadband Internet access (ADSL and unbundling).

The video-production programme continued, as in 2002, notably with the production of a film entitled "good regulatory governance in the face of the challenges of globalisation" by the communications department for the Fratel network meeting in Bamako (see above).

Several innovations were introduced in 2003 with respect to content. New pages were devoted to covering the various draft laws under consideration during 2003/2004: the digital economy law, the law relating to public service obligations and France Telecom, the law transposing the electronic communication directives and postal regulation. A dynamic map showing unbundled local loop coverage has been put online indicating the départements and towns where France Telecom has delivered at least one site to new entrant operators.

The data base showing the frequency band usage for frequencies that can be allocated by ART has been reorganised to take into account the revised R&TTE directive on the publication of interfaces and ensure harmonisation with the European EFIS frequency database. At the same time, a tool was developed to allow easy publication of radio-interface specifications by the frequency-management section.

The two key projects for the site in 2004 are to modernise the graphic charter and ergonomics without changing user habits and to simplify the update procedure by providing more automation. This rework should result in the new site being put online at the end of 2004, beginning 2005.

IV. CONSULTATIVE ORGANISATIONS

A. CCRST (Telecommunications Networks and Services Consultative Committee)

The CCRST is one of the two advisory committees to the Minister responsible for Telecommunications and ART. It can be consulted on topics listed in article D. 97-2 of the Post and Telecommunications Code.

1. CCRST composition and member status

The committee comprises 21 members recommended by ART and appointed by the Minister responsible for Telecommunications in a ministerial order. It consists of:

- 7 representatives from network and service operators (other than radio networks)
- 7 representatives of network and services users
- 7 key experts

New CCRST members were appointed by the Minister responsible for Industry in a ministerial order dated 16 March 2004. Alain Bravo was reappointed as chairman of the committee.

2. CCRST activities in 2003

The committee met on two occasions in 2003. It had not been consulted formally but a certain number of topics were submitted to it for consideration.

Hence ART presented the following analyses to the committee:

- progress on local loop unbundling
- progress on work related to market definition
- progress on the analysis of relevant markets
- changes to the document relating to semaphore point code allocation criteria
- presentation of the conclusions of the study on next generation networks (NGN)
- presentation of the work on broadband by FING (new generation Internet foundation)

The Minister responsible for Telecommunications presented the progress made on the transposition of the new European regulatory framework for electronic communications

B. Radiocommunications Consultative Committee (CCR)

The CCR is in charge of examining proposals for radiocommunication regulation. It may also be consulted on any subject falling within its jurisdiction. ART operates the committee secretariat.

1. CCR composition and member status

The Radiocommunications Consultative Committee (CCR) was instituted by article D 97-1 of the Post and Telecommunications Code. The committee comprises 21 members recommended by ART and appointed for a 3-year term by the Minister responsible for Telecommunications in a ministerial order. It consists of:

- 7 representatives from radio network operators and service providers
- 7 members (professional and private) representing users of the above networks and services
- 7 key experts

The CCR membership was renewed by ministerial order on 10 November 2003. Marc Houéry was reappointed as Chairman of the committee at the same time.

2. CCR activities in 2003

The CCR met three times in 2003. ART presented various reports to the committee covering in particular, GSM licence renewals, an initiative on terminal and mobile service accessibility for disabled people (Balin report), a report on the conditions for using and allocating radio frequencies in the 3.5 GHz, 26 GHz, 28 GHz and 32 GHz frequency bands as well as a report on GSM jamming devices.

C. Interconnection Committee

Article D 99-6 of the Post and Telecommunications Code, as set forth in the decree of 3 March 1997¹, stipulates that *“an interconnection committee will be established reporting to ART and include the operators licensed pursuant to articles L.33-1 and L.34-1. The committee will be chaired by ART, which will decide on its membership and operation.”*

The interconnection committee is managed by the regulator and is the main consultative body for all interconnection-related issues.

¹ Decree no. 97-188 dated 3 March 1997 concerning interconnection as per article L. 34-8 of the Post and Telecommunications Code (extract from a Conseil d'Etat set-aside ruling, published in the OJ dated 28 May 1999, p. 7873)

1. Composition and competences

The 26 members of the interconnection committee are company managers from the telecommunications sector. The amended ART decision¹ dated June 4 1997 establishing the interconnection committee membership terms and working procedures, sets forth the following principles:

- the interconnection committee is chaired by the Chairman of ART or his representative
- the individual members of the committee are appointed by ART; each appointment is non-transferable so as to ensure the committee's stability
- two sub-committees (on economic issues and networks and services) have been created and report to the interconnection committee
- the interconnection committee meets at least twice a year. The meetings are called by the chairman who sets the agenda
- the chairman of the interconnection committee can invite qualified persons to the meetings depending on the topics on the agenda.

The committee's mandate covers all questions relating to fixed and mobile access and interconnection.

2. Interconnection Committee actions in 2003

The committee met five times in 2003 to review implementation of changes to the France Telecom standard interconnection offer for 2003 and to contribute to work on the 2004 standard interconnection offer.

Its work covered primarily:

- changes to the standard interconnection offer in 2004
- mobile network interconnection
- wholesale offers for broadband Internet access

¹ Decision no. 97-155 dated 4 June 1997 setting the interconnection committee terms and working procedures, published in the OJ dated 10 July 1997, p.10483



ART methods and resources

CHAPTER 2

ART's resources

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ART's resources

I. BUDGET

A. Budget resources

ART's annual budget is currently set by the Minister responsible for Economy, Finance and Industry as part of the Finance Bill following discussion between ART departments and the National Budget Office as well as the Secretary General of the Ministry, if required.

The initial Finance Bill for 2003 allocated a budget of 16.75 million euros, of which 9.37 million was for payroll expenses and 7.38 million for routine operating expenses (excluding carry-over).

For 2004 ART funding is contained, as in previous years, in a single chapter of the Economy, Finance and Industry budget. Funding was increased to 17.75 million euros, with 9 926 million euros for payroll expenses and 7 824 million euros for routine operating expenses. Additional funding of 1 million euros and 8 new employees is intended for postal regulation activities in 2004.

ART resource management has been affected by measures blocking budget carry-over, despite the fact that the amount was entered under section H of the Finance Bill, as well as the cancellation of credits for a total of 1 335 million euros. These measures, which were introduced during the budget year, obliged ART to manage funding on an infra-annual basis and to revise its study program.

In 2003, ART departments were partners in the *Moderfie* program for public management reform set up under the organic act dated 1 August 2001. They prepared the implementation of the integrated computing

application for budget and accounting monitoring (ACCORD) which will be fully operational beginning 2004.

B. Budgeted headcount

For 2004, the budgeted ART headcount in the initial budget act is 159, an increase of 8 compared to 2003.

II. ART REVENUES

In 2003, ART derived income from sale of the printed version of the Annual Report (22 euros incl. VAT per report) and the CD ROM, as well as from fees for accessing the G'NUM database (flat-rate subscription of 1500 euros). These revenues totalled 28 457 euros at 31 December 2003

Article L.36-4 of the Telecommunications Act of 26 July 1996 provides that: *“The resources of the telecommunications regulatory authority shall include payments for services rendered and taxes and fees payable under the conditions set out by the Finance Law or by Conseil d’Etat decree. During the drafting of the annual Finance Law, the regulatory authority shall submit to the Minister responsible for Telecommunications its proposals for the funds needed to carry out its functions, over and above the resources referred to in the first paragraph”*. In practice, the method for allocating resource to ART differs from these measures as described above.

III. HUMAN RESOURCES

In 2003 as in 2002, ART pursued a recruitment policy aimed at finding the best possible match between skill requirements and the profiles of tenured and non-tenured staff. ART recruited 28 people in 2003.

A. Headcount

ART’s headcount increased from 139 as of 31 December 2002 to 146 as of 31 December 2003. The breakdown between tenured staff (civil servant status) and non-tenured staff varied compared to the previous year, going from 76 tenured employees and 63 non-tenured employees as of 31 December 2002 to 69 tenured and 77 non-tenured on 31 December 2003.

On 31 December 2003, there were 99 employees in category A (managerial staff), 45 in category B and 2 in category C.

The average age on 31 December 2003 was 41 (45.2 for tenured staff and 37.2 for non-tenured staff).

Headcount :

146 staff of which 66 were women and 80 men.

Average age: 40.98; 61% of the staff were under 44 years of age

B. Training

Professional training and conference participation for ART staff increased by 35% in 2003, amounting to 111 661 euros.

C. Labour relations

A meeting of the ART joint technical committee was held in November 2003. It primarily covered the training plan and implementation of a time-credit savings plan in ART.

D. Organisation

In September 2003, ART considered possible changes to its organisational structure with a view to improving efficiency and adapting the organisation to the new regulatory framework resulting from the transposition of the European directives into national law. The objective was to strengthen its economic skills and ability to adapt to the changing situation on the one hand, and to structure its activity around the key process of market analysis on the other. The new organisation was put in place in February 2004.

E. Computing and logistic resources

The management information system implemented by ART provides group-working facilities and access to new information technologies. The network architecture is designed to function at 100 mbps and consists of file and application servers providing fast, secure access to internal and external resources for 150 workstations. Powerful storage systems allow back-up of more than 250 Gbytes (including 70 Gbytes of email) every night. A single workstation provides integrated access to office and other applications as well to the Internet and intranet.

System resource management is centralised and uses tools such as the Help Desk to control information flows, provide instant access to software using broadcast facilities and to respond rapidly to user requests using remote maintenance functions.

For reasons of confidentiality, security systems have been implemented to prevent unauthorised access to information and premises. In particular, information system security has been reinforced by installing an operating system on each workstation requiring an access code as well as virus protection on email and Internet access. Users are also encouraged to use the internal network whenever possible. These measures have been supplemented by physical security systems such as video surveillance and badge readers.



ART methods and resources

CHAPTER 3

Taxes and fees

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Taxes and fees

I. TAXES

Telecommunications operators were subject to two types of tax up until 25 July 2003.

-The first was a fixed, non-refundable application fee payable when the licence was issued.

-The second, covering licence management and control, was payable annually by L 33-1 and L 34-1 licence holders.

This system was put in place by article 36 of the Act dated 31 December 1996 enabling the Finance Law for 1997¹, modifying article 45 of the Finance Law for 1987²

The Chairman of ART, who is entitled to authorise payment and receipt of public moneys³ establishes and assesses taxes corresponding to the particular circumstances of each operator.

In accordance with EU provisions, application fees are no longer payable as of 25 July 2003, when the “telecom package” directives came into force.

Furthermore, the system governing payment of the management and control charge has been revised.

1 Law no. 96-1181 dated 30 December 1996 enabling the Finance Law for 1997, O J, 31 December 1996, p 19 840.

2 Consolidated version of this article available on the ART website, www.art-telecom.fr

3 Ministerial order dated October 1997 containing public accounting settlement rules concerning ART's entitlement to authorise payment and receipt of public moneys, OJ 6 December 1997, p. 17 652

A. Abolition of the application fee

Article 3 of the “authorisation” directive EC 2002/20/EC dated 7 March 2002¹ sets out the principle of freedom to provide electronic communication networks and services.

Pursuant to this principle, member states are to apply a system of general authorisation to operators. Therefore, article 3 of the above directive allows companies concerned to notify the national regulatory authority of their intention to start providing electronic communication networks and services.

Given that this measure² was sufficiently detailed, clear and unconditional, the government and ART considered that it could be applied³ as of 25 July 2003 when the directive came into force, without waiting for the texts in the “telecom package” to be transposed into national law⁴. On this date, the existing individual administrative licensing system was replaced by an administrative system of prior notification⁵.

The individual administrative licence was formalised by the signature of a ministerial order after examination of the licence request by ART. The application fee⁶ became payable when the licence was awarded.

The notification system abolished the requirement for ministerial orders and, as a result, removed the event generating the application fee. Under these conditions, the tax was no longer payable as of 25 July 2003. The amendment to the Finance Law for 2003⁷ repealed article 45, I of the amended 1987 Finance Law, which set the basis for payment.

The notification system abolished the requirement for ministerial orders and, as a result, removed the event generating the application fee

- 1 European Parliament and Council “authorisation” directive 2002/20/EC dated 7 March 2002 relating to authorisations for electronic communication networks and services. OJEC L 108, 24 April 2002, p21.
- 2 Conditions for direct effect, CJEC, 4 December 1974, Van Duyn c/ Home Office, Rec 1337.
- 3 Operators were informed via the guidelines published on 16 July 2003 by the Minister responsible for Industry and ART.
4. The draft legislation relating to electronic communications and audiovisual communication services one of whose objectives was to transpose the “telecom package” directives, was adopted by the Council of Ministers on 31 July 2003.
5. However, if the telecommunications activity requires the use of scarce resources such as radio frequencies or numbers, community law allows the member states to subject operators to a scheme requiring prior licensing in the sense of article 5 of the preceding “authorisation” directive.
- 6 Given that it was a decision favouring the recipient, the date for coming in to force was the date of signature of the ministerial order, EC, Sect, 19 December 1952, Mattéi, Rec.594.
- 7 Law no. 2003-1312 dated December 2003 amending the Finance Law for 2003, OJ 31 December 2003, p 22 594. 22 594.

B. Management and control charges

Contrary to the licence application fee, the resulting Community law did not result in abolition of the management and control charges. However, the legislator modified the basis of payment to take into account the transposition of the “licences” directive dated 10 April 1997.

1. The principle of proportionality

The level of the management and control charges for operator activities must be proportional to the corresponding administrative costs. The decree dated 25 July 2001¹ completed the transposition into national law of the measures contained in the “licences” directive 97/13/EC dated 10 April 1997². In this respect, the Post and Telecommunications Code was modified to ensure compliance with the objective of proportionality between the charges and the administrative costs related to licence control and management³. Article L.33-1 I q) of the Post and Telecommunications Code stipulates that the taxes payable by the operator for the issue, management and control of a license are limited to the corresponding administrative costs. The system applicable to operators under article L.34-1 is identical and refers to article L 33-1 I.

The regulatory framework resulting from the “telecoms package” directives reaffirms the principle previously set down in the “licenses” directive dated 10 April 1997 that the level of charges levied on operators shall not exceed the administrative costs related to the management, control and application of the new system of prior notification.

The conclusions drawn by the legislator resulted in modification of the payment basis for the charge. The mechanism for determining the amount can be found in article 45 of the amended Finance Law for 1987. The amended Finance Law for 2003 mentioned above set a new scale for operators engaged in telecommunications activities as defined in articles L. 33-1 and L.34-1 of the Post and Telecommunications Code⁴.

1 Order no. 2001-670 dated 25 July 2001 adapting the Intellectual Property Code and the Post and Telecommunications Code to Community law, OJ 28, July 2001, p 12 132.

2. “Licence” Directive 97/13/EC dated 10 April concerning a common framework for general authorisation and individual licences in the telecommunications sector, OJEC L 122, 7 April 1997 p 15

3. Article 11 of the above “licenses” directive. 4. Article 90-I-3° of the above Act no. 2003-1312.

4. Article 90-I-3° of the above Act no. 2003-1312.

2. New payment basis for management and control charges

The management and control charges can continue to be levied given that they comply with the measures in article 12 of the “authorisation” directive allowing member States to levy “*administrative charges*” on companies providing electronic communication networks or services.

The new mechanism continues to exempt operators from paying for trial networks or for activities for periods of less than three years. For operators for which coverage is limited to the overseas départements or to a single département in metropolitan France, the charge is henceforth set at 10 000 euros. All other operators are required to pay administrative charges of 20 000 euros. Finally, those operators considered to have significant market power under the provisions of article L. 36-7, para.7 of the Post and Telecommunications Code, the scale in the amended Finance Law sets the amount at 80 000 euros.

Operators operating a network and providing a public telephone service are liable for charges under the conditions described above, pursuant to article L. 33-1 of the Post and Telecommunications Code on the one hand, and article L. 34-1 on the other.

Whereas in the previous framework, the amount of the charge for the first year was calculated pro-rata temporis, the provisions of the Finance Law for 2003 extend this mechanism to the last year of operation. Operators subject to the charges are required to pay the due amount on 1 December each year for the duration of the activity. Finally, the legislator has applied the new scale to the charges levied in 2003.

ART made a favourable recommendation on 6 November 2003¹ on the changes made by the Finance Bill for 2003 amending article 45 of the amended Finance Law for 1987, after having been consulted pursuant to article L. 36-5 of the Post and Telecommunications Code.

¹ ART Recommendation no. 03-1204 dated 6 November 2003 relating to certain provisions of the Finance Bill amendment for 2003

II. FEES

Pursuant to articles L. 33-1 and L. 33-2 of the Post and Telecommunications Code, network operators with frequency resource allocations are required to pay an allocation and management fee as specified in the amended ministerial order dated 3 February 1993¹.

Furthermore, pursuant to article L. 34-10 of the Post and Telecommunications Code, operators with prefixes or number blocks allocated by ART are required to pay a fee in accordance with ministerial order no. 96-1224 dated 27 December 1996². In this case, an operator reserving numbering resources is required to pay a fee equal to half the fee due when the resource is allocated.

The law governing the public domain is also applicable to the telecommunications sector. Operators occupying the public thoroughfare on a private basis must therefore pay any fees due if, having been granted rights of way, they install radio stations or underground cable networks.

The legal regime applicable to numbering fees did not undergo any significant change in 2003. However, significant changes occurred in respect of fees payable by operators for radio frequencies.

A. The legal regime applicable to frequency resources

1. Management fees for fixed-service radio frequencies

The first wireless local loop (WLL) licence awards were issued on 4 August 2000. At that time, operators paid a management fee of 3 500 000 French francs (533 571.56 euros) in addition to the allocation fee pursuant to the provisions of ministerial order no. 2000-499 dated 6 June 2000³

1 Ministerial order dated 3 February 1993 relating to fees for radio frequency allocation and management payable by holders of licences delivered pursuant to articles L. 33-1 and L. 33-2 of the Post and Telecommunications Code, OJ, 5 January 1993.

2 Ministerial order no. 96-1224 dated 27 December 1996 relating to fees payable for managing the national numbering plan and controlling its use, OJ, 31 December 1996, p 19 685

3 Ministerial order no. 2000-499 dated 6 June 2000 amending the order dated 3 February 1993 relating to fees for radio frequency allocation and management payable by holders of licences delivered pursuant to articles L. 33-1 and L 33-2 of the Post and Telecommunications Code, OJ 8 June 2000, p 8647.

Subsequently, ministerial order no. 2002-238 dated 21 February 2002¹ modified the regime for setting the amount of the management fee. The calculation method was adjusted to include the principle of *pro rata temporis* for determining the amount payable by the operator for the first and last year of the licence. Furthermore, the amount of the fee was set as a function of the ratio of the surface area covered by the allocated frequencies and the total surface area of metropolitan France². This mechanism was designed to ease the financial burden for WLL operators holding licences for a relatively small number of regions³.

However, in view of the risk that this method represented for WLL operators situated in the overseas départements given the surface area involved and the specific nature of the market, the ministerial order dated 21 February 2002 referred to above, included a dispensation for these operators and set the amount at 1 524 euros⁴.

Consequently, there is a substantial difference between the amounts payable by the regional operators and the operators located in the overseas départements depending on whether the fee was due before or after 23 February 2002⁵. Article 91 of the Finance Law amendment for 2003, removed this distortion by making the provisions of the above ministerial order dated 21 February retroactive.

2. UMTS fees for the overseas départements

Operators authorised to establish and operate UMTS networks are required to pay a fee for the frequencies allocated comprising a fixed component exceeding 619 million euros and a variable component of 1% of the relevant turnover⁶ payable annually.

1 Ministerial order no. 2002-238 dated 21 February 2002 amending the order dated 3 February 1993 relating to fees for radio frequency allocation and management payable by holders of licences delivered pursuant to articles L. 33-1 and L. 33-2 of the Post and Telecommunications Code, OJ, 23 February 2002, p 3471.

2 Concerning the allocation fees, article 2 of the above ministerial order dated 6 June 2000, which added an article 1 bis to the ministerial order dated 3 February 1993, already made provision for a method of calculation based on the ratio of the area covered by the allocated frequencies to the total surface area in metropolitan France.

3 Ministerial order no. 2000-499 dated 6 June 2000 modifying the ministerial order dated 3 February 1993 concerning radio frequency allocation and management fees payable by holders of licences delivered pursuant to articles L.33-1 and L.33-2 of the Post and Telecommunications Code, OJ, 8 June 2000, p. 8647.

4 Ministerial order no. 2002-238 dated 21 February 2002 modifying ministerial order dated 3 February 1993 for radio frequency allocation and management payable by holders of licences delivered pursuant to articles L.33-1 and L.33-2 of the Post and Telecommunications Code, OJ, 23 February 2002, p.3471.

5 Concerning the allocation fees, article 2 of the above ministerial order dated 6 June 2000, which added an article 1 bis to the ministerial order dated 3 February 1993, already made provision for a method of calculation based on the ratio of the area covered by the allocated frequencies to the total surface area in metropolitan France.

6 Article 36 of the Law no. 2000-1352 dated 30 December 2000 relating to the Finance Law for 2001, O J, 31 December 2000, p 21 119.

Article 89 of the Finance Law amendment for 2003 limits the scope of this fee to metropolitan France only. This is because it seemed preferable to take into account the special nature of the overseas *départements* by leaving the government free to set the fees in a ministerial order as a function of specific local market conditions¹.

B. Revenues collected on behalf of the State

ART issues collection orders for taxes and fees for the benefit of the general government budget.

In this capacity, it issued nearly 1000 collection orders for the benefit of the general government budget in 2003 for a total amount of 1.6 million euros in taxes and 98.5 million euros in fees. The breakdown is as follows:

- 0.3 million euros in fees pursuant to article L.34--10 of the Post and Telecommunications Code for managing the national numbering plan and monitoring its use
- 98.2 million euros concerning fees for allocation and management of radio frequencies.
- 0.95 million euros in taxes for the management and control of licences
- 0.65 million euros in administrative taxes. This fell sharply compared to 2002 due to the fact that the tax was abolished on 25 July 2003.

The total amount of collection orders for fees and taxes was therefore 100.1 million euros. The amount of taxes and fees actually received by ART was 95.6 million euros.

¹ ART recommendation no. 03-1204 dated 6 November, as above



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List of players



List of players

Between 1 January and 24 July 2003, ART assessed 17 licence applications, which were subsequently presented to the Minister in charge of Telecommunications for signature. During the transition period between 25 July and 31 December 2003 when the Act transposing the European directives was to have been adopted, notifications were received from 96 operators. 70% of the 113 new operators were involved with trial fixed WLAN¹ networks.

The 17 licence applications assessed between 1 January and 24 July were:

Name	Project type	Licence Type*	Ministerial order date
Altitude-RLAN	Fixed WLAN	1	03/07/03
Amicale laïque de Bruz	Fixed WLAN	1	16/07/03
Aramiska	Fixed Satellite	1	28/06/03
Association Provence wireless	Fixed WLAN	1	15/07/03
Cable & Wireless M&G	Fixed	3	14/01/03
Club informatique de Sougy sur Loire	Fixed WLAN	1	24/04/03
Globecast	Fixed Satellite	1	30/01/03
Infonet Broadband Services Corporation	Fixed	2	04/05/03
KPN Eurorings BV	Fixed	1	08/04/03
Megabeam Networks Ltd	Fixed WLAN	1	21/03/03
Meteor	Fixed WLAN	1	28/06/03
Netmobile Arcole Wap Trade (SMS Netmobile)	Fixed WLAN	1	28/06/03
Satlynx SA	Fixed Satellite	1	22/03/03
Sprintlink France SAS	Fixed Local Loop IDark Fibre	1	05/02/03
TLC mobile	Fixed WLAN	1	27/05/03
Wifispot	Fixed WLAN	1	20/05/03
Zablocki	Fixed WLAN	1	25/03/03

1 = Public network - 2 = Public telephony service - 3 = Public network and public telephony service

1 *Licence Type : WLAN : Wireless local area network

The 96 notifications registered between 25 July and 31 December 2003 were:

Name	Project type	Licence Type*	Date
IS Production RLAN	Fixed WLAN	1	25/07/03
Action Net Service	Fixed WLAN	1	25/07/03
Adael-Wireless	Fixed WLAN	1	18/11/03
ADELI SARL	Fixed WLAN	1	25/07/03
ADP Telecom (RLAN)	Fixed WLAN	1	24/10/03
Affiliance - Wifi France	Fixed WLAN	1	25/07/03
ALL TELECOM	Fixed WLAN	1	22/08/03
ALTABIS	Fixed WLAN	1	30/10/03
AM3D	Fixed WLAN	1	05/09/03
Arias-Net Informatique	Fixed WLAN	1	10/11/03
Association " Vivre au Pays des Gaves"	Fixed WLAN	1	06/10/03
Association "Montmain sans Fil"	Fixed WLAN	1	13/10/03
Association Apic	Fixed WLAN	1	25/07/03
Association Cabanac et Villagrain	Fixed WLAN	1	11/09/03
Association Cantal Expansion	Fixed WLAN	1	25/07/03
Association Club Informatique du Montet	Fixed WLAN	1	25/07/03
Association Hautes- Alpes Développement	Fixed WLAN	1	25/07/03
Association Inforoots	Fixed WLAN	1	25/07/03
Association Rhône sans fil	Fixed WLAN	1	25/07/03
Association Saint-Fiacre	Fixed WLAN	1	25/09/03
Association Trizaynet	Fixed WLAN	1	14/11/0
Association Vaournet	Fixed WLAN	1	25/07/03
Association Vésubie Découverte	Fixed WLAN	1	25/07/03
Association Wireless Lyon	Fixed WLAN	1	25/07/03
Assurance Courtage Construction	Fixed WLAN	1	23/10/03
ATPAK SAS	Fixed WLAN	1	12/08/03
AXIONE	Fixed	3	20/10/03
Azur Telecom France SAS	Fixed	3	25/07/03
BT Fluxus	Fixed Satellite	3	21/11/03
Bizzgo	Fixed WLAN	1	20/11/03
Bretagne Telecom	Fixed	1	25/07/03
Cablecom GmbH	Fixed Cable	1	26/09/03
Centre Culturel Scientifique et Technique d'Alès (CCST)	Fixed WLAN	1	25/07/03
CCI de Bordeaux (CCIB)	Fixed WLAN	1	05/09/03
CCI d'Ajaccio et de la Corse du Sud	Fixed WLAN	1	05/12/03
Compucenter (IDS Networks)	Fixed	1	25/07/03
Cyberporte	Fixed WLAN	1	02/10/03
Dauphin Telecom	Fixed Satellite	3	25/07/03
DGCOM	Fixed WLAN	1	25/07/03
Divona	Fixed Satellite	1	25/07/03

Name	Project type	Licence Type*	Date
EDI-MEDIAS	Fixed WLAN	1	08/12/03
E-QUAL (RLAN)	Fixed WLAN	1	03/12/03
ERENIS	Fixed Local Loop	3	29/10/03
Finarea SA	Fixed	2	08/08/03
France Télécom (RLAN)	Fixed WLAN	1	29/09/03
Freecall	Fixed	2	03/12/03
Global One Communications SA	Fixed	3	28/11/03
Hosting France SARL	Fixed WLAN	1	15/09/03
Infosat	Fixed CPL	3	20/10/03
Infosat (RLAN)	Fixed WLAN	1	10/11/03
Inspection académique des Hautes Alpes	Fixed WLAN	1	25/07/03
IRISNET	Fixed WLAN	1	25/07/03
IS Production	Fixed	1	08/08/03
Jersey Telecom	Fixed Local Loop	1	07/08/03
KDDI France	Fixed	2	25/07/03
Libertic	Fixed WLAN	1	26/09/03
M & I Concept	Fixed WLAN	1	13/11/03
ManyOnes	Fixed WLAN	1	02/12/03
Mediaserv SARL	Fixed WLL	1	25/07/03
Mediaserv SARL RLAN	Fixed WLAN	1	25/07/03
MIRE	Fixed WLAN	1	25/07/03
MM Métromédia SA	Fixed WLAN	1	31/10/03
Mobius	Fixed	1	13/08/03
NetABord	Fixed WLAN	1	24/12/03
New Technologies Group	Fixed WLAN	1	24/11/03
Newtel Limited	Fixed	1	25/07/03
OPTIMUM	Fixed WLAN	1	24/10/03
Optline Service	Fixed	1	25/07/03
Ozone	Fixed WLAN	1	13/11/03
Pacwan SAS	Fixed	1	18/09/03
PIWAN France	Fixed	2	08/12/03
Quiconnect SAS	Fixed WLAN	1	19/09/03
SANEF	Fixed	3	25/07/03
SARL Micro Pro	Fixed WLAN	1	18/09/03
Securnet Net SARL	Fixed WLAN	1	25/07/03
SNCF	Fixed WLAN	1	25/07/03
Société ALCO	Fixed WLAN	1	25/09/03
Société Interstem	Fixed WLAN	1	09/10/03

WLAN : Wireless local area network

CPL : Technical powerline-carrier trial

WLL : Wireless local loop

VoIP: voice over IP

*Licence type : 1 Public network - 2 Public telephony service - 3 Public network and public telephony service

Name	Project type	Licence Type*	Date
Société Interstem	Fixed WLAN	1	09/10/03
Société Nostre Pais	Fixed WLAN	1	07/10/03
Swisscom Eurospot France	Fixed WLAN	1	22/08/03
Syndicat d'initiative de Saint Bonnet le Froid	Fixed WLAN	1	25/07/03
T & D LAN	Fixed WLAN	1	30/12/03
T Systems France	Fixed	1	25/07/03
Tekworld	Fixed WLAN	1	25/07/03
Telaphone SA	Fixed DSL	3	24/12/03
Tiscali-RLAN	Fixed WLAN	1	24/08/03
Toggenburger	Fixed WLAN	1	29/09/03
Traff-X SA	Fixed Dealer	2	24/12/03
Transaction Network Services SA (TNS)	Fixed	2	29/09/03
Vartec Telecom (France) SAS	Fixed	2	25/07/03
Vente Représentation Marketing (VRM)	Fixed WLAN	1	25/07/03
VIDATI	Fixed WLAN	1	25/07/03
WALAN	Fixed WLAN	1	25/07/03
WESEA	Fixed WLAN	1	26/09/03
WIFIX	Fixed WLAN	1	25/07/03
WIZEO	Fixed WLAN	1	05/11/03

WLAN : Wireless local area network

CPL : Technical powerline-carrier trial

WLL : Wireless local loop

VoIP: voice over IP

* Licence type* 1 Public network -

2 Public telephony service

3 Public network and public telephony service

18 licences were revoked in 2003

Nom	Project type	Licence Type*	Date
Afripa Telecom France	Fixed Satellite	3	25/09/03
AUCS Communications	Fixed	3	09/01/03
Belgacom France	Fixed Satellite WLL	3	05/02/03
Carrier 1 France SARL	Fixed	3	28/01/03
Signal Global Communications France	Fixed VoIP	2	09/01/03
Danup (Tiscali Entreprises)	Fixed	1	01/12/03
Dolphin Telecom	Fixed	3	12/06/03
Energis (Switzerland) AG	Fixed	2	09/01/03
FLAG Telecom France Network SAS	Fixed Pan-European	1	11/07/03
GTS Network (Ireland) Limited	Fixed	1	09/01/03
Kaptech	Fixed	2	28/07/03
KPNQwest Assets France	Fixed Pan-European	1	28/01/03
NTL France SAS	Fixed Cable	3	09/01/03

Nom	Project type	Licence Type*	Date
Squadran	Fixed WLL	3	03/01/03
Teleglobe France SAS	Fixed	3	28/01/03
TGN Euro Link SA	Fixed	1	07/05/03
Ventelo France SA	Fixed	3	18/12/03
Vine Telecom Networks Limited	Fixed Pan-European	3	09/01/03

WLAN : Wireless local area network

CPL : Technical powerline-carrier trial

WLL : Wireless local loop

VoIP: voice over IP

Licence type* 1 Public network - 2 Public telephony service
3 Public network and public telephony service

The 211 operators active as of 31 December 2003

Name	Project type	Licence type*	Date
21STCentury Communication	Fixed Pan-European	3	04/05/00
3U Telecom	Fixed	2	09/06/00
9 Telecom Entreprise	Fixed WLL DSL	3	19/10/98
9 Telecom Reseau	Fixed E	3	18/12/97
ADP Télécom	Fixed Local Loop	3	03/07/01
Altitude	Fixed WLL	3	04/08/00
Atos Origin Multimédia	Fixed	2	26/05/99
Belgacom Présence SAS	Fixed	1	27/06/02
Bouygues Télécom	Mobile	3	17/11/98
Bouygues Télécom Caraïbe	Mobile O'seas départements	3	19/07/01
Broadband Optical Access France	Fixed infrared LL	1	15/06/01
Broadnet France SAS	Fixed WLL	3	04/08/00
BT France	Fixed Satellite	3	24/10/97
Cable and Wireless France	Fixed	3	25/08/98
Cambio (Atout)	Fixed Local Loop	1	08/11/00
Cegetel	Fixed Local Loop	3	11/03/98
Cegetel La Réunion	Fixed WLL	3	04/08/00
Colt Télécommunications France	Fixed Pan-European Local Loop	3	12/03/98
Completel SAS	Fixed Local Loop	3	17/11/98
Connexion by Boeing Ireland Limited	Mobile Satellite	1	09/10/02
Crisscross Communications (France) SARL	Fixed	1	29/07/99
Dauphin Télécom (DECT)	Mobile	3	19/10/98
Dauphin Télécom (GSM)	Mobile O'seas départements	3	12/12/02
E*Messages Wireless Informations Services France	Mobile radio Paging	1	26/09/00
Easynet	Fixed DSL	3	06/08/99
e-Qual	Fixed Satellite	3	09/12/01

Name	Project type	Licence type*	Date
Equant Télécommunications SA	Fixed	3	20/06/00
Estel	Fixed Local Loop	3	05/11/98
Eutelsat SA	Fixed Satellite	1	16/07/01
Farland Services France	Fixed Pan-European	1	09/12/99
Flag Atlantic France	Fixed Pan-European Carrier	1	04/05/00
France Cité Vision	Fixed Cable	3	25/09/00
France Télécom	Fixed "E"	3	12/03/98
France Télécom (Inmarsat C)	Mobile Satellite	1	01/07/91
Free Telecom	Fixed DSL	3	09/11/99
GC Paneuropean Crossing France	Fixed Pan-European	3	10/03/99
Gensat France	Fixed Satellite	1	06/07/99
Globalstar Europe	Mobile Satellite	3	14/11/02
Hughes Network Systems GmbH	Fixed Satellite	1	28/08/01
InfoMobile	Mobile Radio Paging	1	25/09/98
Iridium Italia SpA	Mobile Satellite	3	28/10/98
Kast telecom	Fixed	3	02/02/99
KDD France	Fixed	2	23/09/98
Kertel	Fixed Phonocard	2	14/03/02
KPN Eurovoice	Fixed	2	19/04/00
Lambdanet Communications France SAS	Fixed	3	09/06/00
Landtel France SAS	Fixed WLL	3	04/08/00
LCR Telecom	Fixed	2	07/07/98
Level 3 Communications	Fixed Pan-European VoIP	3	23/12/98
Louis Dreyfus Communications	Fixed Pan-European Carrier Dark Fibre	1	06/03/00
Marconi France Telecommunications SAS	Fixed VoIP	2	17/02/99
MCI WorldCom SA	Fixed Pan-European Local Loop	3	16/04/98
Metromedia Fiber Network France	Fixed Local Loop Dark Fibre	1	07/10/99
Multicoms	Fixed Satellite	1	16/12/98
Naxos	Fixed Local Loop Dark Fibre	1	16/04/98
Oceanic Digital FWI SAS	Mobile	3	14/03/02
One. Tel SARL	Fixed DSL	2	17/11/98
Orange Caraïbe	Mobile O'seas <i>départements</i>	3	22/09/98
Orange France	Mobile	3	17/08/00
Orange Réunion	Mobile O'seas <i>départements</i>	3	24/04/01
Outremer Télécom	Mobile O'seas <i>départements</i>	3	30/11/00
Outremer Telecom (fixed)	Fixed Satellite	3	29/04/98
Phone Systems and Network	Fixed	2	17/06/98
Primus Télécommunications France SA	Fixed	3	16/09/98
Prosodie	Fixed	2	29/10/99

Name	Project type	Licence type*	Date
Saint Martin Mobiles SA	Mobile O'seasdépartements	3	04/07/91
Saint-Martin et Saint-Barthélemy Tel Cell SARL	Mobile	3	23/07/01
SAS SPM Télécom	Mobile O'seasdépartements	3	21/06/00
Skybridge Communications	Fixed Satellite	1	09/02/00
Société Française du Radiotéléphone	Mobile	3	17/11/98
Société Française du Radiotéléphone (UMTS)	3G Mobile	3	18/07/01
Société Réunionnais de Radiotéléphone (SRR)	Mobile O'seasdépartements	3	23/02/95
Star Télécommunications (France)	Fixed	3	26/10/99
Storm Telecommunication Ltd	Fixed	3	27/04/99
Suez Lyonnaise Telecom	Fixed Câble	3	02/10/98
Swisscom France	Fixed	3	15/10/99
Tachyon Netherlands BV	Fixed Satellite	1	14/03/01
TDF	Mobile Radio Paging	1	03/07/87
Tele2 France	Fixed E	3	16/04/98
Télécom Développement	Fixed E	3	18/12/97
TELECOM ITALIA France (TI France)	Fixed	3	24/10/00
Telenor Global Services AS	Fixed	2	02/08/01
Télévision Française 1 SA (TF1)	Fixed Satellite	1	11/07/01
Telia International Carrier France	Fixed Pan-European	3	20/07/99
Tiscali International Network SA	Fixed Pan-European	1	06/10/98
Tiscali Telecom	Fixed	3	17/06/98
Tradingcom Europe	Fixed Dealer	2	21/03/00
T-Systems Siris	Fixed "E"	3	18/12/97
Tyco Networks (France)	Fixed Pan-European Carrier1	1	13/04/01
UPC France	Fixed Cable	3	17/06/98
Verizon Global Solution France SAS	Fixed	1	05/07/01
VersaTel Telecom Europe BV	Fixed Carrier	1	10/05/00
Viatel Opérations SA	Fixed Pan-European	3	05/06/98
Wavecrest Communications France	Fixed	2	28/07/98
Western Telecom	Fixed	2	17/06/98
XTS Network Caraïbes	Fixed WLL	3	04/08/00
XTS Network océan indien	Fixed WLL	3	04/08/00
XTS Télécom (XTS Network)	Fixed VoIP	3	10/04/00
Globecast	Fixed Satellite	1	07/01/03
Sprintlink France SAS	Fixed Local Loop Dark Fibre	1	07/01/03
Cable & Wireless M&G	Fixed	3	14/01/03
Satlynx SA	Fixed Satellite	1	25/02/03
Zablocki	Fixed WLAN	1	27/02/03
KPN Eurorings BV	Fixed	1	06/03/03
Megabeam Networks Ltd	Fixed WLAN	1	07/03/03
Infonet Broadband Services Corporation	Fixed	2	27/03/03

Name	Project type	Licence type*	Date
Club informatique de Sougy sur Loire	Fixed WLAN	1	02/04/03
Wifispot	Fixed WLAN	1	24/04/03
TLC mobile	Fixed WLAN	1	09/05/03
Altitude-RLAN	Fixed WLAN	1	02/06/03
Aramiska	Fixed Satellite	1	02/06/03
Meteor	Fixed WLAN	1	02/06/03
Netmobile Arcole Wap Trade (SMS Netmobile)	Fixed WLAN	1	02/06/03
Amicale laïque de Bruz	Fixed WLAN	1	11/06/03
Association Provence wireless	Fixed WLAN	1	11/06/03
Tiscali-RLAN	Fixed WLAN	1	15/07/03
Chambre de Commerce et d'Industrie de Bordeaux (CCIB)	Fixed WLAN	1	24/07/03
IS Production RLAN	Fixed WLAN	1	25/07/03
Action Net Service	Fixed WLAN	1	25/07/03
ADELI SARL	Fixed WLAN	1	25/07/03
Affliance - Wifi France	Fixed WLAN	1	25/07/03
Association Apic	Fixed WLAN	1	25/07/03
Association Cantal Expansion	Fixed WLAN	1	25/07/03
Association Club Informatique du Montet	Fixed WLAN	1	25/07/03
Association Hautes- Alpes Développement	Fixed WLAN	1	25/07/03
Association Inforoots	Fixed WLAN	1	25/07/03
Association Rhône sans fil	Fixed WLAN	1	25/07/03
Association Vaournet	Fixed WLAN	1	25/07/03
Association Vésubie Découverte	Fixed WLAN	1	25/07/03
Association Wireless Lyon	Fixed WLAN	1	25/07/03
Azur Telecom France SAS	Fixed	3	25/07/03
Bretagne Telecom	Fixed	1	25/07/03
Centre Culturel Scientifique et Technique d'Alès (CCST)	Fixed WLAN	1	25/07/03
Compucenter (IDS Networks)	Fixed	1	25/07/03
Dauphin Telecom	Fixed Satellite	3	25/07/03
DGCOM	Fixed WLAN	1	25/07/03
Divona	Fixed Satellite	1	25/07/03
Inspection académique des Hautes Alpes	Fixed WLAN	1	25/07/03
IRISNET	Fixed WLAN	1	25/07/03
KDDI France	Fixed	2	25/07/03
Mediaserv SARL	Fixed WLL	1	25/07/03
Mediaserv SARL RLAN	Fixed WLAN	1	25/07/03
MIRE	Fixed WLAN	1	25/07/03
Newtel Limited	Fixed	1	25/07/03
Optline Service	Fixed	1	25/07/03
SANEF	Fixed	3	25/07/03
Securnet Net SARL	Fixed WLAN	1	25/07/03

Name	Project type	Licence type*	Date
SNCF	Fixed WLAN	1	25/07/03
Syndicat d'initiative de Saint Bonnet le Froid	Fixed WLAN	1	25/07/03
T Systems France	Fixed	1	25/07/03
Tekworld	Fixed WLAN	1	25/07/03
Vartec Telecom (France) SAS	Fixed	2	25/07/03
Vente Représentation Marketing (VRM)	Fixed WLAN	1	25/07/03
VIDATI	Fixed WLAN	1	25/07/03
WALAN	Fixed WLAN	1	25/07/03
WESEA	Fixed WLAN	1	25/07/03
WIFIX	Fixed WLAN	1	25/07/03
Jersey Telecom	Fixed Local Loop	1	07/08/03
Finarea SA	Fixed	2	08/08/03
IS Production	Fixed	1	08/08/03
ATPAK SAS	Fixed WLAN	1	12/08/03
Mobius	Fixed	1	13/08/03
ALL TELECOM	Fixed WLAN	1	22/08/03
Swisscom Eurospot France	Fixed WLAN	1	22/08/03
AM3D	Fixed WLAN	1	05/09/03
Association Cabanac et Villagrain	Fixed WLAN	1	11/09/03
Hosting France SARL	Fixed WLAN	1	15/09/03
Pacwan SAS	Fixed	1	18/09/03
SARL Micro Pro	Fixed WLAN	1	18/09/03
Quiconnect SAS	Fixed WLAN	1	19/09/03
Association Saint-Fiacre	Fixed WLAN	1	25/09/03
Société ALCO	Fixed WLAN	1	25/09/03
Cablecom GmbH	Fixed Cable	1	26/09/03
Libertic	Fixed WLAN	1	26/09/03
France Télécom (RLAN)	Fixed WLAN	1	29/09/03
Toggenburger	Fixed WLAN	1	29/09/03
Transaction Network Services SA (TNS)	Fixed	2	29/09/03
Cyberporte	Fixed WLAN	1	02/10/03
Association " Vivre au Pays des Gaves"	Fixed WLAN	1	06/10/03
Société Nostre Pais	Fixed WLAN	1	07/10/03
Société Interstem	Fixed WLAN	1	09/10/03
Association "Montmain sans Fil"	Fixed WLAN	1	13/10/03
AXIONE	Fixed	3	20/10/03
Infosat	Fixed CPL	3	20/10/03
Assurance Courtage Construction	Fixed WLAN	1	23/10/03
ADP Telecom (RLAN)	Fixed WLAN	1	24/10/03
OPTIMUM	Fixed WLAN	1	24/10/03
ERENIS	Fixed Local Loop	3	29/10/03
ALTABIS	Fixed WLAN	1	30/10/03

Name	Project type	Licence type*	Date
MM Métromédia SA	Fixed WLAN	1	31/10/03
WIZEO	Fixed WLAN	1	05/11/03
Arias-Net Informatique	Fixed WLAN	1	10/11/03
Infosat (RLAN)	Fixed WLAN	1	10/11/03
M & I Concept	Fixed WLAN	1	13/11/03
Ozone	Fixed WLAN	1	13/11/03
Association Trizaynet	Fixed WLAN	1	14/11/03
Adael-Wireless	Fixed WLAN	1	18/11/03
Bizzgo	Fixed WLAN	1	20/11/03
BT Fluxus	Fixed Satellite	3	21/11/03
New Technologies Group	Fixed WLAN	1	24/11/03
Global One Communications SA	Fixed	3	28/11/03
ManyOnes	Fixed WLAN	1	02/12/03
E-QUAL (RLAN)	Fixed WLAN	1	03/12/03
Freecall	Fixed	2	03/12/03
CCI d'Ajaccio et de la Corse du Sud	Fixed WLAN	1	05/12/03
EDI-MEDIAS	Fixed WLAN	1	08/12/03
PIWAN France	Fixed	2	08/12/03
NetABord	Fixed WLAN	1	24/12/03
Telaphone SA	Fixed DSL	3	24/12/03
Traff-X SA	Fixed Dealer	2	24/12/03
T & D LAN	Fixed WLAN	1	30/12/03

WLAN : Wireless local area network

CPL : Technical powerline-carrier trial

DSL : Digital Subscriber Line

WLL : Wireless local loop

VoIP: voice over IP

* Licence type 1 Public network -

2 Public telephony service

3 Public network and public telephony service

Consultative Committee Members

I. CCR

The Radiocommunications Consultative Committee membership was renewed by order of the Minister responsible for Industry on 10 November 2003. The following committee members were appointed:

1. As representatives of the network operators and radio-network service providers:

Yves Blanc, director of institutional relations, EUTELSAT.

G rard Chev e, Deputy General Manager, TDF.

Emmanuel Forest, Deputy General Manager, Bouygues Telecom.

Richard Lalande, Deputy General Manager Cegetel.

Pierre Lestage, Director of Regulation, LDCOM/Neuf Telecom.

Didier Quillot, Executive Director, Orange France.

Jacques Roques, Chairman, Towercast.

2. As representatives of network and services users:

Andr  Ampelas, Director, RATP.

Philippe Balin, representing the information systems club formed by large French businesses (CIGREF).

Pierre Bontemps, representative of the association of GSM-service distributors.

Jean-Mars Chaduc, General Manager of the National Frequencies Agency (ANFr).

Bernard Dupré, representing the French telephone and telecommunications users association (AFUTT).

Nicolas Gazalommatis, representing the interprofessional federation for business communications (FICOME).

Jean-Paul Rivière, Chairman and General Manager of Altitude Télécom.

3. En qualité de personnalités qualifiées:

Laurent Benzoni.

Jean-Louis Debiesse.

Serge Ferré.

François Gérin.

Marc Houéry, appointed Chairman of the CCR.

Claire Pédini.

Guy Roussel.

II. LA CCRST

The Telecommunications Networks and Services Advisory Committee membership was renewed by order of the Minister for Industry on 16 March 2004. The following members were appointed:

1. As representatives of the telecommunications network and services operators:

Bertrand Mabilie, Director of Regulation and External Relations, Cegetel.

Pierre Lestage, Director of Regulation, LDCOM/Neuf Telecom.

Jean-Louis Constanza, General Manager, Télé2.

Jean-Daniel Lallemand, Head of Department, France Télécom.

Michaël Boukobza, Chairman, Free.

Patrick Leleu, Chairman and General Manager, Noos.

Jérôme De Vitry, chairman, Completel.

2. 2. As representatives of network and services users:

Dominique Valentiny, General Manager, ADP Télécom.

Alain Bernard, representing the e-commerce and services association.

Paul Bossu, representing the French telecommunications and telephone users association (AFUTT).

Catherine Gabay, representing the French employers' association (MEDEF).

Pascal Exertier, representing Syntec Informatique (French association of software and computing services companies).

Stéphane Marcovitch, chief representative of the French Internet access and service providers association (AFA).

Pierre Monneret, representing the information systems club formed by large French businesses (CIGREF).

3. 3. As key experts:

Alain Bravo, appointed Chairman of the CCRST.

Jean-Jacques Bertrand.

Etienne Andreux.

Jean-Michel Planche.

Patrick Rey.

Antoine Weil.

Bertrand Lacroix.

Calendar of the year's highlights



Calendar of the year's highlights

DÉCEMBER 2002

31 December – Gabrielle Gauthey, a telecommunications engineer, is appointed member of ART for a six-year term by M. Jean-Louis Debré, President of the National Assembly. She replaces Christian Bècle.

JANUARY 2003

3 January - Paul Champsaur, inspector general of INSEE, is appointed ART Chairman by order of the President of the Republic replacing Jean-Michel Hubert, whose six-year term expired on 3 January.

20 January –ART publishes a study which it commissioned to provide an up-to-date overview of medical and scientific data on the possible effects of exposure to electromagnetic fields generated by mobile radio antennas and handsets.

- ART also publishes a report on the legal situation covering the requirements laid down by the local authorities for mobile telephone network deployment and the appeals lodged against these measures by the operators.

9 January - ART rules on a dispute between LDCOM and France Telecom and specifies the tariff and technical conditions for the ADSL Connect ATM (option 3) offer allowing operators with extensive network coverage to collect traffic at a lower level in the France Telecom network hierarchy i.e. in each département and in the main urban areas.

27 January –ART publishes a study on the economics of cable networks in the telecommunications and audiovisual sectors in France. This study, carried out on ART's behalf, shows the low penetration of cable networks in France and highlights the key profitability factors and the problems facing this sector.

ART reiterated the importance of cable networks in France as an alternative access technology for developing broadband and the potential for stimulating local loop competition.

FEBRUARY

3 February – Easing of conditions for WiFi network use in a certain number of départements. ART confirmed the relaxed conditions in decision no. 02-1008 allowing public use of WLANs provided that the maximum transmitted power limits are respected.

4 February – ART publishes the summary of the call for candidates concerning the request for modifications to the licence issued to Dolphin Telecom for the establishment and operation of a public professional mobile communications network (RPN) using the Tetra standard.

11 February – The European Commission adopts a recommendation concerning relevant markets for products and services in the electronic communications sector likely to be subject to ex-ante regulation.

13 February – Following publication of the European Commission recommendation on relevant markets, ART provides details on the market-analysis process and launch of the associated quantitative and qualitative surveys.

23 February – ART publishes the results of the mobile telephone network quality survey carried out in France in 2002.

26 February – The draft legislation to ensure confidence in the digital economy, the main objective of which is to transpose the European Commission “electronic commerce” directive, is adopted on first reading in the National Assembly.

MARCH

6 Mars – ART presents the enquiry procedures to the industry and details the list of relevant markets in France likely to correspond to those defined in the European Commission’s recommendation dated 12 February 2003.

27 March – The Market Observatory figures published each quarter by ART show an overall 1.3% increase in telecommunications-services turnover for the 3rd quarter 2002 compared to the same period in 2001 with contrasting trends depending on the service category.

31 March – France Telecom indicated that it had complied with the formal notice issued by ART requiring it to delete all possible means of establishing a link between any of its customers and data concerning pre-selection implementation in its management information systems. ART emphasises the fact that it continues to pay close attention to ensuring

that all market players with specific interconnection obligations, and in particular France Telecom, comply with the pre-selection rules which have been developed to ensure free and fair competition and protect consumer interests and rights.

APRIL

24 April – At the request of the Minister for Industry, ART makes a recommendation on the information provided by Dolphin Telecom on 10 March 2003 following an application to reconsider the negative decision issued by the Minister on 20 January 2003 in respect of the request for licence modifications.

29 April – ART calls a meeting of the three mobile telephony operators to review technical progress on mobile number portability (MNP).

MAY

9 May – ART publishes a summary of contributions received from industry players following the presentation on 6 March 2003 of ART's interpretation of the relevant markets.

JUNE

5 June – ART rules on three similar disputes between France Telecom and Complete!, Estel and UPC France over the tariffs charged by the local loop operators for terminating calls from the incumbent on their networks. While reaffirming the relevance of reciprocal tariffs in the medium term, ART considered that the specific, transitional situation of these three players had to be taken into account.

27 June – ART specifies the conditions for reallocating the frequencies used in the Dolphin networks.

JULY

18 July – ART launches a public consultation on the renewal of the GSM licences for the three mobile operators.

23 July – ART sets the conditions for commercially launching mobile number portability (MNP) in accordance with the ART guidelines issued in July 2002.

24 July – ART rules on a dispute between Free Telecom and France Telecom on the interconnection conditions for routing telephone calls to the "universal and personal numbers" of Free customers using the "Freebox". This decision follows the decision of 15 May 2003 in which ART rejected the Free request for protective measures in respect of the same subject.

ART decided that following a transition period based on an indirect interconnection arrangement expiring on 1 July 2003 at the latest, the parties will be required to implement a direct interconnection arrangement for routing calls to the 08 7B PQ MC DU numbers allocated to Free.

- ART announces a new, major change concerning wireless local area networks (WLAN): first, further relaxation of the technical conditions for the 2.4 GHz band by the Minister of Defence as of 25 July 2003 and secondly, the coming into effect of certain measures stemming directly from the new European directives for electronic communications .

- ART redrafts its communiqué dated 23 July 2003 concerning the implementation of mobile number portability (MNP), with the aim of reinforcing consumer protection.

25 July – ART publishes the 2003 second quarter Mobile Observatory and announces forthcoming changes.

28 July – ART sends a questionnaire to the relevant players seeking qualitative and quantitative information on telecommunications markets.

AUGUST

13 August – ART launches a consultation on the conditions for sharing the “12” calls originating on the France Telecom network and providing access to directory-enquiry services.

SEPTEMBER

16 September – ART publishes a document on the practical conditions attached to the general authorisation system and the allocation of numbering and frequency resources during the transitional period prior to the adoption of the Act transposing the European directives into national law.

22 September – Departure of Jean Marimbert, ART Director General since January 2001. He was replaced on 1 October by Philip Distler, telecommunications engineer, previously in charge of ART’s “interconnection and new technologies” department.

23 September – ART hands down a decision following a submission from Iliad in respect of a dispute with France Telecom over access to the incumbent’s subscriber lists for the purposes of providing a universal directory service. ART instructed France Telecom to make an offer respecting the principles of cost orientation and non-discrimination to Iliad within 60 days. Through this order, ART sets the competitive economic conditions for establishing universal directories and directory enquiry services.

30 septembre – ART launches a call for comments on the conditions for reallocating the VHF and UHF frequency bands previously allocated to Dolphin Telecom and returned to ART following the liquidation of Dolphin Telecom by the Nanterre Commercial Court on 12 June 2003.

OCTOBER

1 October – ART calls a meeting of consumer associations and the three mobile operators to review the first months of mobile number portability (MNP) operation in France.

-Mobile-telephony revenues exceed fixed-telephony revenues.

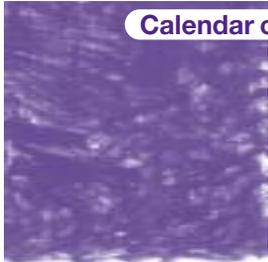
3 October – ART publishes a study on the future economic and technical development of mobile multimedia services.

15 October – Orange and SFR, which have been declared as SMP operators in the interconnection market, notify ART that their network call-termination charges will be lowered by an average of 12.5% from 1 January 2004 in compliance with the long-term reductions defined by ART in November 2001. ART reiterated that the reduction was intended for the benefit of consumers and asked the fixed operators to pass on the reductions in fixed-to-mobile call prices from 1 January 2004.

16 October – ART launches a public call for comments on changes to the national numbering plan for short numbers (3BPQ) to gather the players' opinions on the timeliness and feasibility of changing the management rules for these resources and on the conditions for opening new number blocks in this format.

27 October – ART publishes the Mobile Observatory report for 3Q 2003. As of 30 September 2003, there were 40.1 million mobile-telephony-service customers in France, equivalent to a penetration rate of 66.5%. 2Q 2003 information is published for the first time on turnover, average monthly revenue per subscriber and aggregate traffic for the three mobile operators in metropolitan France.

27-28 October – First annual meeting of FRATEL (Telecommunications regulation network for French-speaking countries) in Bamako at the invitation of CRT (telecommunications regulation committee of Mali). The meeting marked the launch of FRATEL in accordance with the closing declaration adopted in June 2002 in Paris at SYDERF 2002 (international symposium for the development of regulation in the French-speaking countries). The purpose of this network is to provide a forum for French-speaking regulators.



NOVEMBER

12 November – ART and the CGTI (Conseil général des technologies de l'information) publish a study carried out on their behalf by the CREDOC on the dissemination, use and acceptability of new technologies (fixed telephony, mobile, Internet, personal computers) among French people over 12 years of age.

13 November – ART approves the technical and tariff conditions of France Telecom's 2004 standard interconnection offer. ART notes that tariffs for voice and Internet traffic routing are relatively stable and that tariffs for partial leased lines used for interconnection have fallen considerably. Conditions for collecting calls to special services have been reviewed and there is an overall trend towards enhanced quality of service.

20 November – ART publishes a report on mobile telephone accessibility for disabled persons. A certain number of recommendations have been put forward to improve handsets and to adapt services on operators' networks. The report presents a certain number of actions proposed by the rapporteur, which were very well received overall by all CRR members.

DECEMBER

3 December – ART publishes a report on the installation of telecommunications networks in the public domain and on private property prepared on its behalf by the law firm Latournerie Wolfrom & Associés.

-ART publishes a study carried out by CSA-TMO on household perception of the telecommunications sector. This study presents findings relating to the number of households equipped with fixed and mobile telephones and Internet, familiarity with price packages and services and information concerning perception of prices by French households.

23 December – ART publishes the summary of the call for comments on the public consultation relating to the conditions for reallocating the VHF and UHF frequency bands previously allocated to Dolphin Telecom. 41 contributions were received, indicating the importance with which the frequency reallocation process is viewed by the industry players.

Calendar of the legislative process 2003-2004

2003

1 April – The Ministry responsible for industry and the Ministry responsible for Culture and Communication publish the text of the draft electronic communications law designed to transpose the “telecom package” into French law.

29 April – ART publishes its recommendation (no. 03-552) on the draft electronic communications law. ART highlights the necessity to apply the principle of technological neutrality, contained in the directives, to all electronic communications networks.

25 June – The Senate adopts the draft legislation on “confidence in the digital economy” on first reading.

4 July – The Ministry responsible for Industry announces its intention of modifying France Telecom’s status in accordance with the new Community rules.

17 July – The Minister responsible for Industry and ART publish the common guidelines relating to the legal framework applicable from 25 July 2003 until adoption of the texts transposing the European directives into national law.

22 July – ART issues a recommendation (no. 03-904) on the draft legislation covering changes to the telecommunications universal-service tasks, employment conditions for civil servants in France Telecom and the status of France Telecom.

31 July – The Council of Ministers adopts the draft legislation covering changes to the allocation of telecommunications universal-service tasks, employment conditions for civil servants in France Telecom and the status of France Telecom and the draft legislation covering “electronic communications and audiovisual communications services”.

22 October – The Senate adopts the draft legislation on “France Telecom and public telecommunications service obligations”.

5 December – The National Assembly amends and adopts the draft legislation on “France Telecom and public telecommunications service obligations” on first reading.

16 December – The draft legislation on “France Telecom and public telecommunications service obligations”, which had been modified and adopted by the National Assembly, is adopted by the Senate on first reading without amendment. The Act is adopted.

2004

1 January – the “France Telecom and public telecommunications service obligations” Act of 31 December is published in the Official Journal (J.O.).

8 January – The National Assembly adopts the draft “confidence in the digital economy” legislation on second reading.

12 February – The National Assembly adopts the draft legislation on electronic communications and audiovisual communication services on first reading (urgent procedure invoked).

8 April – The Senate adopts the draft “confidence in the digital economy” legislation on second reading. A joint committee with equal representation is planned.

15 April – The Senate adopts the draft legislation on electronic communications and audiovisual communication services on first reading (urgent procedure invoked). A joint committee with equal representation is planned.

Glossary of technical terms and abbreviations

A

Access network: network to which customer premises equipment is directly connected, giving access to services. (cf. core network)

Accounting rates: system which sets out the pricing principles to be used in interconnection agreements between international operators, to enable the revenue for international calls to be shared between the operator in the country that originates traffic and the operator in the country that delivers the traffic.

For calls to a given international destination, the operator in the originating country sets the retail price, which is called the collection rate. At the same time, this operator and the operator in the destination country negotiate a per-minute settlement rate. The settlement rate is used to determine the sum paid by the operator originating traffic to the operator that delivers the traffic. The settlement rate is often half of the accounting rate.

ACTE (Approval Committee for Telecommunications Equipment) : committee chaired by the European Commission and responsible for implementing the terminal equipment directive (98/13/EC) by establishing common technical regulations for network access (CTR).

ADSL (Asymmetrical Digital Subscriber Line) : ADSL is part of the xDSL technology family. It is designed to enhance the performance of access networks and in particular the subscriber's copper pair in the conventional telephone network. Use of two modems, one at the subscriber's premises and the other on the subscriber line termination at the MDF, allows a significant improvement in the network bit rate, to reach transmission speeds up to 70 times faster than with the usual analogue modem. ADSL uses a line splitter or filter so that part of the bandwidth can be used to carry voice, with the rest being reserved for upstream data (user to network) and a higher proportion of downstream data (network to user). Filtering at both ends of the line ensures acceptable voice quality by removing the unnecessary parts of the signal. Throughput diminishes with distance with ADSL technology, making it particularly well suited to the

local loop. It is relatively inexpensive and is therefore an attractive solution for broadband Internet access.

AFA : French association of Internet service providers.

ANFr (Agence Nationale des Fréquences) : National Frequencies Agency. Body responsible for managing the RF spectrum, sharing frequencies between the different bodies and administrations with allocations in France (ART, CSA, Defence Ministry etc), dealing with interference and participating in international negotiations on frequencies.

Asymmetric regulation: regulation which imposes specific obligations on the incumbent because of its dominant position on the market. e.g. special interconnection obligations, up-front retail tariff control, and universal service obligations.

ATM (Asynchronous transfer mode): a packet-switching technique using the cell relay transmission method, i.e. fixed-size cells, to provide high-speed transport of digital data. ATM permits ultra-fast transmission and enhances line capacity, making it particularly well suited to broadband multi-service networks. By improving core network performance and optimising network resources, it supports high traffic flow, while maintaining high service quality.

Audiotel: shared-revenue services provided by France Telecom, which can generally be accessed by dialling a number beginning with 08 36. They enable users to access information, games, etc., via an audiotex-type voice server, which guides the caller with pre-recorded messages.

B

Backbone (a.k.a. core network): operators' backbone networks are made up of very high-speed transmission links connecting the main network nodes to which lower-capacity links are connected. Backbone networks can be national (nationwide coverage), regional (covering several countries in the case of Europe) or global (worldwide coverage).

Bandwidth: designates the transmission capacity of a link. It determines the quantity of information (in bps) that can be transmitted simultaneously. In the IT world, it is often confused with the transfer rate or capacity expressed in bits per second.

BAS (Broadband Access Server): server used to manage data transport in ATM mode for ADSL-based Internet access offers. Each BAS in the France Telecom network consolidates the ATM traffic from some ten DSLAMs. A BAS is used to manage the traffic from the ADSL lines located in the area served by the DSLAM. France Telecom calls the area covered in this way an operating area or plaque. Two ATM circuits, one "downstream" and the other "upstream", are set up between the BAS and the customer.

Beauty contest: method used in France for the selection of candidates for the use of a limited resource (e.g. wireless local loop or UMTS licences and frequencies). It consists of defining a certain number of criteria and rating the candidates accordingly in order to select the most suitable. It is not the same as an auction, where the price of the resource is the only criterion taken into account.

Bit rate: amount of data carried by a network within a given time frame.

BSC (Base station controller): GSM base station controller. This equipment controls one or several BTS and manages the radio resources.

BTS (Base transceiver station equipment): GSM equipment comprising transmitters and receivers and providing the interface between the BSC and the mobile terminals.

CAA (Local exchange): local telephone exchange to which France Telecom customers are connected. In France Telecom's tier system, this is the lowest ranking exchange in the network.

There are two types of exchange:

- subscriber or local exchanges (CAA) are at the bottom of the hierarchy. Subscribers are linked to the exchange via a *unité de raccordement d'abonné* or subscriber connection unit (URA).
- transit exchanges (CT) are at the top of the hierarchy.

Cable networks: refer to audiovisual distribution networks established in accordance with the Audiovisual Communication Act no. 82-652 dated 29 July 1982 and article 34 of the Act no. 86-1067 dated 30 September 1986 on freedom of communication.

Call back: the user dials a number in the country which operates call back. There is no call set-up so no charge at this stage. An automatic device calls the number back and sets up the call on an international line. The user then dials the number of the called party and the call is billed at the tariff charged by the chosen foreign operator. This system thus enables users to enjoy the tariffs charged in the country being called.

Carrier selection: possibility for customers to choose between several carriers. Carrier selection concerns only long distance and international calls.

CCR (Radiocommunications Consultative Committee) and Telecommunications networks and services consultative committee (CCRST): advisory committees created by the Telecommunications Act of 26 July 1996. They report to the Minister responsible for Telecommunications and to the ART Chairman.

CEN: European Committee for Standardisation.

CENELEC: European Committee for the Coordination of Electrical Standards

CEPT (The European Conference of Postal and Telecommunications Administrations): regional regulatory telecommunications organisation of which most European countries are members. It is involved in regulatory and technical co-operation (particularly on frequencies).

Chambre Zéro: operator access point to France Telecom building and distribution frame cables for remote co-location.

Circuit: bi-directional link between two terminal units over which a connection-mode service can be provided.

Co-location: in France Telecom's standard interconnection offer, three different techniques can be used to provide physical interconnection:

- the actual co-location: the operator installs its equipment on France Telecom's premises
- interconnection link : France Telecom installs its equipment on the operator's premises.
- in-span interconnection: a solution midway between these two systems where the point of interconnection is located for example, in the public domain.

In the case of local loop unbundling (LLU), co-location corresponds to the supply of space and the necessary technical resource required for housing and connecting equipment belonging to the alternative operator.

Conformity certification: terminal equipment intended to be connected to a telecommunications network (telephone sets, faxes, modems, etc.) as well as radio transmitters (remote control units, CB devices etc.) must conform with quality and security standards before being placed on the market. The legislation sets out assessment procedures leading to conformity certificates being issued by ART. Equipment which has been conformity certified carries a special label.

Consumer basket (a.k.a. spending or price basket): statistical market information tool, enabling the average change in user bills to be measured at constant consumption. ART has established two consumer baskets to observe the average yearly change in telephone tariffs.

Convergence: refers to two different trends: convergence between the broadcasting and telecommunications sectors.

- Advances in technology make it possible to use different media (cable networks, terrestrial and satellite radio relay systems, computer terminals and television sets) to carry and process all types of information and services, including sound, images and data. This type of convergence is

due to a revolution in technology (digitisation). It has economic and regulatory implications.

- **fixed/mobile convergence.** Fixed telephone and mobile telephone systems provide increasingly similar technologies and services. For operators, this type of convergence opens up the possibility of proposing the same services to all users, regardless of the technology or networks used.

Core network (backbone): a telecommunications network comprises two parts:

- the local loop or access network, which comprises subscriber lines, i.e. in a fixed-telephony network, the part of the network where each subscriber line, generally comprised of copper pairs, is physically separate.
- the backbone consisting of all the transmission and switching elements from the local exchange onwards.

CPT (Code des postes et télécommunications): Post and Telecommunications code

CST (Conseil supérieur de la télématique): French authority for telematics services

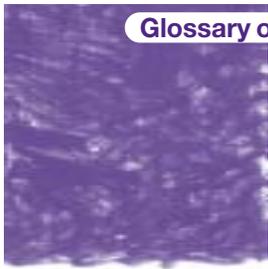
CT (Commutateur de transit): see CAA

CTA (Conseil de la télématique anonyme): French advisory committee on telematics services.

CTR (Common Technical Regulations): joint technical regulations governing network access for terminal equipment. They are drafted in accordance with EU directive 98/13/EC by the TRAC committee and ETSI at the request of the ACTE committee, chaired by the European Commission. CTRs apply to all member States.

DECT (Digital Enhanced Cordless Telecommunications): European digital radio transmission standard for mobile or fixed telephony (wireless local loop).

Digital block: a digital block corresponds to the consolidation of several calls on the same physical transmission medium using a technique called multiplexing. With PDH, a transmission standard used on telecommunications networks, calls can be grouped first into primary digital blocks (PDBs) of 30 calls, secondary digital blocks (SDBs) of 120 calls, tertiary digital blocks of 480 calls and then into quaternary digital blocks of 1920 calls. Each digital block corresponds to a bit rate or capacity expressed in bits per second; a bit being a basic binary digital number which can take the value 1 or 0. Consequently, a PDB corresponds to a bit rate of 2 mbps. Interconnection tariffs can be set as function of the transmission capacity expressed in PDBs.



Digital Link: link over which information is carried in a digital format. Digital means that all the information (sound, text, image) has been encoded and transformed into a series of binary digits, as opposed to analogue technology?.

Direct interconnection: call termination service, allowing an operator to terminate a call to one of France Telecom's subscribers. The call is routed by the operator to the interconnection point and then carried by France Telecom over its network from the point of interconnection to the subscriber's customer premises equipment.

Domain name: name designating an entity to which an Internet site belongs e.g. .fr or .com".

DSLAM (Digital Subscriber Line Multiplexer): one of the devices used to convert conventional telephone lines into ADSL lines for high-speed data transmission, particularly for Internet access. The DSLAM is installed on the main distribution frame of the local operator's network. It combines several ADSL lines onto a single medium, which routes data to and from these lines.

Dual tandem exchange interconnection: service listed in France Telecom's interconnection offer. It enables an operator interconnected at a trunk exchange (CT) to reach the subscribers in another trunk-exchange area, anywhere in France. This gives access to all lines in France.

E

ECC (Electronic Communications Committee): new umbrella committee for the activities formerly handled by ECTRA and ERC in CEPT.

Economic regulation: the regulatory authority has to ensure that competition is effective, fair and sustainable. It does this by using precise knowledge of market developments and the legal instruments at its disposal (e.g. dispute settlement, approval of technical and financial interconnection conditions, penalties, in-depth assessment of operators' costs).

ECTRA (European Committee of Telecommunications Regulatory Affairs): CEPT committee responsible for regulatory affairs. Its permanent office is the European Telecommunications Office (ETO)

EDGE (Enhanced Data rates for Global Evolution): EDGE is a 3rd-generation mobile standard allowing data to be transferred at 384 kbps. It evolved from the GSM and American TDMA standards.

ENUM: protocol defined by the Internet Engineering Task Force (IETF) to create Internet domain names from telephone numbers and link them to communication services (telephone, email, fax, unified messaging etc.). ENUM is the first truly convergent Internet/telecoms project combining numbering aspects with Internet naming and addressing features.

ERC (European Radiocommunications Committee): organisation answerable to the European Conference of Postal and Telecommunications Administrations (CEPT), responsible for regulatory cooperation on radio-communications issues. Its permanent office is the European Radiocommunications Office (ERO).

ERMES (European Radio Messaging System): European radio-paging standard.

ETNO (European Public Telecommunications Network Operators Association): association set up to foster cooperation among public telecommunications network operators.

ETSI (European Telecommunications Standards Institute): body set up by the European Commission to handle telecommunications standardisation for the CEPT.

Extranet: a private external network that uses Internet protocols (IP) to enable businesses or organisations to exchange digital data with key correspondents (subsidiaries, customers, suppliers, etc.). Hypertext Markup Language (HTML) makes the presentation of data user-friendly, using hyperlinks allowing the user to browse through screen pages (as on a web site).

FIP: flat-rate interconnection point.

F

Flat-rate interconnection: an interconnection offer between third-party networks and the France Telecom network whereby the fees payable by the third-party operator for collecting traffic on the local loop are on a per-circuit basis and not on a per-minute basis.

Freephone numbers: generally called a numéro vert (green number) by France Telecom. The caller is not charged; instead, the cost is paid by the person, company or organisation that has requested the number so that they can be called free of charge. Freephone numbers begin with 0800.

FRIACO (Flat Rate Internet Access Call Origination.): British Telecom's flat-rate interconnection offer in the UK.

G

GCT (Group Consultatif Terminaux): voluntary working group comprising the various parties involved in telecommunications terminal equipment, such as operators, manufacturing unions, test laboratories and users. The group is responsible for drafting national technical regulations used for terminal equipment conformity assessment. ART is the group facilitator.

GPRS (General Packet Radio Services): packet switching system enabling enhanced data rates over GSM networks (cf. Switching).

GSM (Global System for mobile communications): digital radio transmission standard for mobile telephony.

GTR (Groupe de Travail sur les Radiocommunications Professionnelles): working group on business communications set up within the Radiocommunications Consultative Committee.

CUG (closed user group): the Post and Telecommunications Code defines an independent network as a network that is shared or used for a private purpose. It is considered to be for private use if use is reserved for the physical person or legal entity that set it up, and for shared use if use is reserved for several physical persons or legal entities which have set up one or several closed user groups, in order to exchange communications within this same group. ART clarified this definition by adding that a CUG must be based on a community of interest that is stable enough to be identifiable and that pre-dates creation of the network. The term 'closed user group' is also used to define a virtual private network on a public network.

H

HDSL (High Speed DSL): bi-directional symmetrical transmission technique primarily for professional applications. Bit rates up to 2 mbps can be achieved over distances up to 2500m.

HLR (Home location register): visitors' location register (VLR). Data base containing profiles and high-level mobile-network subscriber details.

HSCSD (High Speed Circuit Switched Data): circuit-switched data system allowing improved bit rates on GSM networks (see "switching").

I

IAB: Internet Architecture Board.

ICANN : Internet Corporation for Assignment of Names and Numbers.

IEC: International Electrotechnical Commission

IETF: Internet Engineering Task Force.

IMT 2000: International Mobile Telecommunications 2000

IMT 2000: third generation mobile systems which enable mobility services to be improved, thanks to new features. The ITU selected five terrestrial radio interfaces, including UMTS, for third-generation mobile systems under the IMT 2000 label .

Independent network: see: CUG.

In-span interconnection (in span): see co-location.

Indirect Interconnection: call-collection service, in which an operator collects a call from one of France Telecom's subscribers. The subscriber dials a prefix to select the operator and the call is then carried by France Telecom from the subscriber's customer premises equipment to the point of interconnection, where the call is then carried by the alternative operator.

Interconnection: the linking of telecommunications networks in order to allow one operator's subscribers to communicate with any of another operator's subscribers.

Interconnection agreement: private contract negotiated and signed by two operators, on a case-by-case basis, to determine interconnection terms and conditions. Generally, when an agreement is concluded with an operator with significant market power, it is based on this operator's standard interconnection offer. If the service is not listed in the interconnection offer, new interconnection conditions are laid down.

Interconnection interface: the set of technical specifications necessary for practical implementation of interconnection by establishing a dialogue between networks. It defines the physical interconnection arrangements, services and advanced functions accessible between the networks concerned, the control mechanism for these services and their billing and operating arrangements.

Interconnection link: see co-location.

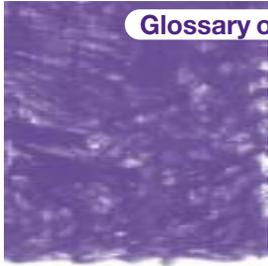
International Settlement Rate: amount paid by one operator to another as part of the international accounting rates system.

Internet: a network of variable sized networks interconnected by the Internet Protocol (IP), over which a wide range of services can be provided.

Interoperability (interworking): service interoperability is the possibility for different services to operate on different networks. The technical specifications at the interconnection interface determine, in part, service interoperability between different operators.

IP (Internet Protocol): telecommunications protocol used on networks supporting the Internet, to allow the information to be transmitted to be broken down into data packets, transmitted independently based on address information carried in the packet and reassembled at the receiving end. The switching technique is therefore referred to as packet switching. For Internet use, it is associated with a data transmission control protocol called TCP (Transmission Control Protocol) known as the TCP/IP protocol."

ISDN (Integrated Services Digital Network): digital telecommunications network, capable of carrying image, sound and text data simultaneously.



Intranet: a corporate network using Internet Protocol, reserved for internal data communication. It enables businesses or organisations to exchange information using the IP standard. Hypertext Markup Language (HTML) makes the presentation of data user-friendly, using hyperlinks to permit users to browse through screen pages (as on a web site).

IP Address: an address allowing equipment connected to the Internet to be identified.

IP telephony: voice communication service using the telecommunications IP protocol (Internet protocol) developed for the Internet.

IRG (Independent Regulator Group): informal body comprising representatives of the various regulatory bodies in EU and EEA countries.

ISO (International Standards Organisation): international organisation for standardisation.

ISP: Internet service provider.

ITU (International Telecommunications Union): organisation under the aegis of the United Nations, based in Geneva and responsible for drafting telecommunications standards.

L

Leased Line: from a technical viewpoint, this is a permanent link (as opposed to a switched link which is temporary) comprising one or several parts of a public network and reserved exclusively for a user. From a legal viewpoint, a leased line, which is also called a dedicated line, is defined in the Post and Telecommunications Code as: “a contract between the public operator and a user to provide transmission capacity on a rental basis between pre-determined termination points of the public network. The user has no control over switching”. This type of service is used by businesses for corporate networks, and also by telecommunications service providers, which either have no infrastructure or wish to extend existing infrastructure.

Least cost routing: optimal routing using a system enabling the least expensive links to be chosen systematically as a function of the destination and time of the call.

LEO : Low Earth Orbit (Satellite).

Licences: the Telecommunications Act of 26 July 1996 states that telecommunications activities can be freely provided. However, it stipulates that certain activities require a licence (also known as an authorisation). For example, a licence must be obtained from the Minister responsible for Telecommunications, after applying to ART, to set up and operate a public network, to provide a public telephone service and to provide the public

with telecommunications services using microwave frequencies. ART was also in the past responsible for issuing licences to set up and operate independent networks.

LLO: local loop operator (see local operator).

LMDS (Local Multipoint Distribution Services): technology supporting high-speed transmission using microwave frequencies to provide access to the telephone service, Internet and television programmes. This type of transmission is particularly well suited to sparsely populated areas not served by cable. However, its development is hindered at present by technical barriers such as signal attenuation, caused on the one hand by the weather (rain), and on the other hand by obstructions (buildings, vegetation, hills) which interfere with radio wave propagation.

Local exchange interconnection service (intra-CAA): service listed in France Telecom's standard interconnection offer enabling an operator to interconnect at France Telecom's local exchange. Up to 30 000 lines can be connected.

Local loop: the wire line or radio connections between the customer's premises and the local exchange. The local loop is the part of the network that allows the operator to access the customer directly.

Local operator (or local loop operator): telecommunications company that has installed subscriber lines.

Local loop unbundling: local loop unbundling, also known as unbundled access to the local network, allows new operators to use the incumbent operator's local copper-pair network to serve subscribers directly. Naturally, new entrants are required to compensate the incumbent for the use of its network.

Consequently, customers of new-entrant operators will no longer be required to take out a subscription with France Telecom to access their operator's services. This broad definition encompasses several options. The preparations for the public consultation exercise conducted by ART in 1999 identified five:

- three of these five emerged during deliberations concerning the possibility of unbundled access to the incumbent's local loop. This unbundled access may entail:
 - physical unbundling of the local loop, where the new operator gets direct access to the copper pair. This is known as raw copper access (option 1),
 - access to transmission capacity, comprising bitstream access and access to a permanent virtual circuit (options 2 and 3). The remaining two options are equivalent to a resale business, namely local traffic resale and subscription resale (options 4 and 5)

Local sorting zone: the local loop operator only sends those calls to the carrier selected by the calling party which are destined for calling parties outside the local sorting zone; calls within the local sorting zone are retained and routed by the local loop operator irrespective of the numbering sequence used by the calling party. In France, the local sorting zone generally corresponds to a département.

Long-run average incremental costs (LRIC): the Telecommunications Act stipulates that interconnection tariffs must be set according to the actual costs incurred by the operator providing the interconnection service. Two methods can be used to determine these costs: the first consists of using the operator's historic network costs; the second, of evaluating the cost of building a new network at current and future prices, which are generally lower than historic costs due to advances in technology. Long-run average incremental costing aims to reconcile these two methods by comparing two evaluations:

- one based on the operator's accounts,
- another based on a technical and economic model of network roll-out and operations.

This reconciliation should provide better understanding of network cost drivers and their relationship with the different interconnection services.

M

Main distribution frame (MDF): apparatus allowing the subscriber copper pairs to be jumpered across to the cables connected to the local exchange. It enables several subscriber lines to be distributed over a single cable.

Mobile network: network using radio frequencies to connect mobiles to the fixed or mobile network

Microwave radio links: terrestrial radiocommunication links between fixed points.

MRC (Milestone Review Committee): advisory group set up jointly by ECTRA and the ERC within the CEPT, in order to ensure that the various regulatory systems fulfil their requirements.

MSC/VLR (mobile services switching centre/visitor location register): GSM and/or UMTS circuit switch (MSC) for managing incoming and outgoing calls. This switch is linked to a data base (VLR) containing a copy of the user profile and information on the terminal or handset location.

N

NAS (Network Access Server): equipment used by operators to provide Internet access services over the switched telephone network. A NAS converts telephone calls into IP data streams so that the switched telephone network and the IP data transport network can interface with each other.

Network: combination of telecommunications resources, e.g. exchanges, wirelines (copper cable, optical fibre) and terrestrial or satellite radio transmission links (electromagnetic waves).

Non-geographical numbers: number beginning with 08. Services can be distinguished by type e.g. general mobile services, virtual private network services, and by pricing, e.g. freephone services, shared-cost services and shared-revenue services.

Number portability: possibility for subscribers to retain their telephone number when changing local loop operator (service available since 1st January 1998 if the subscriber does not change address) or when changing geographical location or local loop operator, or both (service available as of 1 January 2001)

On-net and off-net calling: calls between two customers on the same mobile network or between customers on separate mobile networks.

O

ONP (Open Network Provision): rules allowing the incumbent's network to be used by new operators. Network ownership and architecture and the provision of commercial services over the network are treated separately. The European ONP directives aim to harmonise conditions so that ONP principles can be applied to all telecommunications services. The harmonised conditions guarantee open and effective access to telecommunications networks.

Operator with significant market power (SMP operator): the Telecommunications Act requires ART to draw up annually a list of operators with significant market power (meaning that they have significant influence on a relevant telecommunications market). They are obliged to publish a standard interconnection offer. Any operator which has over 25% market share of a relevant telecommunications market is deemed to have significant market power.

When drawing up this list, ART also takes into account the operator's turnover in relation to the size of the market, its control of access to the end user as well as its access to financial resources and its experience in the market.

PDH (Plesiochronous Digital Hierarchy): a digital transmission standard based on dividing information up into identical time intervals.

P

Peering: refers to a type of interconnection agreement between two IP backbone networks (called peer networks) for the exchange of Internet traffic between their respective networks. These exchanges take place in public or private nodes.

Plan Câble (cable plan): this term refers to a French government plan introduced in the Audiovisual Communication Act 82-652 dated 29 July 1982, which sought to develop audiovisual cable networks in France.

PMR (professional mobile radio): mobile radio networks for business users. In France the distinction is drawn between:

- 3RP: trunked private mobile radio network
- 3RPC: trunked public access commercial mobile radio networks
- RPN: digital trunked professional mobile radio networks, using Tetra or Tetrapol technology
- 2RC: trunked private mobile radio networks for commercial purposes.
- 3R2P: trunked private mobile radio networks for private purposes
- RPX: local trunked networks (new category of networks).

POI: operator interconnection point.

PoP: Point of Presence

Public network: telecommunications network established or used for the provision of public telecommunications services

Public telephony service: service defined by law as “commercial public provision of a service which conveys direct, real-time voice telephony between public switched telephone networks for mobile and fixed users”.

R

Radio interface: system enabling a mobile terminal to communicate with the network. Numerous discussions were held within ETSI in 1997 on the standardisation of a radio interface for UMTS. On 29 January 1998 the SMG committee adopted the UMTS Terrestrial Radio Access standard (UTRA). NB: terrestrial as opposed to satellite. The UTRA standard is a compromise between two originally competing standards: WCDMA and TD/CDMA. UTRA was adopted by the ITU in March 1999 as a radio interface standard for IMT 2000.

Radio paging: mobile communications system enabling users equipped with pagers to receive call-alert signals (beeps) and messages composed of numbers (numeric) or combinations of numbers and letters (alphanumeric). The three commercial radio paging brands in France are Tam-Tam, Tatoo and Kobby.

Regulation: in the telecommunications sector, regulation may be defined as the enforcement, by the competent authority, of all the legal, economic and technical provisions enabling telecommunications activities to be carried out freely, as stipulated by law. Telecommunications regulation is essentially economic regulation, which is not the case in the broadcasting sector, where content is also regulated in accordance with cultural objectives.

RLR: wireless local area network. (see WLAN)

RPS (Radiocommunications Professionnelles Simplifiées): short-range business radio.

RRI: Private terrestrial mobile radio networks (see PMR).

Satellite network: network using radio frequencies relayed by satellite.

SCS (Société de commercialisation de services): mobile communications service provider. Company selling and managing mobile telephony subscriptions on behalf of an operator.

Shared cost services: service in which the cost is divided between the calling and the called parties.

Shared-revenue services: service in which the called party receives a payment from the telecommunications service provider.

Shelter: shelter fitted out for the installation of an operator's co-located equipment for unbundled local loop.

SFCA (Services et Fonctionnalités Complémentaires et Avancés): ancillary and advanced services included in France Telecom's standard interconnection offer.

Signalling: on a telecommunications network, signalling supports the exchange of the internal network data needed for call routing and can be compared with the road signs on a road network. It includes the information required to identify the user for billing or calling-line identification. When carried out by the network that carries the calls to subscribers, it is generally integrated in the exchange. It can also be performed by a separate network, called the semaphore network.

SIM (Subscriber identification module) : smart card in the mobile terminal containing subscriber data required for network authentication.

SIM Card (subscriber identity module): subscriber and value-added services card (GSM standard).

Single tandem exchange interconnection: service listed in France Telecom's interconnection offer. It enables an operator interconnected at a trunk exchange (CT) to reach the subscribers served in that trunk exchange area (ZT), which is usually around two million lines.

SMG (Special Mobile Group): ETSI committee responsible for mobile communications work.

SMS (Short message service) : bi-directional service for exchanging short messages.

SMS (Short Message Service): these messages are transmitted in the signalling channel of GSM mobile networks using a standardised protocol and have a maximum length of 160 characters. A short message server integrated into the mobile network provides an interface with the fixed network.

SNG (Satellite News Gathering): ground stations for temporary satellite video links.

S-PCS: satellite personal-communication services.

SPIROU (Signalisation Pour l'Interconnexion des Réseaux Ouverts): new signalling interface developed by the French Interconnection Committee on ART's initiative to adapt the French network to the ETSI European standard, ISUP. This interface comprises the specifications governing the signalling of basic telephone call commands, advanced services and functions, interworking functions with user access signalling and intelligent network protocols.

Standard interconnection offer (a.k.a the interconnection catalogue): technical and commercial interconnection offer which operators designated by ART as having significant market power, pursuant to Article L. 36 -7 of the Post and Telecommunications code, are required to publish annually to enable other operators to establish their own commercial offers and prices. The standard interconnection offer also sets out the conditions governing physical interconnection between the incumbent and other operators.

Switch: equipment used to route calls to their destination by establishing temporary connections between two circuits in a telecommunications network or by routing data packets. France Telecom's network comprises a hierarchical system of switches; the higher the exchange in the system, the greater number of subscribers it serves.

Switched Internet: refers to Internet access via the France Telecom public switched telephone network used for switching plain ordinary telephone service (POTS).

Switching: in a telecommunications network, switching allows temporary traffic connections to be established between two or more network points. This is carried out by switching equipment called exchanges located at different points of the network. The basic structure of a telecommunications network therefore comprises transmission links interconnected by exchanges. Packet and circuit switching are two techniques used in telecommunications networks. The first is used by Internet (IP) networks and the second by traditional telephony (PSTN) networks.

Tariff squeeze: see tariff squeeze effect.

Tariff squeeze effect: there is a risk of tariff squeeze when two companies A and B are competing in a retail market and B depends on A for the supply of goods or services needed for the retail market. A tariff squeeze occurs when operator A's retail tariff is lower than the sum of the wholesale tariff for the intermediary goods or services and operator B's own costs.

In the case of tests carried out in accordance with ART recommendations, France Telecom retail tariffs generate a tariff squeeze if the average revenue is lower than the average cost of an equivalent retail offer supplied by an operator considered to be efficient and obliged to use France Telecom interconnection services. The term tariff squeeze comes from the fact that the other alternative operator must compete with France Telecom retail tariffs while at the same time depending on France Telecom for intermediary services i.e. interconnection.

TBR (Technical Basis for Regulation): harmonised standard established by ETSI. TBRs are used as the basis for technical regulations, which lay down the essential requirements with which terminal equipment must comply.

Telecommunications: transmission or reception of signs, signals, text, image, sound or other information, by wire, optical fibre, radio or other electromagnetic means.

Terminal equipment: equipment allowing a user to send, process or receive information. e.g. telephone, fax, modem etc.

Third party billing: service enabling new operators to entrust the incumbent with billing for services offered to their customers via interconnection. In the case of special services, third-party billing can only be used for charged services (not for services that are free for the caller). As this market develops, this service becomes essential for effective competition.

Third-party collection: interconnection service, which enables a network operator to collect traffic from the incumbent's network on behalf of another operator that does not have infrastructure in the geographical area concerned. This service is used in particular by L. 34-1 licensed telephone operators wishing to provide service over an extensive area without having to roll out a network.

3G: third generation mobile system. 3G networks will provide users with access to a wide range of new services. Leading the way among these will be high-speed Internet access as a result of the gradual introduction of packet-switching technology on mobile networks.

3GPP (third generation partnership project): global body bringing together worldwide standards organisations, including ETSI and US, Japanese and Korean members. Its mandate is to reach an agreement on a common radio interface in order to determine a standard for third-generation mobile telecommunications systems (UMTS). ETSI transferred the work carried out within the SMG committee on UMTS to the 3GPP.

Some of the 3GPP partners are: the GSM Association, the UMTS Forum and the Ipv6 Forum.

Téletel: database consultation service offered by France Telecom using Minitel teletex terminals.

TRAC (Technical Regulations Applications Committee): CEPT committee traditionally set up to draft common technical regulations (CTRs) for terminal equipment.

Transmission: on a telecommunications network, transmission is the carriage of information from one network point to another. The medium used may be copper cable, optical fibre or microwave radio. (see switching)

Trunk exchange area: see ZAA.

2G, 2.5G : pre third-generation mobile systems e.g. GSM for 2G and GPRS for 2.5G.

U

UMTS (Universal Mobile Telecommunications System): European-standard third-generation mobile telecommunications system, designed to support a wide range of services integrating voice, data and images. At ITU level there are several competing standards for these systems grouped under the umbrella term IMT 2000.

Universal service: principle component of the public telecommunications service, defined by the law. It includes the provision of a telephone service to all at an affordable price, the carriage of emergency calls free of charge, the provision of an information service and a directory in printed and electronic form, and the supply of public phone booths on the public domain. It also sets out special technical conditions and prices for disabled and low-income users.

Unlimited flat rate: offers unlimited Internet connection time via the switched telephone network with the end user being charged a flat-rate fee.

URA (Unité de Raccordement d'Abonné): refers to the part of a telephone switch in the France Telecom network used to connect subscriber lines and convert information to digital format.

V

Virtual co-location: for unbundling, a type of co-location in which the ULL operator's equipment is managed by France Telecom and installed alongside France Telecom's equipment.

Voice telephony: the ONP voice telephony directive of 26 February 1998 defines voice telephony as a public service for the commercial provision of directly transported real-time speech via the public switched network or networks, such that any user can use equipment connected to a network termination point at a fixed location to communicate with another user of equipment connected to another termination point. The term voice telephony is used in Community directives to designate traditional Plain Old Telephone Service (POTS).

VPN (Virtual Private Network): a virtual private network shares resource on one or several public networks for the internal requirements of a closed user group, which is defined as a “group which has a common interest, which is sufficiently stable to be identified and which pre-dates the provision of telecommunications services”. It responds to a need for both internal communication (within the user group), and external communication (to public network users). For businesses that have sites spread over a wide area, the virtual private network, established on the operator's network, can function like a private network, with its own private numbering plan; this simulation provides the same service as a private branch automatic exchange (PABX) while at the same time saving the business costly investments.

VSAT (Very Small Aperture Terminal): satellite telecommunications services using a narrow part of the total satellite bandwidth and a very small transmitting/receiving terminal for low or medium-speed data transmission.

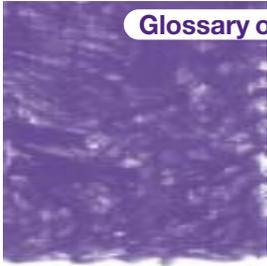
WAP (Wireless Application Protocol): standard for adapting the Internet to the constraints of mobile telephones. It deals in particular, with the use of a suitable content format. This new communications protocol is part of the process of incorporating Internet applications into GSM mobile networks.

V

WiFi (Wireless Fidelity): commercial name for the IEEE 802.11b wireless local ethernet network (WLAN) operating in the 2.5 GHz band.

Wireless local loop (WLL): local loop network where the traditional copper wires are replaced with wireless network technology, giving greater flexibility in infrastructure deployment.

Wireline network: network using metal cables or optical fibres as a transmission medium.



WLAN (Wireless local area network): wireless network operating over a limited area.

WRC (World Radiocommunications Conference): international coordination in the field of radiocommunications. This coordination is essential because frequencies have no national boundaries and it is simpler to have similar types of service in the same frequency band. This conference, organised in connection with the ITU, is held every three years. The results, once incorporated into radiocommunications regulations, constitute international treaty. The Radiocommunications Assembly is held prior to the conference. After the conference, a preparatory meeting is held to prepare for the next conference. 2 363 delegates from 150 member countries and 95 organisations such as manufacturers, operators and international and telecommunications organisations attended in 2000.

Z

ZAA (Local exchange area): in France Telecom's network, the exchange area is the area in which subscribers are served by one or several exchange(s) corresponding to a particular level in the network hierarchy. For local exchanges (CAA, lowest level) the area is called the local exchange area (ZAA), and for trunk exchanges (CT) it is called the trunk exchange area (ZT).

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PART 1

The electronic communications market

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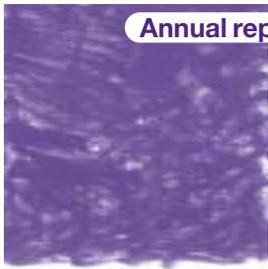
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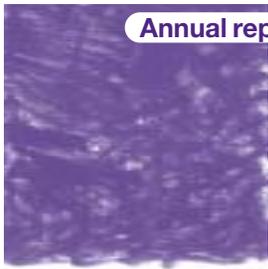
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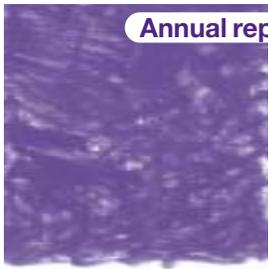
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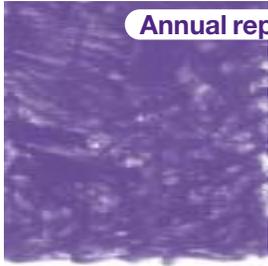
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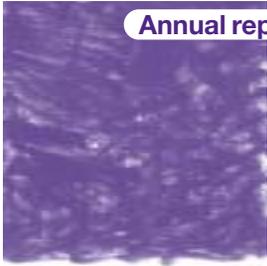
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Réalisation graphique : Studio Guy Bariol

dépôt légal : juin 2004

ISSN 1289-3803