

# *Annual Report*

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# 2001

# Volume 1



Article L. 36-14 of the Posts and Telecommunications Code, under the 1996 Telecommunications Act, provides that:

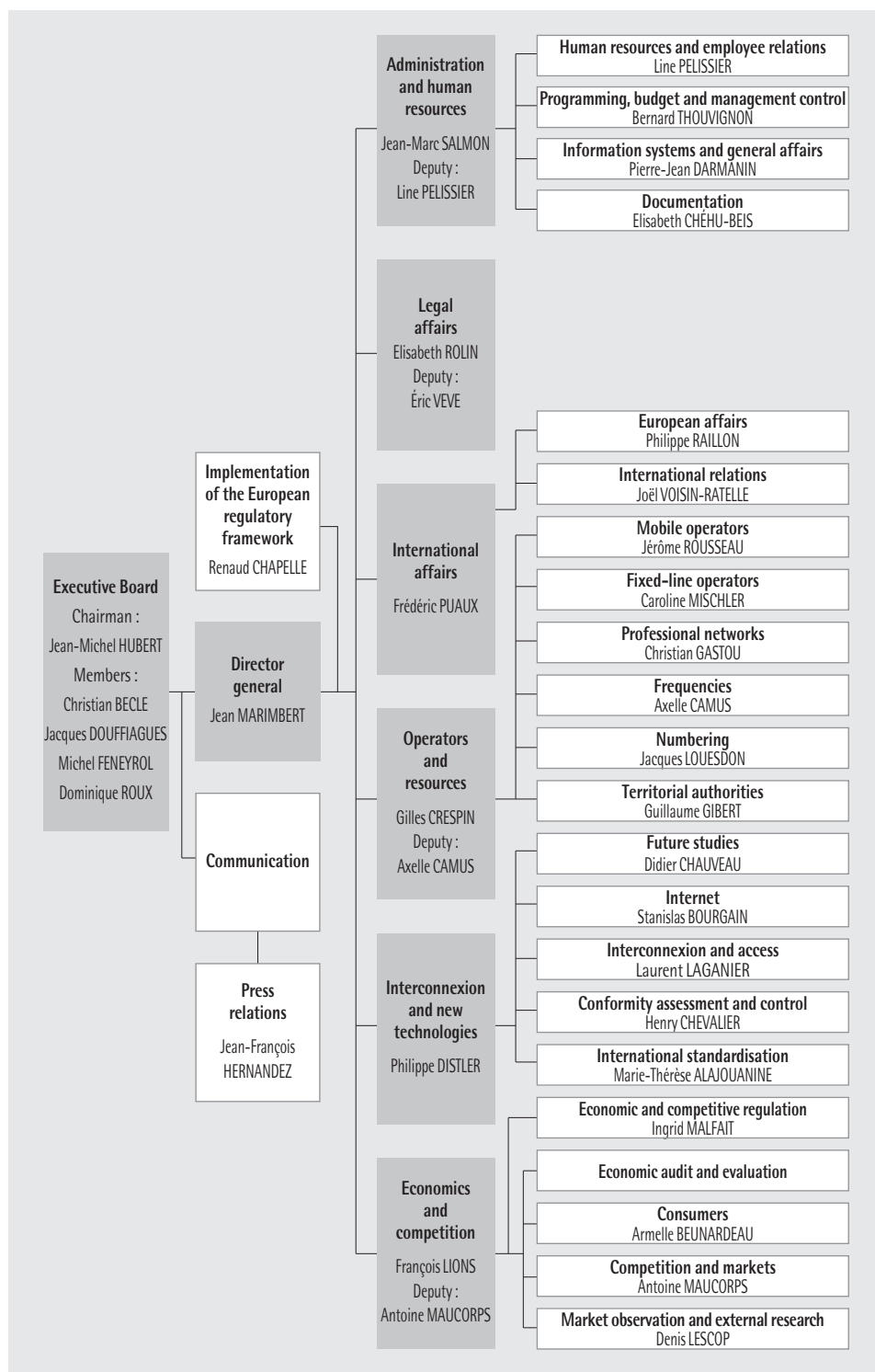
*"The telecommunications regulatory authority shall draw up and publish an annual report on the performance of its functions and on the application of the legislative and regulatory provisions for telecommunications before 30 June. This report shall be submitted to the Government and to Parliament. It shall also be submitted to the 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 evolutions 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 two volumes, a set of appendixes and a summary. Volume 1 analyses market trends between 1998 and 2001, reports on changes to the legal and regulatory frameworks in 2001, and sets out ART's priorities for the future. Volume 2 reviews ART's activities during 2001. The summary presents the highlights of Volume 1.

Renaud Chapelle, assisted by Gwenaëlle Collet, coordinated the drafting of the report, which involved a collective effort by the entire staff of ART.

The report was officially adopted by ART's Executive Board on 7 May 2002.







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## *Editorial*

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The telecommunications sector witnessed a number of contrasting trends in 2001.

The general economic climate worsened, resulting in widespread consolidation that winnowed the ranks of Europe's telecoms industry.

But despite these setbacks, the market continued to expand. In France, telecommunications services saw double-digit growth driven by the Internet and mobile telephony for the third consecutive year.

Competition continued to intensify in 2001. This is reflected, for example, in the market-share growth achieved by new entrants in the fixed-wire sector, firstly for long-distance calls and then, since 1 January 2002, for local calls.

New market segments have also been drawn into the ambit of competition. The so-called "last mile" is beginning to open up with the deployment of the first wireless local loops – a difficult but ongoing process – and the operational implementation of unbundling. High-speed Internet access through ADSL technology, which is crucially important for the market and for the development of our economy, has been the key area of focus for ART from the standpoint of competition. The process of awarding UMTS licences continued throughout the European Union. The current outlook, which is based on normal leadtimes for rolling out this technology and is hence more realistic, suggests that UMTS services will be available in early 2004.

In France, public policy now harbours new ambitions in terms of nationwide telecoms coverage. The completion of mobile coverage and the deployment of high-speed communications throughout the country are now key issues for the telecommunications sector in terms of regional development. The role of local authorities in this sphere was strengthened in 2001, allowing them to take initiatives to encourage operators' efforts to grow the market.

The European telecommunications sector has adopted a new legal framework that allows for technological convergence and the spread of competition. The talks conducted throughout 2001 on introducing a new European regulatory architecture culminated on 7 March 2002 with the adoption of four directives and one decision that substantially modify the existing rules. The directives are due to be transposed into national legislation during 2003.

ART, which operates against a backdrop of multiple trends in the telecoms sector, has concentrated on fostering – and in some cases initiating – these developments, for the benefit of consumers, who are profiting from the market's current momentum. Although its activities are technical and therefore complex, ART carried out its mission without losing sight of the underlying objectives. As a result, factors such as the tangible implementation of unbundling, the introduction of an affordable flat-rate interconnection offer for Internet access and the decline in interconnection charges for fixed-to-mobile calls are harbingers of lower prices and greater diversity in terms of offerings and methods of accessing services.

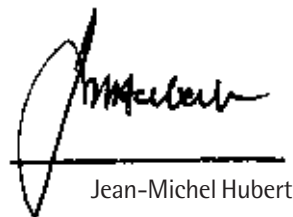
The purpose of this annual report is to show, via a brief overview of five years of competition and regulation, how ART's decisions have helped to structure the markets that make up the telecommunications sector. The report also contains statistical data on the economic situation of the French market since 1998. This information is fleshed out with a thorough review of ART's activities and the situation of the principal markets in 2001.

The main projects undertaken by ART over the past few years are discussed in detail. These include the local loop, network coverage and UMTS, the success of which depends on continual and determined action by the regulator.

Lastly, the report analyses the economic, technological and regulatory factors that will shape telecoms regulation and considers how it can be amended. The fact is that regulators will have to adapt their methods and strategies in several areas, particularly with the forthcoming introduction of the new European regulatory framework.

In early 2002, ART launched a review into ways of adapting French regulation to the new framework, as well as to the new economic and technological issues facing the sector. The results of these deliberations have been made public as part of the much-needed debate preceding the transposition of the new EU directives. This annual report contains a detailed analysis of the new European measures and will prove useful to readers seeking to understand the new policy settings and their implications for the future of the market.

All the evidence points to the fact that although the regulator's remit is set to change, it has certainly not run its course. This, moreover, is one of the main conclusions of the new directives. Resolute action by regulators is vital to help the market develop even further and to ensure that competition holds sway in all areas. ART has no intention of letting up its efforts; it intends to forge ahead, in collaboration with all interested parties, in an effort to reach the objectives defined by the public authorities. This collective involvement is crucial if our country is to reap the full benefits of the fast-developing information society.



Jean-Michel Hubert

## *Introduction*

# *The importance of telecommunications in the French economy*

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### **A morose business climate**

After the euphoria of 2000, 2001 was marked by a slowdown in the world economy that worsened in the autumn and was further amplified by the terrorist attacks of 11 September, which shook the industrial and financial sectors. This economic turndown was felt strongly by the new information and communication technologies sector at a time when businesses were under pressure to run down stocks and rein in major investments. Europe was not spared. Overall, France was among the countries least affected by the crisis, thanks to sustained consumption and an increase in household purchasing power. However, destocking was just as severe as elsewhere and investment stagnated.

### **The telecommunications sector was hit by crisis...**

The telecommunications sector was at the heart of the speculative bubble which burst in mid-2000. In 2001 it was hit by the financial after-shocks of this collapse. The high price of UMTS licences in some European countries also affected operators' financial equilibrium. The

sector is now in the midst of consolidation. Players are adjusting their market conquest strategies, with a tighter focus on restoring their margins, and investments are slowing. A decline in revenues from telecommunications services can be expected at both world and European levels. However, there are a number of contrasting trends. Equipment suppliers, who are anticipating a drop in sales, are experiencing greater difficulties than operators. These difficulties have a number of causes. They include excess installed capacity and lower prices charged by new entrants that have led to bankruptcies, the incapacity of some entrants to finance their development plans and massive debt incurred by major operators due to acquisitions made at a time when telecommunications activities were overvalued on the financial markets. In addition, as the telecommunications sector waits for new technologies to reach maturity, the penetration rate of mobile telephony is slowing on most European markets.

### **But still a driving force of the French economy.**

In France, despite the depressed business cli-

mate, the telecommunications sector continues to grow, both in value (10%) and in volume (23%), and plays a central role in the French economy. More than 1.5% of consumer spending is devoted to telecommunications services, a figure that has practically tripled in 30 years. In volume, this same spending has increased annually by more than 20% since 1999, illustrating France's enthusiasm for information and communication technologies.

The telecoms sector accounted for around 2.6% of French investment over the period. This figure is in slight decline, reflecting a certain market maturity following the explosive growth in investments in 2000. Once again, the market was driven mainly by the Internet and mobile telephony. These trends should be confirmed in 2002, though a slowdown in growth is likely.

## Chapter 1

# *The new telecommunications environment*

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The liberalisation of the telecommunications sector has been marked by technological developments that brought new services in their wake. This technological and commercial expansion, associated with intensifying competition, has led to market development and strong growth in the sector, even though the economic climate has been less favourable in the past two years.

### *1. New technologies and services*

#### **A. Mobility**

The French mobile telephony phone market has been open to competition since 1987. It has grown exponentially over the last decade to the point where mobile phones have become an indispensable part of everyday life. In just seven years, from the end of 1994 to the end of 2001, the penetration rate of mobile phones in France rose from 1.3% to 61.6%. The number of mobile lines exceeded that of fixed lines in 2001, reaching 37 million at the end of the year.

The first mobile communication services to be developed were analogue services. The introduction in the early 1990s of a single, Europe-wide digital standard – Global System for Mobile Communications, or GSM – was a key driver of growth in this sector. In 1991, France Télécom Mobiles and SFR obtained GSM licences, and Bouygues Télécom obtained its licence in 1994. Since then, competition has grown, leading to a wide range of offerings and a decline in prices, especially with the advent of flat-rate schemes.

The market has grown considerably since 1998. The sharp acceleration in demand has been buoyed by operators' intensive marketing drives, the main ones being:

- promotional offers involving free calls, especially at year-end, when operators generate more than 25% of their annual sales (specifically in 1998 and 1999);
- subsidising handsets sold on a contract basis, which account for between 70% and 90% of total sales, according to information provided by manufacturers and operators.

The emergence of prepaid cards marked a major innovation in the history of mobile telephony. Over the last three years, prepaid cards have attracted growing numbers of users, and today account for nearly half of operators' total customers in France and the other European countries.

More recently, Short Message Services (SMS) have become extremely popular. SMS, also known as 'texting', allows users to send and receive short written messages on their mobile phones. In 2001, mobile users sent 3.2 billion SMS messages, up nearly 120% on 2000. SMS messages accounted for 377 million of mobile operators' revenues in 2001.

On the other hand, Wireless Access Protocol (WAP) – the first attempt at offering mobile Internet services – did not meet with the expected success. There are several reasons for this, including inadequate user-friendliness, high prices and the lack of bandwidth available to access the services on offer.

These data services foreshadow the new services that will be delivered as a result of faster speeds, made possible by the new technologies now being introduced, specifically GPRS and UMTS. Not only will these technologies enable the transfer of voice, data and images; they will also spur the development of networked gaming on mobile phones.

## **B. Internet**

Together with mobile telephony, the Internet is the second market segment driving growth in the telecommunications sector. It has been radically transformed over the last five years, and the economic model used by market players has changed likewise.

### **1. The origins: "free" Internet**

Internet access comes with a wide range of "free" services and content. This reflects the origins of the Internet: a non-commercial community spirit; an open architecture enabling all users – individual or otherwise – to publish content; and simple, low-cost traffic exchange mechanisms (peering). So the economic models are based largely on those of the broadcast media, with advertising as the main source of revenue.

In contrast, fee-paying access was initially based more on the model used in the telecoms sector: subscribers paid the telephone charges as well as a subscription fee to their Internet services providers (ISPs) for connecting to the Internet.

Gradually, the 'free' model gained ground. In 1999, the ISP subscription component disappeared with the advent of pay-as-you-go offers, or flat-rate schemes that include telephone charges and Internet access fees. With pay-as-you-go, ISPs are paid via a rebate on each minute of communication. The disappearance of 'Internet access' subscriptions is encouraged by the growing number of Internet backbone development projects and the falling cost of Internet connection. For example, in France international IP capacity grew from a few hundred Mbit/s in 1998 to 38.4 Gbit/s in 2001.

The 'broadcast medium' model – as applied to the Internet – reaches a climax with 'free' ISPs, who do not charge Internet users for either Internet access or telephone communications. Free ISPs mainly count on advertising to cover their costs: as with television, access is free. The operators earn income from advertising fees.



The period through to 2000 featured a rising number of players on each of the many new Internet-related markets (access, portals, e-commerce, advertising, games, etc.). There were 300 ISPs in France in 2000<sup>1</sup>. Under the broadcast medium model, where audience size is critical, the players concentrate on acquiring the largest possible number of subscribers.

## **2. The emergence of new models**

The market changed in the period 2000-2002 as the economic situation turned down. This was reflected in a wave of concentration and the development of paid-for services. The downturn in capital invested in Internet companies has had multiple effects.

Firstly, advertising revenues are not high enough to allow Internet companies to be financially independent. The limited budgets of these companies, and the many bankruptcies in this sector, are exacerbating this trend because it is these same companies that are the biggest users of online advertising. For example, between 2000 and 2001, average expenditure on advertising (across all media) for promoting a website plummeted by 45%, from 950 million to around 500 million.

As a result, market participants are seeking to modify the economic models applied to their companies:

- some services that were previously free of charge are now offered on a paid-for basis. Examples include website listing, sending SMS messages via the Internet, and Yahoo! premium services (distribution of classified ads, additional e-mail space, online auctions, hosting of personal pages and website listing. But making the transition from free to

paid-for is a tricky exercise. A good example of the difficulties faced can be seen in Oreka. When this ISP dropped its free access in favour of a pay-as-you-go model, it lost nearly half of its subscribers;

- new services – such as downloading logos or mobile telephone ringtones – are generally fee-paying.

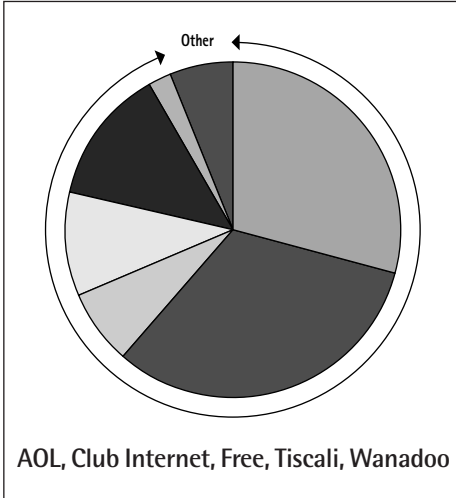
ISPs rely as much as possible on income from access, i.e. from telecoms rebates. While access prices had been falling steadily since late 1999, they finally levelled off and even began rising in September 2001. For example, Club Internet's rates rose by 20% with its "Full is Beautiful" range in September 2001. At the same time, to ensure greater loyalty and take full advantage of their customer base, the majority of ISPs are opting for flat-rate schemes over pay-as-you-go systems.

The sector has seen concentration in parallel with changes in billing structures. This development has been quite clear among ISPs, with Liberty Surf purchasing Freesbee, followed by Tiscali buying Liberty Surf, Infonie and World Online. By end-2001, 5 ISPs (AOL, Club Internet, Free, Tiscali, Wanadoo) accounted for 80% of active Internet subscribers.

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<sup>1</sup> Source IDATE.

Breakdown of volume of switched  
Internet traffic:  
5 ISPs account for 80% of switched traffic



Lastly, 2001 saw the rapid growth of high-speed Internet access, especially via ADSL<sup>1</sup>.

In addition, new modes of access give rise to economic models that contrast sharply with those seen at the beginning of the 'commercial' Internet era. Two examples can be used to illustrate this diversification: mobile online services are currently moving towards a premium-rate system (e.g. surcharges for SMS messages), whereas high-speed Internet suppliers derive their income mainly from access.

### C. High-speed access

As the Internet expands, users are becoming increasingly demanding in terms of service quality and comfort. The new services now available – downloading, streaming, on-line gaming, etc. – require high-speed or real-time transmission to function effectively. These are decisive factors governing the future success of high-speed access, not only for businesses but also for private users.

### 1. What is high-speed Internet access?

In terms of throughput, the definition of 'high speed' varies: while the International Telecommunications Union (ITU) has specified a speed of 2 Mbits/s, the Telecommunications Standards Advisory Council of Canada (TSACC) suggests setting the minimum threshold for high speed at 1.5 Mbits/s for residential users, 10 Mbits/s for organisations and 1 Gbit/s for hospitals. These thresholds are arbitrary.

In the near future, consumers will probably want to use their standard high-speed access to rapidly exchange the contents of a CD-ROM or DVD, send and receive multi-gigabyte files and watch live streamed video without a lengthy wait for the buffer memory to fill and with no deterioration in viewing quality.

In terms of services, high-speed access must offer the possibility of transferring large, multi-megabyte files (music, video clips, photos) and can include rapid – or even immediate – access to the Internet.

The fixed technologies for high-speed access include the digital subscriber line (DSL), which converts conventional subscriber lines into a high-speed access-ways, cable, fibre, wireless local loop (WLL) and satellite. These different technologies are complementary. High-speed access via mobile terminals will hinge upon the development of third-generation mobile networks, the so-called UMTS.

Only with widespread high-speed Internet access will it be possible to generate strong demand for innovative multimedia services that are both attractive for consumers and economically viable for content providers.

High-speed Internet access is not just an economic and social issue; it is also a political

<sup>1</sup> Asymmetric Digital Subscriber Line. See section on high-speed Internet access below.

objective. At a meeting of the interministerial committee on regional development<sup>1</sup> meeting in July 2001, the French government set itself the target of making 2-Mbit/s access available nationwide by 2005.

## 2. The growth of high-speed Internet access

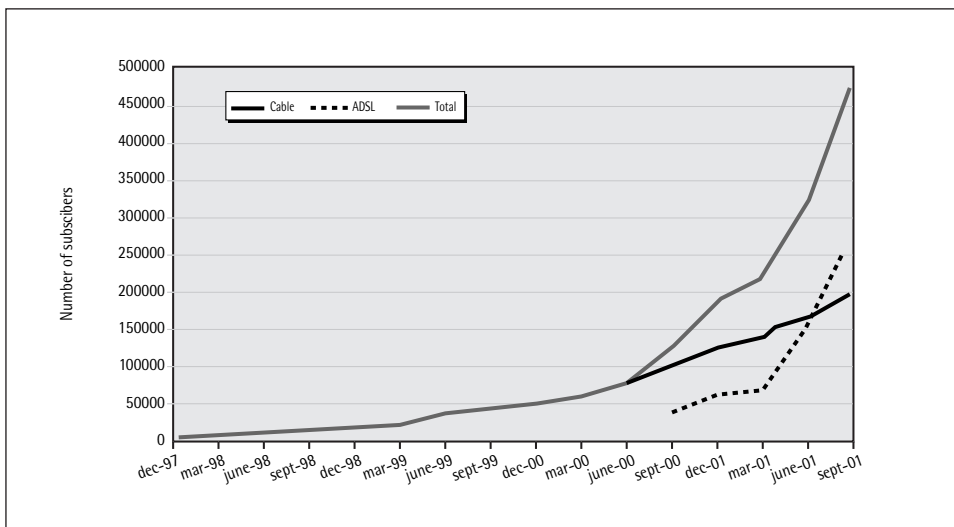
The market for high-speed services, ADSL in particular, grew rapidly in 2001. In just one year, the number of high-speed subscribers increased three-fold, from around 200,000 to 600,000. These subscribers now represent 10% of all active Internet access subscriptions, i.e., 13% of corporate and 4% of residential subscriptions. These developments are important for the Internet sector, since high-speed access offers a level of user comfort – efficient browsing and downloading, permanent connection – that should stimulate the growth of e-commerce and new services.

An analysis of trends in high-speed access subscription in 2001 reveals that growth was driven by both cable and ADSL technology. The number of ADSL subscribers rose from 70,000 to 400,000, outstripping the rise in the number of cable subscribers. There are around 200,000<sup>2</sup> Internet subscribers hooked up via cable, up 50% year-on-year.

In 2001 the number of ADSL subscribers overtook the number of cable subscribers. ADSL's faster start is mainly due to the fact that cable operators can market their services only in areas where operators have a presence. At the same time, France Télécom has modified its network in order to make its DSL offerings available to more than half of the population in France.

Turnover in the high-speed Internet access sector in 2001 stood at around 125m, with ADSL accounting for around 55% and cable 45%.

Growth of cable and ADSL in France



<sup>1</sup> Comité Interministériel d'Aménagement et de Développement du Territoire (CIADT).

<sup>2</sup> 188 000 subscribers as of 31 December 2001 according to AFORM.

In 2001 high-speed services were offered mainly by cable operators, the incumbent operator and alternative ISPs such as Club-Internet, Liberty Surf, 9 Telecom and Infonie. Offerings by ISPs are based on the collection and transmission of ADSL traffic by France Télécom (IP/ADSL contract). Approximately 1,000 business customers have offers based on the wireless local loop and satellite, although these are still marginal. The emergence of offerings based on the unbundling of France Télécom's local loop was hindered by the numerous operational and economic hurdles faced by the incumbent's rivals.

The initial offerings by wireless local loop operators emerged in 2001. Firstmark Télécommunications France was the first operator to launch its commercial service, followed by Altitude Télécom and Belgacom France. Late in the year, offerings by all wireless local loop operators were available in some 20 urban centres. These offerings include the wireless equivalent of leased lines (secure SDSLs), an intermediate step between DSL and fibre.

The development of high-speed access services by satellite also seems to be imminent: several licences have been granted to companies which plan to handle ISP traffic or traffic by high-bandwidth business customers, especially in areas where there is no alternative.

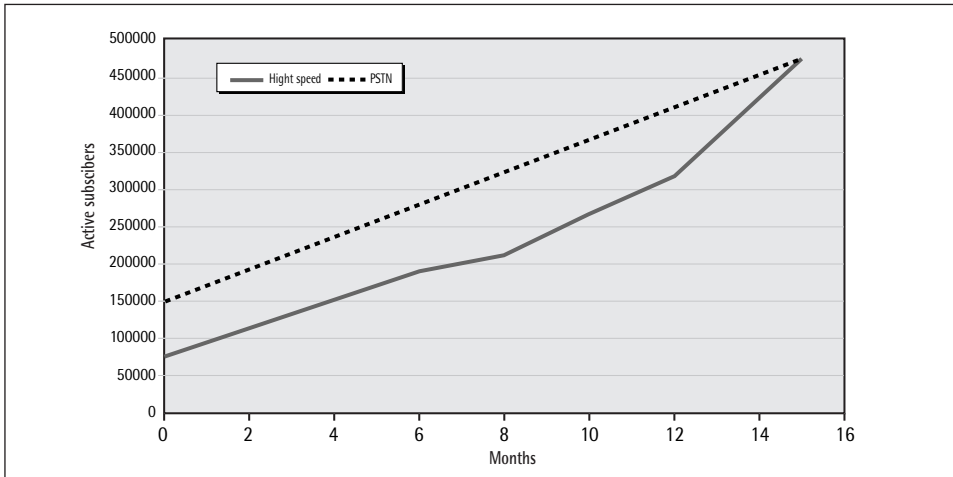
By the same token, there is growing interest in RLAN technology, especially following the development of offerings in other European countries such as Sweden. Radio Local Area Networks (RLANs) use frequencies which have not been specifically assigned to their users, so there is no guarantee of security and scrambling is not allowed. RLANs can potentially offer point-to-point or point-to-multipoint access services, and enable high-speed wireless communications between users.

With a view to examining the potential for using these frequencies to provide telecommunication services for the general public (similar efforts are also being made in other countries), ART launched a public consultation round in December 2001 on the provision of telecommunication services using frequencies not specifically assigned to their users in the 2.4 GHz and 5 GHz bands (RLAN).

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<sup>6</sup> Fournisseurs d'Accès à Internet.

### Roll-out curves for PSTN and high-speed access



Scenarios: PSTN roll-out September 1997; high-speed roll-out June 2000

This curve suggests that the roll-out of high-speed services was, at first, virtually identical to the launch of PSTN<sup>1</sup> access, but penetration started picking up steam in September 2001. It should be pointed out, however, that ADSL has a fast penetration rate, whereas in practice Wanadoo had a 90% market share in ADSL access by end-2001. The penetration rate should be even higher as more and more ISPs are able to effectively compete with Wanadoo's offerings. This is the focus of the IP/ADSL service which France Télécom offers ISPs. The terms and conditions of this offering must be further improved.

With 3% of households enjoying high-speed Internet access, France is near the European average of around 4%. However, while the number of high-speed subscribers grew sharply in 2001, the underlying competitive conditions were unsatisfactory. ART's objective in this area is to allow various high-speed offerings to emerge nationwide.

The table below shows a comparative estimate the number of subscribers in seven European countries at end-2001. The numbers are given in thousands.

End 12/01	DSL	Cable	Homes	%
Germany	2000	200	37900	5,80
France	500	200	23890	2,93
Spain	300	110	12130	3,38
UK	120	180	24000	1,25
Italy	500	0	21860	2,29
Netherlands	400	400	6780	11,80
Sweden	200	150	4000	8,75
Total	4020	1240	130560	4,03

Source : Idate

<sup>1</sup> Public switched telephone network

## **D. Convergence**

The mechanism known as convergence is creating an increasingly pronounced distinction between the digital networks and the services they carry. Networks are carrying an ever wider range of services, with the same networks now used for voice, data and video transmission. So rather than the traditional distinction between audiovisual and telecoms networks, the distinction is now between networks (or "pipes") and content.

The growing use of IP (Internet protocol) has contributed to this trend. IP is used to send all types of information, including voice traffic, through the networks. Its spectacular growth is a recent development, directly linked to the emergence of new associated technologies, the success of the Internet and the communication services that it provides. It reflects the trend of network convergence, and has wide-ranging implications – of a regulatory nature especially – which concern ART in particular.

### ***1. Technological convergence of networks***

In just a few years, the volume of traffic carried over IP networks has overtaken that of telephony. IP technology, which is now able to meet transmission constraints in real time, has gradually pushed back the technical and economic limits to its development. These developments can be seen in new convergent IP services incorporating voice or video transmission, and in the appearance of new players to provide these services.

The capacity of the IP networks to carry voice traffic does not necessarily mean an immediate migration from telephone networks to IP, or that ISPs will be competing directly with traditional operators on the telephony market. In fact, the lack of uniformity of IP networks means that packet-switching networks (IP

technology) cannot yet offer a telephone service of the same quality as conventional circuit-switched networks (the technology used in the PSTN). Furthermore, providing a Voice over IP service is no less expensive per se than providing a traditional telephone service. The added value of Voice over IP lies more in the provision of innovative IP services or IP applications integrating voice or video.

While operators are gradually using more IP infrastructure to carry telephone traffic, Voice over IP accounted for less than 10% of total telephone traffic in 2001, according to several estimates. In contrast, the convergence towards a single medium for all services – a movement that began in operators' long-distance networks – is picking up speed. This can be explained by the development of permanent, high-speed fixed and mobile IP connections up to the end-user, and the development of terminals suited to these new multimedia applications (modem VoDSL, PC+TV, etc.). New applications of IP networks incorporate voice transmission and give concrete shape to convergence: computer conferencing, unified instant messaging, virtual personal assistants, e-commerce applications, online games and so forth.

Accordingly, there is no doubt that conventional circuit-switched telecommunication networks will coexist with and to be interconnected to packet-switched IP infrastructure for many years to come.

The coexistence of these two types of networks, each having its own architecture and method of operation, has created the need for gateways between them. Coexistence requires interoperability solutions for communication between their respective terminals, thereby making it possible to interconnect different proprietary systems or to link the identifiers of different services.

## **2. ENUM protocol**

The development of the ENUM protocol is a significant example of technological convergence. To enable interoperability and address the close interdependence between circuit-switched and packet-switching networks, it is important to resolve numbering and naming issues. Such issues play a role in ensuring end-user transparency for communication between terminals in both types of network.

ENUM, devised in 2000 by the Internet Engineering Task Force (IETF)<sup>1</sup>, aims to establish a global numbering/addressing system to ensure that the telephone network numbering system corresponds to the Internet naming system.

### **a. The ENUM principle**

When making a call, a telephone network subscriber uses an E.164 number. The structure of this number may vary from country to country but it will fall within the guidelines set out in the international numbering plan defined and coordinated by ITU recommendation E.164. (The ITU is a UN intergovernmental body.)

To visit a website, an Internet user must connect to the host server, found on the Internet by means of an IP address. Normally, he or she uses a domain name corresponding to the numeric IP address. The domain name is easier to memorise than the IP address. For example, it is easier to remember 'www.art-telecom.fr' than '160.167.29.43'. Domain names are registered in a hierarchical database centralised on a root server located in the United States and distributed over servers around the world. This

system, dubbed Domain Name System (DNS), is managed by ICANN<sup>2</sup>, an American organisation which coordinates activities in the self-regulated private Internet sector.

The ENUM standard is a significant example of this technological convergence. ENUM is an address resolution and conversion system that uses the domain name system (DNS) to map telephone numbers compliant with recommendation E.164 to Web addresses (e-mail address, URL, IP address, etc), with orders of priority. In this way, phone numbers can be associated with IP network resources and services, addressable using the DNS system.

Now being finalised, this standard should simplify communication between phone and IP networks. It should also foster the emergence of new, truly convergent applications such as the use of a single number to replace an individual's multiple numbers and addresses or simplified Internet access from a mobile phone. The system will be fully transparent for the end user.

### **b. Technical implementation of ENUM**

ENUM consists in introducing telephone numbers into the DNS by putting each digit into a separate DNS zone, albeit one which is still linked to the 'e164.arpa' reference domain.

For example, in this system, the telephone number +33 1 40 20 51 51 would be transformed into domain 1.5.1.5.0.2.0.4.1.3.3.e164.arpa.

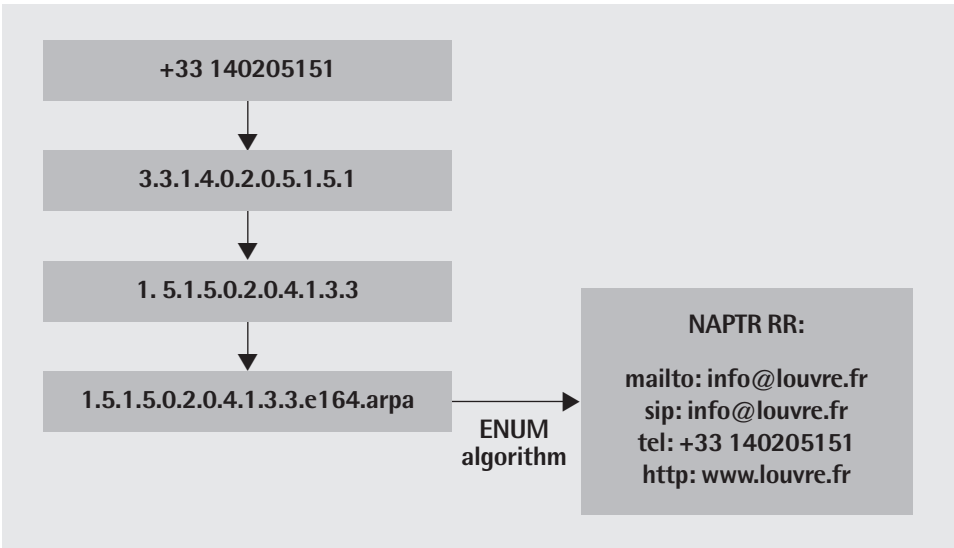
The diagram below presents, on the left, the principle for transforming an E.164 number

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<sup>1</sup> The Internet standardisation body. ENUM protocol is described in RFC 2916 of the IETF, which created it.

<sup>2</sup> Internet Corporation for Assignment of Names and Numbers.

into an Internet domain, and on the right the principle of how this ENUM domain name corresponds to the list of network service identifiers.

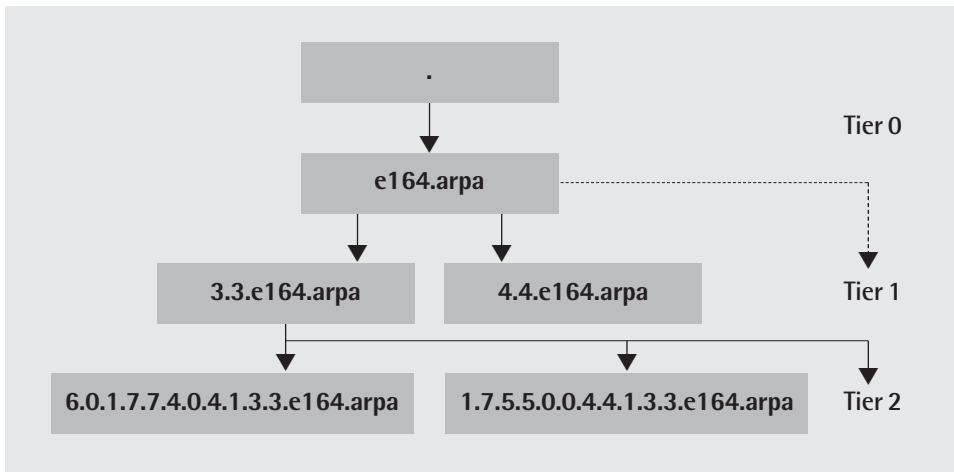


The insertion of telephone numbers into the DNS will follow a three-tiered hierarchical organisation. Tier 0 corresponds to the root domain 'e164.arpa' (or another one that has not yet been defined since the ITU member states have not yet reached agreement on its use). Tier 1 corresponds to the sub-domain linked to the country code. Tier 2 designates a

subscribers E.164 telephone number. Interrogating an ENUM domain name results in one or more network service identifiers which have been previously recorded in this database.

In other words, the DNS has a vast hierarchical database of E.164 telephone numbers, as set out in diagram below.





### c. The main challenges arising from ENUM

There is still uncertainty about the practical applications of this protocol and the commercial viability of such applications, especially since the conditions for its national and international implementation are still being worked out.

For the first time, the administrative implementation and organisation of the ENUM name database will make it necessary to mix the concepts of numbering and naming. The protocol lies at the dividing line between these two types resources whose methods of management, regulatory and economic environment differ so fundamentally.

The deregulation of the telecommunication market has given ENUM strategic importance, in particular with respect to access to end-customers. In each country, neutral regulatory bodies have been assigned the task of managing number resources. The ITU manages these resources internationally. These regulatory bodies are supposed to guarantee fairness and transparency in resource allocation procedures. However, the administration of the DNS is not free of either commercial interests, linked to the companies responsible for administering

the Tier 1 domain, or the influence of the US government, which still exerts political control over the DNS's authoritative root server.

Many technical and economic challenges arise in connection with ENUM. These are linked to consistency in inserting E.164 numbers into the DNS using the numbering plan, and to the competition that arises among service providers who will use access to the ENUM databases for applications based on this protocol.

Although confined to these areas, the questions raised by the implementation of ENUM do imply farther-reaching challenges. As they are specifically linked to the method of managing names on the Internet, these challenges are political in nature and international in scope.

### d. ENUM in France

#### • ART's public consultation of May 2001

ART, which is responsible for managing the national E.164 numbering plan, set out to raise the awareness of the parties concerned by ENUM, collect their opinions and define the recommendations to be implemented. On 23 May 2001, ART, together with the telecommu-

nications minister, launched a public consultation on the conditions for implementing the ENUM protocol in France.

By the time the consultation concluded on 12 June 2001, some 15 contributions had been submitted by operators, equipment suppliers, service providers, research institutes and consultancies. These contributions were instrumental in defining the main challenges involved in ENUM, and they set out a number of recommendations on how to implement the protocol.

### • The main findings of the consultation

First, the consultees said that they hoped the implementation of ENUM would not destabilise either the numbering plan or the Internet naming system already in place.

ENUM domain names are simply another way of representing a telephone number. Consequently, the choice of rules for managing ENUM domain names must comply with the regulatory obligations associated with telephone numbers and must be done in a way that is subordinate to the rules for allocating E.164 resources at all levels. More specifically, these allocation rules must comply with international and national numbering plans, and must ensure perfect correspondence between the allottee of the telephone number and the allottee of the associated ENUM domain name. To ensure such consistency, it would seem logical to subordinate the management of the ENUM system to the management of the E.164 numbering plan. Such a choice would mean giving the ITU a coordinating role to play in defining the rules for inserting and delegating subdomains

within this implementation process.

The findings of the consultation also highlighted the risk of a takeover of E.164 number resources. The majority of contributors felt that it was important for the ITU's authority to be asserted in an agreement recognised internationally by ICANN/ISOC<sup>1</sup> so as to ensure the management of the Tier 1 reference domain and to enjoy exclusive responsibility for the insertion of E.164 numbers. Such recognition is deemed to have priority relative to the choice of the Tier 0 domain. The use of a domain for which the ITU is responsible would indeed be a guarantee of neutrality and consistency in delegation.

The much debated choice of the 'e164.arpa' domain is not felt to be a major problem. The general position that emerges from the contributions is that there is no need to oppose the choice of this domain, provided that an agreement is officially reached between ICANN/ISOC and the ITU on the definition of rules applicable to all tiers, the delegation of subdomains and their management.

The contributions also emphasises that the insertion of subdomains corresponding to country codes at Tier 1 and the insertion of an E.164 number at Tier 2 must, in all cases, follow an 'opt-in' process<sup>2</sup>.

Lastly, the definition of roles and responsibilities at Tiers 1 and 2 is seen as being a matter for each country.

At Tier 2, the choice of entities to manage the databases of names associated with E.164 subscriber numbers, as well as the associated ser-

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1 Internet Society.

2 This term means that the allottee of the E.164 resource in question (country code at Tier 1, individual number at Tier 2) is entitled in all cases to request or refuse to have its resource included in the corresponding ENUM database. Its agreement must be obtained before any action is taken, such as the inclusion or removal of its resource from the database.

vice addresses, must make it possible – in addition to ensuring consistency with the national numbering plan – to establish competition between the various service providers who will use the ENUM protocol and access to these databases.

These entities may be, by definition, a telephone operator, a service provider or any other corporate body selected by the end-user of the ENUM service. However, a risk has been identified: competition between service providers is in jeopardy if this entity is linked to a service provider based on ENUM. It is also essential to grant authority to the telephone operator which manages these numbers during their insertion into the ENUM system, if only to validate the identity of the allottee of the number.

• **The creation of a working group following the consultation**

In order to extend the review of the conditions governing the implementation of ENUM in France – and in the light of the issues raised, specifically the definition of Tier 2 responsibilities – a working group was created in late August 2001 under the aegis of ART and the telecommunications minister.

The working group plays an advisory role in respect of the positions that ART can advocate within those international organisations that are working on implementing ENUM. It also helps inform the interested parties about the work in progress. In this connection, a review

of practices and services made possible by ENUM has been initiated in collaboration with Fondation Internet Nouvelle Génération (Next-Generation Internet Foundation, FING).

**e. International work on ENUM**

International discussions on the implementation of ENUM illustrate two different approaches, depending on whether they have their origins in the Internet sector or the telecommunications sector.

The Internet Architecture Board (IAB)<sup>1</sup>, which manages the Tier 1 '.arpa' domain, appointed RIPE NCC<sup>2</sup> as the technical manager of the 'e164.arpa' domain, giving it a procedure for delegating domains corresponding to country codes.

For its part, ITU-T<sup>3</sup> is working on drafting an EA-ENUM recommendation to define stringent procedures for delegating domains corresponding to country codes. However, the ITU was not given administrative authority over the management of the 'e164.arpa' domain, even though it is used for the implementation of ENUM.

The year 2002 should prove critical for the adoption of rules governing the implementation of ENUM. User confidence and the further development of ENUM applications will depend on these rules. Moreover, 2002 may also see the first tests in the implementation of the ENUM platform in France.

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1 Th IAB is the organisation that supervises the technical development of the Internet, specifically the work done by the IETF.

2 Organisation that manages IP addresses for Europe and the Middle East. This 'appointment' remains ambiguous for the following reasons:

1) the IAB has no legal existence (this body is merely an emanation of ICANN),  
2) the appointment was made for a limited period.

3 ITU sector responsible for standardisation issues.

## 2. A new economic situation

### A. The telecommunications market in 2001

In the last three years, the telecommunications market has seen double-digit growth, in both value and volume. This can be seen from the figures below, published by ART's market

observatory. They are broken down by market in Volume 2 of this report. The data for 2001 are the aggregate result of four quarterly surveys conducted by the market observatory in 2001. The last column of each table gives the growth rate in 2001.

#### 1. Employment

	1998	1999	2000	2001	Growth in 2001 (%)
Number of employees at 31/12	155,992	155,297	155,663	152,615	-2,0%

Licence-holding operators employed a total of 152,615 people on 31 December 2001. The slight decrease this year can be explained by non-replacement of retirees and non-renewal of fixed-term contracts; it does not therefore

result from redundancies. Note also that most employees are engineers and executives.

#### 2. Investment

€ million	1998	1999	2000	2001	Growth in 2001 (%)
Investment flows for the telecoms activity	5,538	5,909	7,854	7,176	-8,6%

Capital expenditure by operators was lower in 2001 than in 2000. However, this decrease is relative, since 2000 was a period of major deployment involving large-scale investment.

In 2001, expenditure came back to a more customary level owing to financial rationalisation and the bursting of the speculative bubble.

### 3. The end-user market

#### Change in revenues

€ million	1998	1999	2000	2001	Growth in 2001 (%)
Fixed telephony	14,931	15,063	14,631	14,438	-1,3%
Internet	162	344	731	1,160	+58,8%
Mobile services	4,042	5,658	7,789	9,877	+26,8%
Total telephony (fixed and mobile)	19,136	21,065	23,151	25,475	+10,0%
Advanced services	1,370	1,648	1,842	1,795	-2,6%
Leased lines	1,449	1,469	2,011	2,345	+16,6%
Data transport	378	404	530	667	+25,7%
Information and other income	557	584	320	342	+6,9%
Terminals	1,229	1,358	1,760	2,114	+20,1%
Hosting and call centre management	nd	10	20	45	+128,8%
All telecommunications services excluding interconnection	23,957	26,537	29,633	32,782	+10,6%

#### Change in volume

€ million	1998	1999	2000	2001	Growth in 2001 (%)
Fixed telephony	124,898	124,029	121,950	118,622	-2,7%
Internet	4,976	12,617	34,016	72,728	113,8%
Mobile Telephony	10,065	20,695	35,524	44,253	24,6%
Total telephony and Internet	139,939	157,341	191,490	235,602	23,0%

Telecommunications revenues continued to grow (10% in value and 23% in volume), despite unfavourable market conditions. As in 2000, sector growth was driven by the Internet and mobile telephony, with an increase in revenues (respectively 58.8% and 26.8% over one year) and volumes (113.8% and 24.6%). Telephony has been contracting slightly since 1999. This may be because users are opting for mobile telephony and the Internet to replace fixed communications. Residential users appear to be moving towards these new forms of communication.

#### B. The state of competition

Since 1998, competition has become a reality in France. This is reflected in the number of operators present on the market and also in the market share held by competitors:

- On 31 December 2001, 113 operators held licences, though the wave of consolidations initiated in 2000 reduced the number of players in 2001 (from 131 to 113).
- The French market is feeling the full effects of competition, with new entrants

representing:

- 37 to 38% of the market for long-distance and international calls;
- 2% of the local communications market, prior to implementation of the decision extending carrier selection to local calls. Following its entry into force, the market share of new entrants rose sharply in early 2002.

The reality of competition and its tangible effects for consumers are visible on all segments of the telecoms market.

### **1. Fixed telephony**

The opening of telephone services to competition gathered strong momentum as a result of the carrier selection mechanism, which was set up in early 1998 on the basis of ART's decisions taken in 1997.

- 1 January 1998: selection of the carrier on a call-by-call basis and allocation of 1-digit (E) or 4-digit (16 XY) selection prefixes. Given the scarcity of numbering resources (selection prefix with just 1 digit), operators holding an 'E' authorisation had to undertake, prior to the issue of the authorisation, to deploy their network across the entirety of mainland France;

- interconnection of the network of alternative operators with the general network of France Télécom.

This took place at two levels:

- at the level of the operator connection points. Since their geographical distribution allows an operator interconnected to 18 operator connection points to serve its customers across mainland France, the connection to each operator connection point allows an operator to handle calls placed by some 2 million subscribers;

- at the level of the local exchange. During the reference years, there were around 800 local exchanges distributed across mainland France. Interconnection to a local exchange makes it possible to reach around 40,000 subscribers. The deployment of an operator's network up to the local exchange means that less use is made of the France Télécom network. While this requires greater investment, it does enable lower interconnection charges;

- definition of the local sorting zone. The local sorting zone corresponds to each département, (administrative area) except in the greater Paris area and in Corsica, where two départements are combined. The local loop operator, in this case France Télécom, only routes to the operator selected by the customer those calls to called parties outside the local sorting zone. The local loop operator itself maintains and routes calls within the local sorting zone, irrespective of the numbering sequence dialled by the caller. Sorting meets the need for efficient routing of local calls. It makes it possible to avoid transmitting to a carrier a call made by a consumer who dials the wrong service code. Without this sorting process, the carrier would have had to pay for two interconnections, even though it did not route the call over its network.

The effect of these decisions was to open the national and international long-distance segment of the fixed telephony market to competition beginning in early 1998.

The carrier selection mechanism was subsequently extended in two areas in 2000:

- the launch of preselection on 17 January 2000. The mechanism is identical for operators holding an 'E' prefix and those holding a '16 XY' prefix;
- on 1 November 2000, extension of the car-

rier selection process to include fixed-to-mobile calls (selection on a call-by-call basis and preselection).

Lastly, plans dating from 2000 to extend this mechanism further by eliminating the local sorting zone were implemented in January 2002. This means that carrier selection and preselection can be extended to include local calls. Operators can now route calls made within the département by their customers. This kind of development has now become economically viable for those operators who have deployed their network so that it can be interconnected to the local France Télécom exchanges rather than to operator connection points.

One specific feature worth noting is the public payphone market, where France Télécom still holds the monopoly on installing public payphones along public thoroughfares<sup>1</sup>. Any other legal entity may operate this line of business on public land, apart from on roads and in private areas.

## **2. Value-added services**

So-called 'advanced' or 'value-added' services may be provided by either the local loop operators or by interconnection mechanisms. There are three main types of advanced or value-added service: those that are free of charge for the caller ('freephone' numbers), those where the costs are shared between the caller and the called party, and those where the revenues are shared between the telecommunications operator and the service provider. These services are mainly operated by companies or administrative departments. They target the general public and are used either to provide information or for marketing and commercial purposes.

The provision of these kinds of services by operators other than France Télécom was made possible by several actions taken by ART:

- the opening-up of ranges of numbers within the numbering plan dedicated to these services (known as non-geographical fixed numbers): 08 AB PQ MC DU and 3BPQ;
- the portability of numbers in 08 AB PQ MC DU range; in view of the aim of these services (provision of public information), it is essential that the company or department providing the information service should be able to retain its number - even if they change operators - so that users do not have to learn a new number. Any change of number is a hindrance to the potential customer changing operators;
- the inclusion in France Télécom's interconnection offering for 1999 of an interconnection package for so-called 'special numbers', including third-party billing for shared-revenue numbers. In fact, for this type of service the low level of billable amounts and the occasional nature of the use made of this service by customers does not financially justify direct billing of the customer by the service provider, especially in view of the cost of issuing an invoice. On 18 May 2001, ART decided in favour of third-party billing for shared-revenue services in connection with a decision settling a dispute between France Télécom and 9 Télécom Réseau.

## **3. Mobile telephony**

With regard to mobile telephony, three main operators are present on the market: Orange<sup>2</sup>, SFR and Bouygues Télécom.

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<sup>1</sup> Articles L. 33-3 and L. 35-1 of the Post and Telecommunications Code.

<sup>2</sup> France Télécom Mobiles became Orange in June 2001.

Dolphin Télécom, a new operator providing mobile services for the public, received authorisation in 2000. This company, which operates TETRA, a digital network, had until that time been authorised to operate an independent network. This authorisation was expanded in connection with an L. 33-1 authorisation as provided for under the Post and Telecommunications Code.

Regulatory decisions concerning the GSM mobile networks focused on call termination charges on mobile networks for calls from fixed networks. These charges are the main component in the price of fixed-to-mobile calls.

In 1999, ART informed France Télécom Mobiles and SFR that they were considered to be operators with significant market power ("SMP operators") under the Interconnection directive. As a result, these two operators were required to adopt cost-oriented pricing for interconnection, which had the direct effect of bringing about an initial reduction of some 20% in the prices of fixed-to-mobile calls. This was followed by the three operators in late 1999. Two events that occurred simultaneously in November 2000 paved the way for increased competition in this market segment during 2001:

- Whereas, until that time, retail tariffs for fixed-to-mobile calls were set by the mobile operators and billed on a third-party basis by France Télécom, these tariffs are now determined by the fixed operators handling outgoing calls, who pay the mobile operator an interconnection charge for call termination.
- Whereas, until that time, only France Télécom was capable of routing fixed calls to mobile numbers<sup>1</sup>, the expansion of the carrier's mechanism to include fixed-to-mobile calls made possible the growth in the num-

ber of offerors, thus encouraging a reduction in prices and the commercial diversification of offerings.

In February 2001, France Télécom and SFR lowered their call termination prices by around 15%, in accordance with their obligation to gear prices to costs. Bouygues Télécom, which is not bound by this obligation, cut its prices accordingly.

In November 2001, ART decided on a cut of nearly 40% implemented over three years in the call termination charges on the mobile networks of SMP operators, i.e. Orange and SFR. The cut was set at 15% from 2001 to 2002, 15% from 2002 to 2003 and, finally, 12.5% from 2003 to 2004.

ART also endeavoured to introduce third-generation mobile services (UMTS) to France. Following a public consultation in 1999, ART opted for a 'beauty contest' to select candidates. Given the deteriorating financial situation and the amounts paid in some European countries for licences, France was unable to award the four available licences during the first call for applications, which ended on 31 May 2001. Two operators, Orange and SFR, won licences in the first round. Following the government's announcement that it was adjusting the financial conditions for UMTS in the autumn, ART prepared a second call for applications, launched on 29 December 2001, for two licences. The results are to be published by 30 September 2002.

#### **4. Internet access**

At 31 December 2001, Internet access in France represents:

- 7.1 million residential subscribers<sup>2</sup>,

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1 Apart from the marginal case of short number rerouting (e.g. 3B PQ)

2 Source: AFA (Association des fournisseurs d'Accès à Internet, French ISP association)



- 15.7 million users at the end of 2001, up by 26% in the fourth quarter<sup>1</sup>,
- More than two-fold annual growth in Internet traffic over the last three years.

Though the word "Internet" does not appear in legislation, it is an area of daily concern for ART. Two categories of player are present on the Internet access market: access providers (non-regulated market) and operators. There are two distinct market sectors: low-speed access by the switched network and high-speed access.

#### **a. low-speed access via the switched network**

Low-speed access via the telephone network accounted for 91.5% of residential subscribers as of 31 December 2001<sup>2</sup>.

Historically, Internet access developed on the basis of the telephone service as defined in the Post and Telecommunications Code: communications between Internet users and their service providers were identical to 'voice' phone calls from the technical point of view. The prices were also the same as those for local phone calls, or long-distance calls, where appropriate.

The situation is different today: technological developments have made it possible to improve network architecture, specifically by developing gateways to the IP network (Network Attached Storage, NAS). These gateways are located as close as possible to Internet users. For Internet access under this architecture, the use of the incumbent operator's switched phone network is confined to those network components located between the telephone service subscriber and interconnection points. From these interconnection points, other operators are able to operate to complete the routing of Internet communications by converting protocols, where necessary (specifically the transition to IP mode).

ART initially encouraged flat-rate offerings, and managed to achieve a consensus on this among all the relevant parties. This led to the emergence of the first offerings in September 1999. ART also facilitated the implementation of an interconnection model – indirect interconnection – geared to Internet traffic collection from France Télécom's local network. To this end, in 2000 ART included this kind of offering in France Télécom's standard interconnection offer. This model encourages the development of flat-rate schemes. Furthermore, ART endeavours each year to seek out a cut in interconnection tariffs for Internet access communications offered by France Télécom in its standard interconnection offer.

In 2000, some ISPs launched so-called 'unmetered' flat-rate access. In this system, Internet users pay a fixed subscription charge for Internet access and are then free to remain online as long as they wish. The charge varied between FF 100 and FF 300 per month. In some cases there was a special clause requiring a minimum subscription period. Most of these flat-rate offers were withdrawn within a few months because the ISPs were unable to make them profitable. Approached by several players in September 2000, ART looked into a flat-rate interconnection offering for the collection of Internet traffic from France Télécom's network. The availability of this kind of offer should enable the operators to offer ISPs flat-rate collection schemes, meaning that the ISPs can offer their customers attractively priced flat-rate packages, irrespective of the number and duration of connections. This new way of pricing for the collection networks may lead to the emergence of tariff schemes that encourage wider use of the Internet, thereby contributing to the development of the information society.

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<sup>1</sup> Source: Médiamétrie

<sup>2</sup> Source: AFA.

In February 2001, France Télécom submitted its first flat-rate interconnection offer (at the local exchange level) to ART. France Télécom sent its second offer, this time for transit switches, to ART in spring 2001. The ensuing talks led to significant improvements in the technical conditions of the offer. Both offers were made available on 1 September 2001. The talks surrounding approval of the 2002 interconnection offering led to significant improvements in the technical conditions and tariffs of these services. The conditions for flat-rate offers included in the standard interconnection offer for 2002 are among the most advantageous in Europe.

#### **b. High-speed access**

Around 600,000 residential subscribers, representing 8.5% of residential subscriptions, had high-speed access on 31 December 2001<sup>1</sup>.

The French system is based on competition between operators as well as on diverse and complementary technologies. Several high-speed Internet access technologies have been developed in recent years, namely cable networks, wireless local loop and ADSL. ART has contributed to their deployment.

##### **• Internet access via the cable networks**

The networks involved in the National Cable Plan found themselves in an unusual situation, in which commercial operations were handled by a cable operator (Lyonnaise Communications, Paris TV Câble and NC Numéricâble) while the networks were owned by France Télécom. This situation resulted in several disputes between these companies about the provision of telecommunications services over cable networks.

ART, which is empowered to settle such dis-

putes, was required to hand down several decisions relating to both the technical and financial conditions governing the supply of telephone services and the provision of Internet access services over the cable network in Paris and certain networks outside Paris. ART issued two decisions settling a dispute between France Télécom and Lyonnaise Câble, and between France Télécom and Numéricâble. These decisions, taken in 1997 and 1998, opened the door to supplying Internet access services (as well as telephone services) over cable networks.

The existing cable networks have considerable potential. At their current rate of growth, they could enable more than eight million French homes to access cable-delivered services. At the end of the first quarter of 2001, 3.1 million homes were subscribed to at least one of the services offered over these networks.

Work is under way to upgrade these networks to supply telecommunications services, thereby paving the way for growth in this mode of access to high-speed services. However, high-speed Internet access is still an emerging and not particularly competitive market.

##### **• The wireless local loop**

The wireless local loop (WLL) is an especially attractive technology for Internet access in terms of tariffs for speeds ranging from 128 kbit/s to 2 Mbit/s. It is targeted mainly at small and medium-sized businesses as well as territorial authorities. Following a selection procedure run by ART in 2000, France is today one of the few countries where WLL technology is being effectively deployed, despite the poor economic climate. Commercial offerings have been launched in around 30 urban areas.

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<sup>1</sup> Source: AFA.

- **Internet access using xDSL technologies, particularly ADSL**

xDSL technologies deliver high-speed Internet access to the vast majority of telephone subscribers; they also have significant growth potential because they are easy to deploy over conventional telephone lines. ADSL, in particular, offers greater potential than cable from the geographical point of view, since cable is limited to urban areas. ADSL has the long-term potential to offer broad coverage, except in cases where telephone lines are too long. Accordingly, ADSL is a critical technology in the development of Internet access for the general public.

Where competition is concerned, the growth of ADSL in an open market context calls for particular vigilance by regulators to ensure that the incumbent operator does not use its quasi-monopoly on the local loop – a position linked to the fact that the incumbent owns the access infrastructure – to engage in behaviour that would hinder emerging competition on the ADSL market.

Since 1998 ART has been working to encourage the development of ADSL in a competitive environment, thereby enabling all Internet service providers and operators to offer ADSL services. The growing number of offers expected must lead to a wide range of packages, which in turn encourages falling prices for consumers in the medium term.

Analysing competition on the ADSL market implies drawing a distinction between the three segments that make up the service supply chain:

- access itself, for which France Télécom is remunerated via its customers through their subscription to the Netissimo service.

The establishment of competition on this segment assumed the actual unbundling of France Télécom's local loop and the deployment by operators of their networks up France Télécom's distribution frames;

- the transmission of ADSL traffic, still handled almost exclusively by France Télécom, which has so far been the only operator able to offer ISPs collection services. Third-party operators will ultimately be present in this intermediary segment, as a complement to the unbundling process, via an access offering in asynchronous transfer mode (ATM);

- the supply of ADSL services, a segment still largely dominated by Wanadoo, even though different ISPs are able to offer subscriptions by using France Télécom's traffic collection service. However, at this stage, these ISPs are unable to differentiate themselves from France Télécom in the services they offer their own customers, especially with respect to service speed and quality. They are still reselling the services provided by France Télécom.

France Télécom has several packages for players wishing to offer services on the ADSL market: offerings for ISPs; an intermediate offering for operators at the level of the ATM networks; and unbundling offers at the level of copper pair that serves the customer. However, France Télécom still has a virtual monopoly on this market. Coordinating these offerings so that all players can operate under economically viable conditions is a major challenge for the development of high-speed Internet access in France. Through the decisions it takes, ART endeavours to foster effective competition across all segments of the service supply chain.

## 5. Interconnection

The provision of services to end customers is based on the existence of an intermediary market, or interconnection services market, which allows operators to ensure that their services are interoperable.

Originally, interconnection services were provided exclusively by France Télécom to its competitor. Today, France Télécom's interconnection services continue to account for the bulk of services on this market, thereby requiring an annual review of interconnection tariffs.

However, some operators have deployed alternative networks across mainland France, enabling players active on the retail market (national and international calls, Internet access communications for ISPs and communications between fixed and mobile networks, in particular call from mobiles networks to fixed networks) to have access to offerings other than those of France Télécom on the interconnection services market. These operators have the possibility of buying intra-local exchange capacity from France Télécom and then reselling switched minutes at regional or at national level. In fact, Télécom Développement announced that it had sold nearly 17 billion minutes of single-transit in 2000, compared to 50 billion sold by France Télécom. These operators also sell colocation services or transmission capacity between the France Télécom infrastructure (switches and distribution frames) and the points of presence of client-operators. These services compete with the colocation offerings and the connection links in the standard interconnection offer.

### a. France Télécom, supplier of interconnection services

With its dense and far-reaching network, France Télécom has played a leading role on the interconnection market. During the first few years of opening to competition, alternative operators were generally in the midst of deploying their own networks and were generally unable to route end-to-end calls. They had to make partial use of the France Télécom network to collect and terminate their calls.

France Télécom's interconnection offering – the main services of which are set out in a standard offer (or "catalogue"), approved every year by ART – played a formative role. The offering was crucial in two ways:

- the costs borne by the new entrants: as most of them do not have their own network, costs arising from the use of interconnection services account for a major proportion of all of the charges borne by a new entrant;
- new entrants' policies on investment and on network deployment from a make-or-buy perspective. The operator must opt for either interconnection as close as possible to the subscriber, among the 800 local exchanges<sup>1</sup>, or interconnection that is less costly in terms of own investment, to the operator connection points<sup>2</sup> allowing it to attain 2 million subscribers in single-transit mode or all of mainland France in double-transit mode.

Major changes were made in the interconnection services offered by France Télécom in the period 1998-2001. With regard to

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1 The switch to which the customer is directly linked.

2 These are the operator interconnection points located at the same level as the transit switches, i.e. further up the network than local exchanges.

tariffs for telephone traffic routing services, the average price per minute collected or terminated at the local exchange fell by 37.6% between 1998 and 2001; the average price per minute collected or terminated at the operator connection point in single-transit mode dropped by 46%. On average, interconnection tariffs for the telephone service dropped by some 40% from 1998 to 2001, leading to changes in retail prices. The interconnection tariffs for Internet access also dropped considerably, particularly in late 1999 with the introduction of a night-time tariff, and especially in late 2001 with the launch of a flat-rate interconnection offering.

The offering has also grown over the years, with new services (third-party collection for special numbers, indirect interconnection for the Internet, third-party billing for shared-revenue services, etc.). With regard to France Télécom's Internet access service, the developments have made it possible to reduce the bills of operators corresponding to the colocation of their equipment or to the purchase of connection links from France Télécom.

The structure of interconnection traffic also evolved during the period 1998-2000. In 1998 the operators, most of which were connected to operator connection points, mainly used the single and double-transit mode services. The operators then gradually deployed their networks: intra-local exchange developed in this way, accounting for around 20% of traffic in 2000, compared to 80% for single-transit mode, with double-transit mode representing a marginal share.

The development of France Télécom's offering during this period made it possible to

reduce operators' costs via tariff cuts and to encourage investment in view of the significant growth in local exchange links.

#### **b. Interconnection services provided by other operators**

Operators that deployed their own networks were able to offer other operators services equivalent to France Télécom's interconnection services. Consequently, some interconnection markets opened up to competition, in particular:

- the international interconnection market: an operator which has a network in several countries or which has signed agreements with its foreign counterparts is able to offer call collection or termination services in foreign countries;
- the double-transit mode market: an interconnection operator at the level of France Télécom's transit switches can offer collection services across mainland France by billing its customers the cost of France Télécom's single-transit mode as well as transit over its own network.

### **6. Lower prices**

Market opening over the last five years has brought down consumer prices in all telecommunications market segments.

#### **a. Fixed telephony prices**

On the basis of consumption baskets defined by ART, France Télécom's national call charges fell by around 60% over six years (1996-2001), both for business and residential users. The price of local calls fell by 11% for households and 14% for businesses. The

fact that the average phone bill has decreased by only 10% and 28% respectively, is mainly the consequence of specific decisions to increase the France Télécom subscription charge.

Over the last three years (1999-2001), the average price of long-distance calls has fallen:

- by 26.8% for France Télécom;
- by 35.7% for France Télécom's main competitors.

#### **b. Mobile telephony prices**

Prices for calls from mobile phones levelled off following a significant price drop between the start of 1998 and the start of 1999.

Judging by the average of the best tariff schemes offered by mobile operators, mobile tariffs saw significant reductions from 1998 to 2001 for the four baskets defined by ART<sup>1</sup>.

Prices fell:

- 29.7% for 30 minutes of calls each month;
- 11.6% for 1 hour of calls each month;
- 20.9% for 2 hours of calls each month;
- 15.7% for 3 hours of calls each month.

In addition, ART's actions helped reduce fixed-to-mobile prices by some 40% during the period 1999-2000. A 40% cut in interconnection tariffs for these calls is planned for the period 2001-2004.

#### **c. Internet access prices**

Between January 1999 and December 2001, the average price of Internet access dropped sharply:

- by around 65% for short monthly connection times (between 3 and 10 hours);
- by around 75% for intermediate monthly connection times (between 15 and 30 hours);
- by around 50% for long monthly connection times (between 40 and 100 hours).

For short and medium connection times, prices began levelling off in spring 2001. Prices for long durations plummeted until spring 2001, and then rose slightly beginning in the second half of 2001 owing to the disappearance of unmetered flat-rate schemes.

#### **d. Interconnection tariffs**

From 1998 to 2002 interconnection tariffs fell by around 40%, thereby encouraging reductions in retail prices.

### **7. Assessing competition on the markets**

On 5 October 2001 ART adopted a decision<sup>2</sup> launching a series of surveys into the competitive situation of certain segments of the market which it identified with a view to gauging the scope of competition on these markets.

This was not a new approach per se, since ART naturally takes the degree of competition into consideration in its analyses and in its regulations. Nevertheless, ART sought to make its analyses more systematic and to publicise them. It also did this with a view to the future regulatory framework emerging from the directives adopted on 7 March 2002.

Three markets in particular were initially chosen by ART in connection with this decision:

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<sup>1</sup> 30 minutes, 1 hour, 2 hours and 3 hours per month.

<sup>2</sup> Decision No. 01-898 of 5 October 2001 on conducting surveys into the competitive situation on the communications markets, published in the Official Journal of 28 February 2002.

- the Internet collection market, which is experiencing significant quantitative growth and on which several major players are positioned. Today, changes are expected, especially in connection with the implementation of flat-rate interconnection and collection offers. In this regard, ART deemed it advisable to carry out a general review of this market.
- the fibre optic infrastructure market. This mainly involves updating a review carried out by ART in 2000, pursuant to a request by France Télécom to remove some of these services from the scope of tariff approval. The role of this market is essential in developing local high-speed infrastructure and justifies a fresh review.
- the interconnection market: several operators have taken up positions on the interconnection market and are competing with France Télécom for interconnection services. This measured review of the interconnection market also aims to clarify the discussion on implementing the price cap for interconnection tariffs.

Unlike other surveys carried out by ART (especially statistical surveys and the annual survey on SMP operators), these surveys were streamlined and took the form of direct interviews in the field. Their purpose was to pave the way for both quantitative and, more importantly, qualitative analyses.

The surveys took place over a period of three months, after which time a report was drawn up on each of the markets. The report was intended mainly for ART. However, with a view to keeping the relevant parties informed, ART is publishing the main conclusions in Volume 2 of this report.

ART will also draft a comprehensive assessment and forward it to the relevant players in the sector. The assessment will cover the situation on these markets and the lessons learned by ART in terms of regulatory matters, as well as the method, relevance and advisability of extending this procedure to include other market segments.

## C. European comparisons

### 1. Growth indicators (1999–2001)

#### a. Market growth in value terms (1999–2001)

##### • All markets (in € billion)

	1999	2000	2001	Change (1999–2001)
Austria	3.3	4.6	5.1	+54.5
Belgium	4.6	5.1	5.6	+21.7%
Denmark	3	3.4	3.6	+20%
Finland	2.3	2.8	2.8	+21.7%
France	26	29.5	34.3	+31.9%
Germany	36.2	41.9	46.6	+27.8%
Greece	3.8	4.3	5	+31.5%
Ireland	2.2	2.3	2.7	+22.7%
Italy	25.2	29	32.3	+28.2%
Luxembourg	0.2	0.3	0.3	+50%
Netherlands	8.1	9.2	10.8	+33%
Portugal	3	4	4.5	+50%
Spain	11.3	18.7	22.8	+101.7%
Sweden	4.6	5	5.3	+15.2%
United Kingdom	27.6	30.4	36	+30.4%
Whole EU	161.3	190.7	218	+35.1%

Source : EITO (European Information Technology Observatory)

##### • Fixed telephony (in € billion)

	1999	2000	2001	Change (1999–2001)
Austria	2.2	2.3	2.3	+4.5%
Belgium	2.7	2.7	2.8	+3.7%
Denmark	1.9	1.9	1.9	-
Finland	1.1	1.1	1.1	-
France	16.7	17.4	17.9	+7.2%
Germany	24.8	25.6	26.5	+6.9%
Greece	2.7	2.7	2.7	-
Ireland	1.6	1.6	1.6	-
Italy	14.3	14.7	14.8	+3.5%
Luxembourg	0.17	0.2	0.15	-11.7%
Netherlands	5	5	5.2	+4%
Portugal	2.1	2.2	2.2	+4.8%
Spain	7.5	10.4	10.5	+40%
Sweden	2.7	2.6	2.8	+3.7%
United Kingdom	15.8	16.4	17.5	+10.8%
Whole EU	101.1	107	110	+8.8%

Source : EITO (European Information Technology Observatory)



• Mobile services (in € billion)

	1999	2000	2001	Change (1999–2001)
Austria	0.6	1.8	2.3	+283.3%
Belgium	1	1.4	2.1	+110%
Denmark	0.7	1	1.3	+85.7%
Finland	0.8	1.3	1.3	+62.5%
France	4.7	7.3	10.9	+131.9%
Germany	5.5	10.3	14	+154.5%
Greece	1	1.5	2.1	+110%
Ireland	0.5	0.5	1	+100%
Italy	8.4	11.5	14.7	+75%
Luxembourg	0.06	0.1	0.1	+66.6%
Netherlands	2	2.9	4.6	+130%
Portugal	0.7	1.5	2	+185.7%
Spain	2.6	6.9	10.9	+319.2%
Sweden	1.4	1.8	2	+42.9%
United Kingdom	5.9	7.8	12.6	+113.6%
Whole EU	35.8	57.8	82	+129.1%

Source : EITO (European Information Technology Observatory)

• Leased lines and data transmission (in € billion)

	1999	2000	2001	Change (1999–2001)
Austria	0.4	0.49	0.4	-
Belgium	0.8	1	0.8	-
Denmark	0.4	0.45	0.4	-
Finland	0.4	0.38	0.4	-
France	4.6	4.8	5.5	+19.5%
Germany	5.9	5.9	6.1	+3.4%
Greece	0.1	0.15	0.2	+50%
Ireland	0.2	0.16	0.2	-
Italy	2.5	2.8	2.8	+12%
Luxembourg	0.05	0.06	0.05	-
Netherlands	1.1	1.3	1	-9%
Portugal	0.2	0.23	0.3	+50%
Spain	1.1	1.4	1.4	+27.2%
Sweden	0.5	0.53	0.5	-
United Kingdom	5.9	6.2	5.9	-
Whole EU	24.3	25.9	26	+7%

Source : EITO (European Information Technology Observatory)

**b. Other growth indicators**

• **Number of fixed lines per 100 inhabitants**

	August 1999	August 2000	August 2001	Change (1999-2001)
Austria	49.5	52.2	54	+9%
Belgium	49.8	52	56	+12.4%
Denmark	66.2	70.0	75	+13.3%
Finland	55.7	60	66	+18.5%
France	58.1	61	63	+8.4%
Germany	57.4	60	65	+12.6%
Greece	53.3	57	61	+14.5%
Ireland	42.7	47	52	+21.8%
Italy	45.3	50	54	+19.2%
Luxembourg	71.0	80	85	+19.7%
Netherlands	59.2	65	73	+23.3%
Portugal	42.1	43	44	+4.5%
Spain	45.8	46.5	48	+4.8%
Sweden	68.5	69	70	+2.2%
United Kingdom	55.5	57	59	+6.3%

Source : EITO (European Information Technology Observatory)

• **Number of mobile subscribers per 100 inhabitants**

	August 1999	August 2000	August 2001	Change (1999-2001)
Austria	41	66	82	+100%
Belgium	23	39	68	+195%
Denmark	46	61	75	+63%
Finland	61	70	79	+29.6%
France	26	43	59	+127%
Germany	22	44	68	+209%
Greece	30	49	68	+126%
Ireland	30	51	68	+126%
Italy	44	63	82	+86%
Luxembourg	41	59	83	+102%
Netherlands	34	57	73	+115%
Portugal	38	54	75	+97%
Spain	27	53	68	+152%
Sweden	53	66	76	+43%
United Kingdom	30	54	72	+140%

Source : EITO (European Information Technology Observatory)

• Number of Internet subscribers/users per 100 inhabitants

	August 1999*	August 2000**	August 2001**	Change (1999–2001)
Austria	13.6	31	46	+238%
Belgium	3	26	33	+1,000%
Denmark	14	55	58	+314%
Finland	11.4	36	48	+321%
France	6	19	27	+350%
Germany	11	23	38	+245%
Greece	1.4	5	12	+757%
Ireland	13	27	46	+254%
Italy	4.4	18	33	+650%
Luxembourg	9	32	42	+366%
Netherlands	6.3	40	58	+820%
Portugal	2	12	23	+1,050%
Spain	1.4	11	22	+1,471%
Sweden	16	58	62	+288%
United Kingdom	18	32	47	+161%

Source : EITO (European Information Technology Observatory). \* Number of Internet subscribers

\*\* Number of Internet users

## 2. Competition indicators

### a. Market share of the incumbent operator

• Incumbent operator's market share in fixed telephony

#### Market share in local call volumes

	August 1999	August 2000	August 2001
Austria	96%	83%	62%
Belgium	97%	97%	97%
Denmark*	95%	80%	63%
Finland	100%	100%	98%
France	98%	98%	98%
Germany	98%	98%	98%
Greece	100%	100%	100%
Ireland	100%	100%	98%
Italy	100%	98%	98%
Luxembourg	100%	100%	97%
Netherlands	99%	89%	98%
Portugal	100%	100%	100%
Spain	100%	98%	98%
Sweden	98%	90%	87%
United Kingdom	82%	72%	64%

Source : Commission européenne. \* No distinction drawn between local calls and national long-distance calls

**Market share in national long-distance call volumes**

	August 1999	August 2000	August 2001
Austria	95%	82%	58%
Belgium	97%	89%	88%
Denmark*	95%	80%	63%
Finland	93%	95%	32%
France	98%	82%	72%
Germany	66%	65%	65%
Greece	100%	100%	100%
Ireland	98%	98%	52%
Italy	94%	68%	65%
Luxembourg	100%	89%	74%
Netherlands	90%	70%	79%
Portugal	100%	91%	88%
Spain	92%	89%	85%
Sweden	70%	62%	65%
United Kingdom	72%	49%	51%

Source: European Commission. \* No distinction drawn between local calls and national long-distance calls

**Market share in international call volumes**

	August 1999	August 2000	August 2001
Austria	95%	83%	44%
Belgium	94%	88%	85%
Denmark	63%	56%	50%
Finland	95%	94%	54%
France	98%	82%	68%
Germany	65%	53%	48%
Greece	100%	100%	100%
Ireland	98%	99%	67%
Italy	88%	69%	60%
Luxembourg	98%	89%	74%
Netherlands	70%	70%	70%
Portugal	100%	92%	81%
Spain	93%	89%	86%
Sweden	62%	62%	55%
United Kingdom	54%	49%	31%

Source: European Commission.

• Mobile telephony

Incumbent operator's share in the number of mobile subscribers

	August 1999	August 2000	August 2001
Austria	55%	50%	43%
Belgium	68%	64%	56%
Denmark	49%	47%	48.5%
Finland	62%	63%	62%
France	48%	47.5%	48%
Germany	39%	40%	40.5%
Greece	44%	38.5%	37%
Ireland	62%	57%	61.5%
Italy	62%	58%	48%
Luxembourg	61%	60%	61%
Netherlands	52%	47.5%	43.5%
Portugal	42%	44.5%	43.7%
Spain	62%	57.5%	56%
Sweden	51%	52%	49.2%
United Kingdom	37%	26%	25.4%

Source: European Commission.

b. Price trends

• Fixed telephony

Cost of a 3-minute local call (in € cents)

	August 1999	August 2000	August 2001	Change (1999–2001)
Austria	18	19.1	19.1	+6%
Belgium	16	15.6	21.1	+32%
Denmark	11	11.2	12.3	+12%
Finland	10	12.1	13.8	+38%
France	11	12.6	16.3	+60%
Germany	11	12.4	12.3	+12%
Greece	9	12.3	14.4	+60%
Ireland	16	16.5	16.5	+3%
Italy	9	13.6	14.2	+58%
Luxembourg	12	12.9	9.6	-20%
Netherlands	12	12.9	12.7	+6%
Portugal	9	9.9	20	+122%
Spain	10.5	10.6	10.8	+3%
Sweden	11	11.4	11.4	+3.6%
United Kingdom	16.5	16.6	17.4	+5.5%
European average	12	13.3	14.6	+21.5%

Source: European Commission.

Upward price changes are due to a tariff rebalancing operation carried out by the incumbent operator in consultation with the ART.

**Cost of a 3-minute long-distance call (in € cents)**

	August 1999	August 2000	August 2001	Change (1999-2001)
Austria	60	55.2	23	-61%
Belgium	57	54.8	21.1	-63%
Denmark	18	14	12.3	-31.6%
Finland	28	26.9	28.0	-
France	41	35.8	33.6	-18%
Germany	38	37.1	36.8	-3.1%
Greece	61	57.3	38.3	-37.2%
Ireland	42	30.6	28.4	-32.3%
Italy	68	66.6	58.1	-14.6%
Luxembourg	10	12.9	9.6	-4%
Netherlands	22	16.4	18.6	-15.5%
Portugal	46	54.2	55.9	-21.5%
Spain	85	79.5	67.3	-21%
United Kingdom	37	33.3	34.8	-6%
Sweden	18	11.4	11.4	-36.6%
European average	52	45	40.3	-22.5%

Source: European Commission.

• **Internet access**

**Basket of prices (where available) for 20 hours online for residential customers (in €)**

	August 1999	March 2000	August 2001
Austria	n/a	33	33
Belgium	n/a	36	39
Denmark	n/a	46	34
Finland	n/a	32	34
France	n/a	36	27
Germany	n/a	42	42
Greece	n/a	26	41
Ireland	n/a	24	34
Italy	n/a	17	33
Luxembourg	n/a	38	39
Netherlands	n/a	30	38
Portugal	n/a	30	42
Spain	n/a	17	32
Sweden	n/a	35	24
United Kingdom	n/a	35	8

Source: European Commission.

• Leased lines

64 kbit/s leased line (2 km) in €

	August 1999	August 2000	August 2001
Austria	2,686	2,689	1,413
Belgium	2,007	1,980	2,261
Denmark	1,186	1,186	1,186
Finland	ND	ND	ND
France	2,773	2,773	2,766
Germany	1,104	1,104	1,104
Greece	2,762	2,200	2,113
Ireland	1,544	1,544	1,544
Italy	3,564	3,564	2,479
Luxembourg	1,728	1,728	1,728
Netherlands	2,920	2,920	2,920
Portugal	1,389	1,389	1,389
Spain	3,042	3,042	2,799
Sweden	2,613	3,439	2,439
United Kingdom	2,819	3,064	3,064

Source: European Commission.

2 Mbit/s leased line (2 km) in €

	August 1999	August 2000	August 2001
Austria	6,802	7,200	7,160
Belgium	7,952	7,300	6,247
Denmark	2,917	1,956	1,956
Finland	ND	ND	ND
France	8,869	8,500	7,500
Germany	5,829	4,200	4,080
Greece	9,962	9,861	9,861
Ireland	711	4,571	4,571
Italy	8,676	8,200	7,772
Luxembourg	17,253	17,253	6,072
Netherlands	15,000	15,000	13,363
Portugal	7,461	7,461	7,461
Spain	13,981	13,950	10,625
Sweden	5,486	4,326	4,326
United kingdom	4,402	4,786	4,786

Source: European Commission.

2 Mbit/s leased line (50 km) in €

	August 1999	August 2000	August 2001
Austria	27,802	16,000	11,555
Belgium	35,351	35,351	17,179
Denmark	18,054	11,884	11,884
Finland	8,743	8,743	8,743
France	46,490	23,400	23,325
Germany	29,328	18,000	23,749
Greece	38,591	38,591	32,371
Ireland	30,229	21,517	21,517
Italy	43,382	41,000	28,155
Luxembourg	22,608	22,608	12,408
Netherlands	34,850	34,850	33,489
Portugal	41,000	32,869	32,869
Spain	46,490	46,490	35,334
Sweden	15,115	9,175	9,175
United Kingdom	22,994	24,116	24,116

Source: European Commission.

34 Mbit/s leased line (2km) in €

	August 1999	August 2000	August 2001
Austria	42,000	30,000	27,994
Belgium	18,000	18,000	19,336
Denmark	9,500	9,000	8,112
France	54,000	51,000	49,027
Germany	42,000	19,000	12,600
Ireland	42,000	37,075	37,075
Italy	70,000	70,500	49,580
Luxembourg	ND	ND	33,948
Spain	52,000	52,000	47,746
Sweden	29,000	21,000	19,667
United Kingdom	52,000	52,000	53,464

Source: European Commission.



• Interconnection services

Local interconnection (€ cent/min)

	Août 1999	Août 2000	Août 2001
Austria	182	102	91
Belgium	107	92	77
Denmark	93	75	67
Finland	143	143	143
France	61	63	58
Germany	101	88	83
Greece	ND	110	88
Ireland	100	84	64
Italy	100	75	72
Luxembourg	225	169	127
Netherlands	100	109	79
Portugal	99	99	90
Spain	99	90	90
Sweden	86	91	67
United Kingdom	62	62	63

Source: European Commission.

Regional interconnection (single-trunk exchange mode) in € cent/min

	August 1999	August 2000	August 2001
Austria	182	163	139
Belgium	180	148	124
Denmark	167	96	95
Finland	143	143	118
France	150	133	123
Germany	172	189	142
Greece	ND	186	141
Ireland	160	115	97
Italy	160	133	114
Luxembourg	226	169	127
Netherlands	141	150	103
Portugal	163	153	137
Spain	159	150	150
Sweden	116	124	90
United Kingdom	90	90	90

Source: European Commission.

**Incoming calls on the mobile networks (fixed-to-mobile interconnection) in € cent/minute**

	August 1999	August 2000	August 2001
Austria	n/a	13.81	13.81
Belgium	n/a	n/a	16.91
Denmark	n/a	16.47	16.09
Finland	n/a	20.52	20.01
France	n/a	24.70	19.22
Germany	n/a	34.25	n/a
Greece	n/a	27.22	23.48
Ireland	n/a	18.41	17.78
Italy	n/a	18.80	22.88
Luxembourg	n/a	16.73	13.41
Netherlands	n/a	15.74	15.74
Portugal	n/a	23.70	23.70
Spain	n/a	23.74	20.73
Sweden	n/a	17.84	12.85
United Kingdom	n/a	22.00	12.44

Source: European Commission.

**D. Consequences of the economic and financial difficulties facing the market**

**1. Consolidation and repeal of authorisations under Articles L 33-1 and L 34-1**

**a. Position of alternative fixed operators authorised as of 31 December 2001**

In the table below, operators active in France are organised by the origin of their ultimate

parent company (which is not always the same as their immediate parent company), and by their position on the market. Those operators whose authorisation decree was published in the Official Journal after 31 December 2001 do not appear in this table. These are Flag Telecom France Network SAS and e-Qual.

The operators are presented according to whether they are licensed under Article L33-1<sup>1</sup>, Article L 34-1<sup>2</sup> or both articles together.

	Local loop operators	Long-distance operators	Transmission capacity operators
Subsidiaries of incumbent operators		Licensed under Article L 34-1 KDD France	Licensed under Article L 34-1 KPN Eurovoice

<sup>1</sup> Article L 33-1 of the Post and Telecommunications Code, authorising the establishment and operation of a public network.

<sup>2</sup> Article L 34-1 of the Post and Telecommunications Code, authorising of the supply of public telephony service.

	Local loop operators	Long-distance operators	Transmission capacity operators
		<p>Marconi France Telecommunications Telenor Global Services</p> <p><b>Licensed under both articles</b> 9 Télécom Réseau AUCS Communications Belgacom France Telia France T-Systems Siris</p>	<p><b>Licensed under Article L. 33-1</b> BT France Farland Services France KPNQwest Assets France 1 TF1 TI France</p> <p><b>Licensed under both articles</b> Equant Telecommunications</p>
<b>Operators with French investment</b>	<p><b>Licensed under both articles</b> ADP Telecom Altitude Cegetel Cegetel la Réunion Dauphin Telecom Firstmark Communications France Squadran Suez Lyonnaise Telecom</p>	<p><b>Licensed under Article L. 34-1</b> Atos Multimedia Prosodie Trading.com Western Telecom XTS Network</p> <p><b>Licensed under both articles</b> Estel Free Telecom Kaptech (Kapt'Holding) Kast Telecom Kertel Outremer Telecom Telecom Developpement XTS Network Caraïbes XTS Network Océan Indien</p>	<p><b>Licensed under Article L. 33-1</b> Danup Gensat France Louis Dreyfus Communications Multicoms Naxos</p>
<b>Operators with European investment</b>	<p><b>Licensed under Article L. 33-1</b> Broadband Optical Access France Tachyon Netherlands</p>	<p><b>Licensed under Article L. 33-1</b> 21st Century Communications Eutelsat SA Fibernet VersaTel Telecom Europe</p> <p><b>Licensed under Article L. 34-1</b> Interoute Communication</p>	<p><b>Licensed under Article L. 33-1</b> 21st Century Communications 3U Telecom KPNQwest Assets France Nets TGN Eurolink VersaTel Telecom Europe</p>

	Local loop operators	Long-distance operators	Transmission capacity operators
		<b>Licensed under both articles</b> 3U Telecom Cable & Wireless France Energis (Switzerland) Liberty Surf Telecom Storm Telecommunications Tele2 France Tiscali France Vine Telecom Networks	
Operators with international investment (outside Europe)	<b>Licensed under Article L. 33-1</b> France Cité Vision HOT Telecommunications  <b>Licensed under both articles</b> Broadnet France Colt Telecommunications France Completel Dolphin Telecom Landtel France MFS Communications Priority Telecom France UPC France	<b>Licensed under Article L. 33-1</b> GTS Network Ireland  <b>Licensed under both articles</b> Afripa Telecom France Carrier 1 Easynet Lambdanet Communications France Level 3 Communications One Tel Phone Systems & Network Star Telecommunications (France) Ventelo France Viatel Operations  <b>Licensed under Article L. 34-1</b> Signal Global Communications France Graphtel LCR Telecom Viatel France	<b>Licensed under Article L. 33-1</b> Dynegy France Communications Flag Atlantic France GTS Network Ireland Metromedia Fiber Network France Skybridge Communications TyCom Networks (France) Verizon Global Solution France  <b>Licensed under both articles</b> GC Pan European Crossing France Primus Télécommunications France

*Names in italics indicate operators whose application for a repeal was still being as of 31 December 2001.*

**b. The forecasts of licensed operators in 2001**

Operators licensed in 2001 made the total forecasts given in the table below for the next

five years<sup>1</sup>. As only one company has been licensed under Article L. 34-1, the forecasts for this category of operators cannot be presented here. Moreover, this breakdown does not include

<sup>1</sup> Operators which relinquished their licence during the year in which it was obtained are not taken into account.

operators selected in connection with the call for applications for the wireless local loop

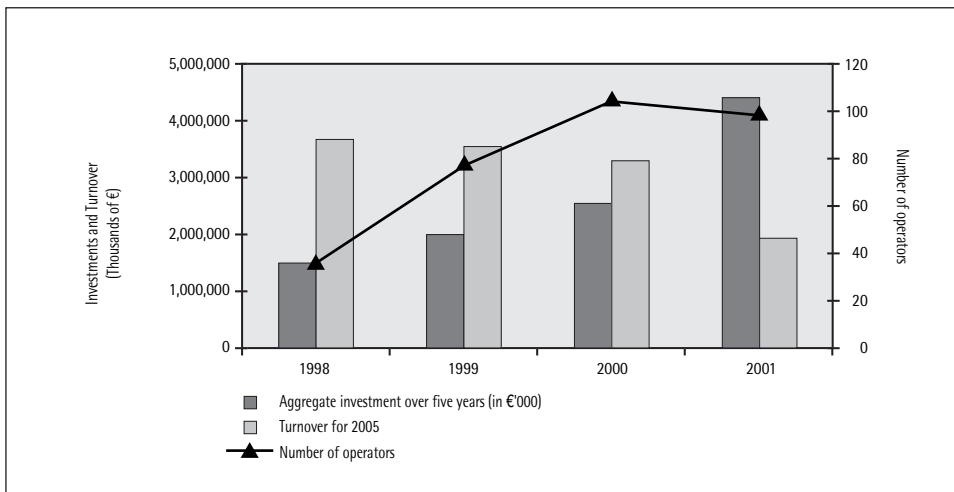
because the forecasts do not cover either the same geographical areas or the same durations.

	Forecast jobs for 2005	Total investment 2001-2005 (in € thousand)	Forecast turnover for 2005 (in € thousand)
Operators licensed under Article L.33-1 only	743	4,351,336.3	1,732 889.2
Operators licensed under Article L.34-1 only	3	278	30,488
Operators licensed under articles L. 33-1 and L. 34-1	390	137,081.4	168,920.6
TOTAL (excl. wireless local loop)	1,136	4,488,695.9	1 932,297.6

Operators licensed under Article L. 33-1 forecast that they will employ 93 people and have turnover in excess of €200 million in five years, after investing a total of €544 million.

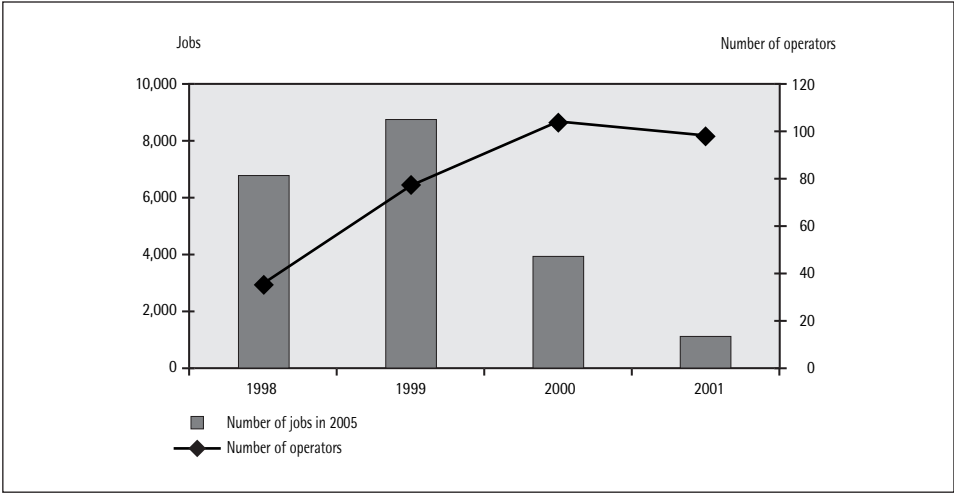
For their part, operators providing public telephony services while establishing a public network forecast that they will employ 195 individuals, on average, and have a turnover of €84.5 million in five years, after totting up total investments of €68.5 million.

The chart below shows a comparison between annual investment patterns and turnover forecasts of operators holding a new licence. It can be seen that despite a 10% reduction in the number of operators between 2000 and 2001, planned investment for the next five years - for all operators - rose by 82%, despite the fact that the forecast turnover in five years time was down 42%. The increase in investment can be explained by the launch of projects supported by international groups, requiring massive start-up commitments. More specifically, this is true of several public satellite networks.



The chart below shows a comparison between the trend in overall forecast job creation forecasts by newly licensed operators, for every year

from 1998. The average number of jobs created by a licensed operator fell from 192 in 1998 to 12 in 2001.



2. Financial market trends

Since 1997, investors have invested or speculated heavily in the stock market as a result of low interest rates. This interest, enhanced by the strong growth in technology shares (especially Internet and mobile telephony shares), created a 'bubble' which burst in mid-2000. When investor euphoria was at its height, France Télécom shares were trading at 220 compared with around 45 at end-2001. The high overall prices of UMTS licences in Europe also contributed to reversing the trend on the European markets.

The reversal was reflected in the bursting of the bubble and in the plummeting of stock prices for operators and equipment suppliers. The downtrend coincided with incipient doubts about the viability of products such as WAP. UMTS is no longer considered to be a growth driver for GSM, according to many investors. In fact, investors are wary of growth assumptions

for subscriber-generated revenues. In addition, operators took substantial debts to pursue acquisition-led growth and purchase UMTS licences (France Télécom's debt burden at 30 June 2001 was 59.9 billion ).

Since then, most operators have pursued a debt reduction policy and a drive for profitable. This negative context, coupled with a general economic slowdown in the United States and Europe, has reduced the number of players active on the market.

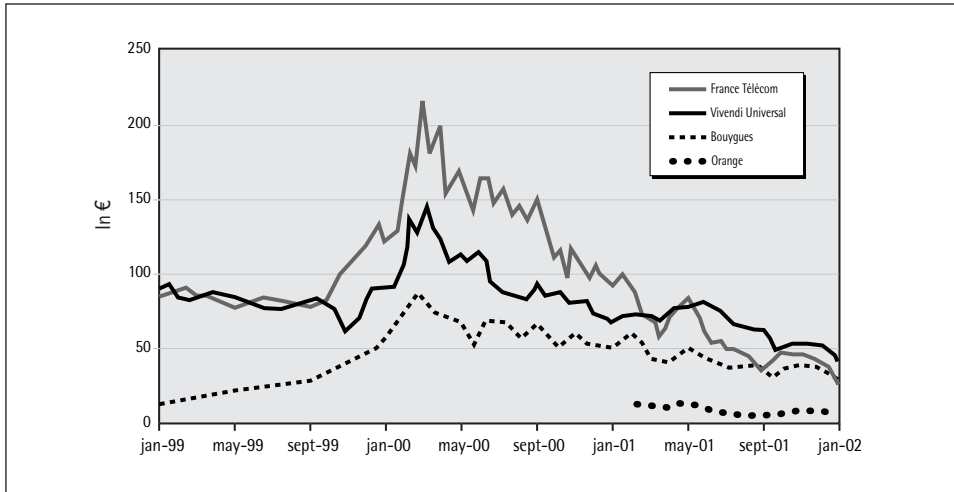
With regard to mobile operators, France is still an 'exception': the penetration rate in France is below the European average, leaving greater room for growth.

The telecommunications market is therefore facing a contrasting situation. The financial markets are correcting the unrealistic expectations spawned by technology-driven euphoria. Meanwhile, the sector still has

significant growth potential based on the emergence and development of new services.

The chart below shows the change in share prices since 1 January 1999 for France Télécom,

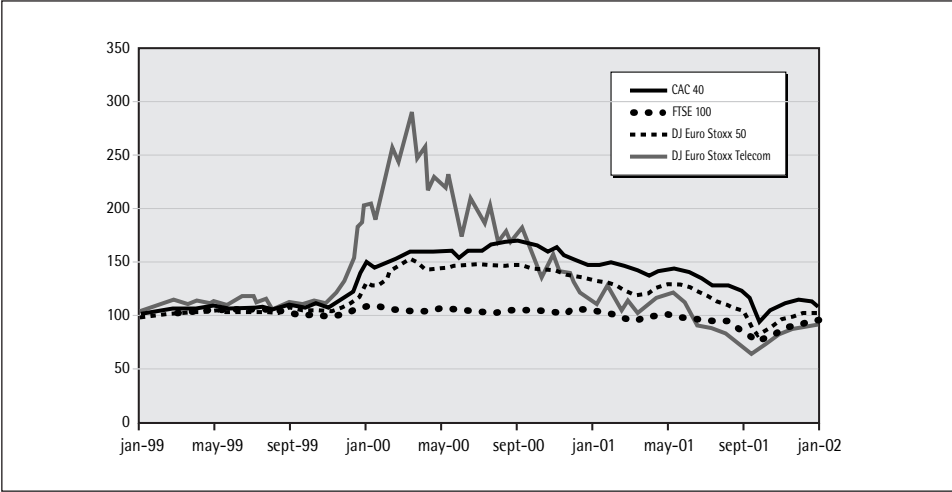
Vivendi Universal (which holds 44% of Groupe Cegetel), Bouygues (which owns 54% of Bouygues Télécom) and Orange<sup>1</sup>.



The market performance of the leading telecom operators in Europe can be assessed via the DJ Euro Stoxx Telecom index. This index, which focuses on telecoms shares, is comparable to the DJ Euro Stoxx 50 broad index of leading European shares.

The DJ Euro Stoxx Telecom followed the same pattern as European operators's share prices. The sharp run-up in telecoms shares between September 1999 and February 2000 is less visible in the other indexes, such as Paris's CAC 40 and London's FT-SE 100. In late 2001, the various indexes had moved back to their early-1999 levels (see chart below).

<sup>1</sup> Orange went public on 14 February 2001.



Operators' prices dropped significantly in 2001. In a sample of 14 operators, share prices fell by an average 29.6%. During the same period, the CAC 40 fell 22% and the DJ Euro Stoxx Télécom 28%.

Market data for the leading European operator

	Currency	31/dec/00	31/dec/01	Change
CAC 40	€	5,926.4	4,624.6	-22.0%
FTSE 100	£	6,222.5	5,217.4	-16.2%
Euro Stoxx 50	€	391.8	314.5	-19.7%
Euro Stoxx Telecom	€	666.6	477.9	-28.3%

French operators		Share price			Market capitalisation in billion	
	Currency	31/dec/00	31/dec/01	Change	31/dec/00	31/dec/01
France Telecom	€	92.0	44.9	-51.2%	106.1	51.8
Vivendi Universal	€	70.1	61.5	-12.3%	75.7	67.0
Bouygues	€	48.3	36.8	-23.7%	16.0	12.2
Orange	€	*9.5	10.2	+7.2%	*45.62	49.0

European fixed operators		Share price			Market capitalisation in billion	
	Currency	31/dec/00	31/dec/01	Change	31/dec/00	31/dec/01
Deutsche Telecom	€	32.1	19.4	-39.6%	97.3	81.4
Telecom Italia	€	11.8	9.6	-18.5%	62.8	50.5
BT	£	401.1	253.0	-36.9%	37.5	21.6
Telefonica	€	16.6	14.7	-11.2%	76.4	70.2
KPN	€	12.0	5.7	-52.3%	14.8	12.9



European mobile operators		Share price			Market capitalisation in billion	
	Currency	31/dec/00	31/dec/01	Variation	31/dec/00	31/dec/01
Vodafone	£	245.5	179.8	-26.8%	158.5	122.4
TIM	€	8.5	6.3	-26.2%	71.7	52.9
Telefonica Moviles	€	11.0	8.2	-25.8%	42.1	34.8
Sonera	€	15.7	5.7	-63.7%	14.4	6.3
MobilCom	€	36.2	24.0	-33.7%	2.4	1.6



## Chapter 2

# Changes to the regulatory framework

Several new legislative and regulatory provisions were adopted in 2001. Some of them were intended to complement the provisions of the Telecommunications Act of 26 July 1996. However, the most significant changes result from the adoption of a new European framework which will substantially modify the French regulatory environment.

### *1. Changes to the current framework*

#### **A. Edict of 25 July 2001<sup>1</sup>**

The edict of 25 July 2001 made significant changes to the legislative part of the Posts and Telecommunications Code. It completed the transposition of various directives<sup>2</sup>.

<sup>1</sup> Edict 2001-670 of 25 July 2001 adapting the intellectual property code and the Posts and Telecommunications Code to Community law. Published in the O.J. on 28 July 2001.

<sup>2</sup> These directives are:

- Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP), published in the OJEC L.199 p.32 of 26 July 1997;
- Directive 97/13/EC of the European Parliament and Council of 10 April 1997 on the common framework for general licences and individual licences in the telecommunications services sector, published in the OJEC L117 p.15 of 7 May 1997;
- Directive 97/51/EC of the European Parliament and of the Council of 6 October 1997 modifying directives 90/387/EEC and 92/44/EEC with a view to adapting them to a competitive environment in the telecommunications sector, published in the OJEC L295 p.23 of 29 October 1997;
- Directive 97/66/EC of the European Parliament and of the Council of 15 December 1997 concerning the processing of personal data and the protection of privacy in the telecommunications sector, published in the OJEC L24 p.1 of 30 January 1998;
- Directive 98/10/EC of the European Parliament and of the Council of 26 February 1998 on the application of open network provision (ONP) to voice telephony and on universal service for telecommunications in a competitive environment, published in the OJEC L101 p.24 of 1 April 1998;
- Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity, published in the OJEC L191 p.10 of 7 April 1999.

The edict of 25 July 2001 amended 18 articles of the Posts and Telecommunications Code, some of them extensively. At the same time, four new articles were added. The changes involved the scope and implementation of ART's dispute settlement and sanctions procedures, as well as some of the Posts and Telecommunications Code's provisions.

**1. Amendments to dispute settlement procedures (Article L. 36-8) and sanction procedures (Article L. 36-11)**

**a. Dispute settlement**

The edict of 25 July 2001 broadened the remit of ART by giving it jurisdiction over disputes concerning the technical and financial conditions for supplying subscriber lists<sup>1</sup>.

As regards disputes over the possibilities and conditions for operators to share existing facilities located on the public property of the state or on private property, the same edict also specifies that ART must organise a public consultation involving all interested parties.

**b. Sanctions**

A decree, which has yet to be adopted, will specify the time period within which operators must comply with a notification from ART as well as the date before which the sanction decisions must take effect. It should be noted that the new "Authorisation" directive adopted on 7 March 2002 sets out arrangements that are better suited to the practice of regulation. ART believes it would be better to wait for these arrangements to be transposed, which should occur by 24 July 2003 at the latest<sup>2</sup>.

**2. Clarifications relating to other areas of the Posts and Telecommunications Code**

**a. Procedures relating to SMP operators, conformity assessment and universal directories**

One merit of the edict of 25 July 2001 is that it brings French law into compliance with Article 7 of directive 97/33 relating to the obligations that can be imposed upon the different types of operators with significant market power ("SMP operators"). Although previous provisions provided for the existence of a list of SMP operators, the code now classifies SMP operators into four markets<sup>3</sup>: fixed telephony, leased lines, mobile telephony, and national interconnection. The constraints imposed on these operators differ according to the category to which they belong<sup>4</sup>. ART had been applying these provisions since 1999.

Obligations concerning non-SMP operators have been streamlined: these operators are no longer subject to the obligation of non-discrimination and no longer need to submit their interconnection agreement systematically, unless requested to do so by ART.

The edict also transposes into French law directive 1999/5/EC relating to procedures for assessing the conformity of terminal equipment<sup>5</sup>. The ex-ante authorisation procedure for the market launch of telecommunications terminals such as fixed and mobile telephones, automatic diallers and private branch exchanges (PBXs), has been abandoned. From now on, equipment can be freely marketed as soon as it has been assessed for conformity by the manufacturer itself or by a notified body<sup>6</sup>.

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1 Provided for in article L. 33-4 of the Posts and Telecommunications Code

2 See the presentation of the new European framework below.

3 Article L. 36-7 7° of the Posts and Telecommunications Code.

4 Article L. 34-8 of the Posts and Telecommunications Code.

5 Directive op cit.

6 Article L. 34-9 of the Posts and Telecommunications Code.

In addition, the obligation requiring that complicated items of equipment be installed solely by "accepted" fitters has been abolished. The acceptance procedure, whereby ART accepts designates fitters as such, has therefore been abolished. This obligation mainly concerned equipment intended for companies, such as PBXs and radio networks.

ART no longer acts as a notified body, but it is still responsible for designating and monitoring these bodies. Their role consists in determining what standards to apply to terminals and, where applicable, assessing terminals for conformity.

Stricter penalties for violating these new provisions have been imposed. The terminal equipment market is monitored by ART and the National Frequencies Agency, and, in certain cases, by notified bodies.

In addition, the provisions concerning the publication of a universal directory have been modified<sup>1</sup>. The provision relating to the creation of an independent body responsible for preparing and updating the list required to publish universal directories and to provide the universal directory enquiry service has been abolished. Although France Télécom is obliged to carry out these missions, they can also be performed by any person that wishes to do so, on condition that the information used for these purposes is treated in a non-discriminatory manner. Operators are required to communicate the list of subscribers to which they have assigned numbers, and must do so under non-discriminatory conditions and at a price that reflects the costs of the service rendered.

**b. ART's powers have been increased in certain areas.**

Pursuant to L. 36-6 of the Posts and Telecommunications Code, ART now determines network termination points. With regard to interconnection, ART can temporarily limit operators' obligations to meet interconnection requests<sup>2</sup>. ART has an automatic power of referral to define the sections or specific conditions of an interconnection agreement and can determine the timetable when an interconnection agreement is being negotiation. These two possibilities also apply to special access to public networks

Pursuant to article L. 36-11 of the Posts and Telecommunications Code, ART can also require an operator to modify its contractual conditions relating to the provision of telephone services to the public and the procedures relating to reimbursement or compensation<sup>3</sup>. Similarly, it can require an SMP operator on the fixed telephony market to withdraw or modify its price reductions<sup>4</sup>.

However, in the leased lines sector, the telecommunications ministry designates the operators that are required to provide such offers<sup>5</sup>.

**3. Article L. 34-8-VI of the Posts and Telecommunications Code**

Article L. 34-8-VI, stemming from article 11 of the edict of 25 July 2001, transposes the provisions of article 9.3 of the directive of 30 June 1997<sup>6</sup>. This provision endows ART with important powers, in that it allows ART to intervene in ongoing negotiations concerning intercon-

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1 Article L. 35-4 of the Posts and Telecommunications Code.

2 Article L. 34-8 of the Posts and Telecommunications Code.

3 Article L. 34-1 of the Posts and Telecommunications Code.

4 Article L. 34-1-1 of the Posts and Telecommunications Code.

5 Article L. 34-2-1 of the Posts and Telecommunications Code.

6 Directive 97/33/EC op cit.

nection or access to a public network. Henceforth, ART can, on its own initiative or at the request of one of the parties, define the areas that must be covered by agreements governing interconnection or access to a public network, and lay down the specific conditions with which these agreements must comply. ART can also set a final deadline for negotiations on interconnection or access to a public network and, here again, may do so on its own initiative or at the request of one of the parties.

These new powers complement ART's existing powers under the dispute settlement procedure. It should be noted that pursuant to article L. 36-8 of the Posts and Telecommunications Code, ART has the authority to settle disputes arising from the refusal of an interconnection, the failure of negotiations, or a disagreement on the conclusion or execution of an agreement on interconnection or access to a telecommunications network. At present, ART can avert disputes between two operators by defining the areas that must be covered by agreements governing interconnection or access to a public network, and laying down the specific conditions with which these agreements must comply or specifying the date by which negotiations must be concluded. In this sense, the purpose of these new powers is to prevent disputes and make it easier for operators to gain access to ART as from the negotiation stage.

## **B. The Act of 17 July 2001: miscellaneous social, educational and cultural provisions**

The Act of 17 July 2001<sup>1</sup> includes a number of amendments that modify certain aspects of telecommunications law. These amendments

concern the regime of high-speed telecommunications networks installed by territorial authorities, the agreements between telecoms operators and owners of buildings in which radio relay equipment is installed, the right of a co-owner, tenant or bona fide occupant to install an appliance permitting access to the wireless local loop, the submission by the Agence Française de Sécurité Sanitaire Environnementale (French Agency for Environmental Safety) of a report on radiation emissions from radio telecommunications equipment, and the authorisation to install radio interference systems in theatres.

### ***1. Modification of the legal regime for the provision by territorial authorities of infrastructure to support telecommunications networks***<sup>2</sup>

Territorial authorities have sometimes been faced with a lack of offerings that would enable them to meet their high-speed access requirements on reasonable terms. In its first draft application, which stems from the General Principles Act of 25 June 1999 on regional development and sustainable development<sup>3</sup>, Article L. 1511-6 of the Local Authority General Code led to problems in areas such as public hearings, the notion of inadequacy and investment depreciation periods.

An amendment stemming from Article 30 of the Information Society bill<sup>4</sup> was finally introduced into the Miscellaneous Social, Educational and Cultural Provisions Act. It contains significant modifications to the following areas:

- extension of involvement beyond high-

1 Act no. 2001-624 of 17 July 2001 that includes various provisions of a social, educational and cultural nature. Published in the O.J. on 18 July 2001 p.11503.

2 Article L. 1511-6 of the Local Authority General Code.

3 General Principles Act no. 99-533 concerning regional development and sustainable development of 25 June 1999 which amends General Principles Act no. 95-115 of 4 February 1995 concerning regional and territorial development, published in the O.J. of 29 June 1999.

4 The Information Society bill no. 3143 transposes the European directive of 8 June 2000 on electronic commerce.

speed networks alone;

- the requirement to officially establish the inadequacy of private initiatives is abolished and replaced by a public consultation;
- provision of infrastructures at tariffs that cover costs, taking account of public subsidies (for the purposes of regional development);
- the eight-year limit on investment depreciation is abolished.

When consulted on Information Society bill, ART issued an opinion<sup>1</sup> on 2 May 2001, noting with satisfaction that the provisions of Article 30 of the bill were consistent with its proposals.

## **2. Infrastructure giving access to wireless local loop networks**

In its opinion of 2 May 2001 on the Information Society bill, ART deemed it important to extend broadcast rights to include wireless local loop (WLL) antennas, with a view to ensuring fair and technologically neutral legal treatment of telecommunications networks. Such legislation would facilitate the deployment of WLL networks and provide users with better access to online communication services via this technology. WLL technology requires the installation of a local antenna in line of sight of the operator's antenna, which itself is connected to a high-speed backbone. The terminals are connected to the local antenna via an internal cable network.

Article 20 of the Miscellaneous Social, Economic and Cultural Provisions Act extended to WLL antennas the broadcasting rights established by Article 1 of the act on radio broadcasting receivers<sup>2</sup>. With the extension of this regime to WLL installations, a landlord cannot deny

a request by a tenant or bona fide occupant, irrespective of any previous agreements that may have been reached between them. A landlord may, however, oppose such an installation by "citing a genuine and legitimate motive". Consequently, a building owner may not, without a genuine and legitimate reason, oppose the installation of a fixed external transmitting/receiving antenna for telecommunications.

## **3 Installation of radio equipment to render all mobile telephones inoperative in theatres (jammers)**

### **a. Adoption of the new provision**

In June 1999, ART expressed its opinion on the use of radio equipment that renders mobile telephones inoperative. After consulting with all interested parties, notably the Radio-communications Advisory Committee (CCR), and considering the current legislative and regulatory environment, ART came to the conclusion that such appliances could not be authorised in France.

Article 26 of the Act of 17 July 2001 paves the way for the use of such appliances in theatres. This provision amends Article L. 33-3 of the Posts and Telecommunications Code and authorises the installation of jamming systems in theatres in order to render mobile phones of all types inoperative and incapable either of transmitting or receiving. The article specifies that "theatre" shall mean any place specifically designed for the public display or transmission of intellectual works.

Pursuant to this legislative provision, and on the basis of Article L.36-6 of the Posts and Telecommunications Code, ART prepared a deci-

<sup>1</sup> ART opinion no.01-423, dated 2 May 2001, on the Information Society bill.

<sup>2</sup> Act 66-457 of 2 July 1966, amended, on the installation of radio receiving antennas.

sion aimed at defining, at the technical level, the regulatory conditions relating to the use of these appliances. The decision is pending the approval of the telecommunications minister<sup>1</sup>.

#### **b. ART launches a call for comments**

The adoption of these technical requirements is part of a process that consists of three principle stages: preparation of a draft decision by ART, consultation with the CCR<sup>2</sup>, and notification at the European Commission for a three-month consultation period<sup>3</sup>. Finally, the adoption of the decision by ART will be submitted to the telecommunications minister for approval. Accordingly, the use of such appliances will remain prohibited until the order approving ART's decision takes effect.

In addition, in June 2001, the prison authorities asked ART for information about the possibility of installing jamming equipment in penitentiaries. Although this possibility is not provided for in Article 26 of the Act of 18 July 2001, ART is prepared to consider this legitimate request.

In September 2001, in connection with the process of establishing technical requirements, ART initiated a wide-ranging consultation with the interested parties, including manufacturers of jamming/filtering systems, mobile operators and representatives of potential users. This process is accompanied by a call for comments, which was issued on 6 December 2001 and for which 20 contributions have already been received.

#### **4. Agreements between telecommunications operators and building owners on antenna installation**

Article 19 II of the Act of 17 July 2001 reinstates Article L. 94 of the Posts and Telecommunications Code concerning prior agreements between telecommunications operators and building owners on the installation of radio equipment. The equipment concerned includes all equipment required for the operation of telecommunications networks, whether public, independent, or freely installed under Article L. 33-3 of the Code.

The new Article L. 94 obliges the parties to an agreement to append a diagram specifying the location of the equipment and drawn to a scale that allows the visual impact to be measured. According to the author of the amendment, the aim of the article is to oblige the operator to supply information that enables the owner to assess how the installation of an antenna will affect the appearance of the building. The penalty provided for by the Act is the annulment of the agreement. The new provision will not apply to agreements concluded prior to the Act's entry into force.

#### **5. The preparation of a report on telecommunications installations by the French Agency for Environmental Safety**

The aforementioned Article L. 94 stipulates that the French Agency for Environmental Safety must prepare a report on the existence of sanitary risks of exposure to radiation from terminal equipment and telecommunications radio equipment. The report must be submitted to the government and both houses of parliament before 30 September 2002.

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<sup>1</sup> The underlying principle is set forth in Article L.33-3 of the Posts and Telecommunications Code.

<sup>2</sup> Pursuant to Article D.97-1.

<sup>3</sup> In accordance with Directive 98/34/EC of the European Parliament and Council of 22 June 1998 setting forth an information procedure in the area of technical standards and regulations, published in the OJEC L 204 of 21 July 1998 p. 37.



### **C. The Act of 15 November 2001 on general security**

Article L 32-3-1 and the new article L 32-3-2 of the Posts and Telecommunications Code were introduced by the Act of 15 November 2001 (General Security)<sup>1</sup>.

Article L 32-3-1 establishes the principle of requiring telecommunications operators to delete or render anonymous all information relating to communications as soon as they have been completed. These provisions transpose Article 6 of the directive of 15 December 1997 concerning the processing of personal data and the protection of privacy in the telecommunications sector<sup>2</sup>.

Two exceptions to this obligation have been provided for:

- invoicing and payment requirements for telecommunications services. For these requirements, operators may use, store and, where necessary, transfer technical data relating to communications to any third parties directly concerned by the invoicing or collection procedure "until the end of the period in which the invoice may be legally challenged or in which legal action may be taken to obtain payment". Pursuant to Article L 32-3-2, this period is set at one year. In addition, operators may process this information with a view to marketing their services, on condition that users have given their express consent.
- tracking down, ascertaining and prosecuting offences. To this end, and with the sole aim of making information available, where required, to the judicial authorities: "this obligation may be deferred for a period not

exceeding one year as regards operations to delete or render anonymous certain categories of technical data". These provisions apply to all telecommunications operators within the meaning of point 15 of Article L 32 of the Posts and Telecommunications Code.

It is specified that the data stored and processed in these conditions "pertain exclusively to the identification of persons using the services supplied by operators and to the technical characteristics of communications provided by [them]". That being the case, "these data may not pertain to the content of the communications exchanged or to the information accessed, in any form, in connection with these communications".

A Conseil d'Etat decree, passed after the CNIL (National Commission for Information Technologies and Civil Liberties) issued an opinion, will determine the categories of technical data concerned by the provisions and the period of time they may be stored (maximum one year), depending on the activity of the operators and the nature of the communications. Failure to comply with the obligations to delete – and also to store data – are subject to the criminal penalties provided for in Article L 39-3 of the Posts and Telecommunications Code.

In its opinion of 2 May 2001 on the Information Society bill, ART deemed that the storage periods should not necessarily be set at the maximum limit, i.e. one year, for all categories of data. For instance, in the Internet access sector, storing certain data could involve substantial volumes, particularly where browsing information has to be stored.

In addition, ART noted with satisfaction the inclusion in the Posts and Telecommunications

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<sup>1</sup> Act 2001-1062 of 15 November 2001 on general security. Published in the O.J. of 16 November 2001 p. 18215.

<sup>2</sup> Directive 97/66/EC *op cit*.

Code of a draft version of Article L. 32-3-2, which requires operators to store traffic-related data for one year for invoicing purposes. Telecommunications operators are henceforth subject to a one-year limitation period, the same applicable to France Télécom under Article L. 126 of the Posts and Telecommunications Code. This Article stipulates that the limitation period become effective one year after the date of payment for telecommunications services, in the case of operators; and one year after the due date for payment, in the case of users.

**D. The Decree of 8 January 2002: clauses appended to the authorisations issued in pursuance of Article L. 33-1 of the Posts and Telecommunications Code**

Completing the incorporation into French law of EU directives 97/66 and 98/10<sup>1</sup>, the decree relating to certain standard clauses of the specifications appended to the authorisations issued in pursuance of Article L. 33-1 of the Posts and Telecommunications Code<sup>2</sup> amends Articles D. 98-1 et D. 98-2 of that Code and adds the new Article D. 98-2-1.

It should be noted that ART was consulted about this Decree by the telecommunications minister on 11 June 1999 and issued an opinion on 23 July 1999.

First, the Decree fundamentally changes clause c) of Article D. 98-1 of the Posts and Telecommunications Code on the confidentiality and neutrality of transmitted messages and information relating to communications. The new text stipulates that all natural and legal persons now have the same rights in this respect.

The Decree contains new provisions and obligations vis-à-vis operators. Article D. 98-1 c) 2.1 states that:

- the right of any natural or legal person not to appear in published lists of subscribers or users must henceforth be free of charge. Payment of a reasonable, non-dissuasive sum as per the previous Decree can no longer be demanded. This wording differs from the version on which ART issued an opinion;
- it is possible to request not to be included in lists of subscribers or users that can be accessed via a directory enquiries service. Since there is no mention of whether this service should be free, it is conceivable that operators may charge for it;
- all natural and legal persons have the right to receive non-itemised invoices but now also have the right to receive itemised invoices.

Subscribers must be informed of all the rights described in paragraph 2.1 before signing the subscription contract<sup>3</sup>.

The new paragraph 2.2 specifies the content of itemised invoices. These are provided free of charge upon the user's request, with the exception of additional, undefined services.

The new paragraph 2.3 relates to the option available free of charge to all users to block the display of their number on the called party's phone. It takes up the previous provisions, further specifying that the means given to users to exercise this option must be "simple". The paragraph further states that a user with several lines may exercise this option for each line. Finally, users that have opted for permanent blocking may cancel that decision via "a method that is simple and free of charge".

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1 Op cit.

2 D.The Decree no.2002-36 of 8 January 2002 relating to certain clauses appended to the authorisations issued in accordance with Article L. 33-1 of the Posts and Telecommunications Code. Published in the O.J. of 10 January 2002 p.585.

3 Paragraph 2.6.

Pursuant to the new paragraph 2.4, operators must inform subscribers if they offer a service that identifies the caller's number or the connected line. In both cases, the operator must allow subscribers, simply and free of charge, to prevent the calling number from being displayed on their terminals and/or to prevent the person calling from obtaining the identity of the connected line.

Finally, in accordance with this paragraph, if a caller ID service is offered, operators are obliged to provide all users with the opportunity of refusing, simply and free of charge, incoming calls from an unidentified line. Operators may, if they provide justifiable technical reasons, ask ART to extend the implementation deadline.

The new paragraph 2.5 stipulates that any subscribers to whom calls are transferred may interrupt or effect the interruption of this transfer simply and free of charge.

In addition, operators are now required to inform subscribers in the event of specific risks of breaches of network security; they must also provide information about how to remedy such breaches and the cost of doing so.

Moreover, operators now have a period of one year to comply with the abovementioned provisions as regards personal-data procedures initiated before the Decree was published, i.e. before 10 January 2002. Operators are required firstly to inform their subscribers in the event that personal data were being used for marketing purposes prior to 10 January 2002 and secondly to allow them three months in which to oppose any further use of the information.

The Decree also amends clause g) relating to operators' contributions to research and training in the area of telecommunications. Henceforth, operators respond to this obligation

by making financial or in-kind contributions to research, development or training activities that promote the development of telecommunications "in the European community", and no longer "in France".

Article D. 98-2 of the Posts and Telecommunications Code, notably Clause r) of the contractual obligations on equal treatment and information for subscribers, has also been amended by the Decree.

Although operators are still obliged to inform the public of their prices and of the general terms and conditions of the service offer, they must also indicate clearly and precisely the terms of contract renewal as well as any minimum contract period, where relevant. This paragraph also specifies that the information must be kept up to date and made available to the public in the operator's retail outlets. Finally, the operator must provide one or more simple methods for gaining remote access to this information free of charge. This wording seems to exclude the provision of this information via a website, to which access cannot be considered as being free of charge.

In addition, the Decree modifies the second paragraph of clause r) and obliges operators, when drafting contracts with their users, to include mandatory information relating to maintenance, service quality, service interruption, compensation payable if the operator fails to comply with quality requirements, and procedures for claiming and receiving such compensation.

These contracts must comply not only with the Posts and Telecommunications Code but also with the Consumer Protection Code. Moreover, the contractual obligations may now include provisions aimed at protecting users' rights, particularly with respect to marketing methods.

The provisions of the Decree of 8 January 2002 add a new Article D. 98-2-1 under which certain instructions must be added to clauses b) and d), when they are relevant.

First and foremost, these changes concern clause b) of the contractual obligations relating to permanence, quality and availability and to methods of access. If this article is included in the obligations, the operator in question will be obliged to measure the service quality indicators specified in Annex III of Directive 98/10/EC. This information must be transmitted to ART upon its request. ART may oblige the operator to publicly disclose this information in an appropriate form.

It should be noted that the new Article L. 34-1-1 of the Posts and Telecommunications Code that results from the adoption of the edict of 25 July 2001 requires SMP operators providing telephone services between fixed points to comply with the quality obligations, where appropriate, that have been determined by ministerial order. The values recorded by operators are communicated to ART and to the minister at their request. ART may request that the data supplied be verified by an independent body.

The new article specifies the content of clause d) relating to the standards and specifications of the network and services. Assuming that such an addition is judged relevant, the operator is obliged to communicate to ART, in accordance with the procedures that the Authority is responsible for defining, detailed technical specifications concerning network access interfaces, before they are implemented. These specifications concern all generally supplied interfaces.

The specifications may be transmitted to anyone that requests them, in accordance with the procedures that ART has yet to define. Operators must inform ART without undue delay of any network characteristics that affect the smooth operation of terminal equipment.

Consequently, French law has been brought into compliance with EU directives. However, this transposition process must be reactivated in the near future given that the new EU "package" relating to electronic communications, adopted on 7 March 2002, must be incorporated into French law by 24 July 2003 at the latest.

### **E. The Decree of 20 February 2002 on the powers of the CST and CTA<sup>1</sup>**

The Decree of 20 February 2002 amends Articles D. 406-1-1, D. 406-1-2, D. 406-2-2 and D. 406-3 of the Posts and Telecommunications Code, the wording of which stemmed from the Decree of 25 February 1993 on the creation of the French authority for telematics services (CST) and the French advisory committee on telematics services (CTA)<sup>2</sup>.

#### **1. Extension of the current ethical framework to all operators**

The provisions of this Decree now extend the possibility of referral to the CST and CTA to all telecommunications operators within the meaning of point 15 of Article L. 32 of the Posts and Telecommunications Code. This change in the regulatory framework allows the same rules to be applied to all operators in their relations with suppliers of telematics services.

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1 Decree no. 2002-219 of 20 February 2002 modifying the Posts and Telecommunications Code and relating to the French authority for telematics services as well as to the French advisory committee on telematics services, published in the O.J. on 21 February 2002, p. 3351.

2 Decree no. 93-274 of 25 February 1993 on the creation of the French authority for telematics services and the French advisory committee on telematics services, published in the O.J. on 3 March 1993, p. 3317.

It should be noted that since the adoption of the Telecommunications Act of 26 July 1996<sup>1</sup>, the collection of traffic for telematics services has been open to competition. When this market was in the process of being liberalised, ART adopted the decision of 23 December 1998 relating to the changes to the numbering plan for non-geographic numbers in the 08 AB PQ MC DU format<sup>2</sup>, thus paving the way for alternative operators to provide telematics services. Accordingly, although the market for traffic collection for telematics services had been opening gradually to competition since early 1999, France Télécom was still the only operator authorised to refer to the CST in the event of a dispute or before deciding to suspend the connection of a telematics service.

In addition, France Télécom specified in its standard interconnection offer that its indirect interconnection model with third-party billing would not be extended to levels higher than FF2.21/minute unless the ethical framework for telematics services were adapted accordingly.

Consequently, with the adoption of this Decree, all telecommunications operators will be able to offer traffic collection services for telematics services and services providers, thus benefiting effectively from the opening up of the market.

## ***2. The range of services that may be included in the ethical framework of the CST and CTA***

In its opinion of 7 September 2001 on this draft decree<sup>3</sup>, ART deemed that this new regulatory framework appeared to allow mobile operators to avail themselves of the ethical fra-

mework amended by the Decree. In view of the development of premium-rate services accessible via mobile networks, the experience of the CST and the CTA is particularly attractive to mobile operators. Consequently, ART deems it necessary that the modified ethical framework should be applicable to the services that are accessible from mobile networks and that can be classed as telematics services.

## ***3. Types of dispute that may be referred to the CTA***

Either of the parties to a contract may bring two types of dispute to the attention of the CTA:

- those relating "to compliance with ethical recommendations applicable to services offered on anonymous telematics accesses, whether written or vocal, and to their conditions of access";
- those relating "to the clauses of contracts between operators and providers of telematics services or resources that have a bearing on ethics".

In addition, operators can consult the CTA before deciding to terminate or suspend contracts with providers of telematics services.

## ***4. The monitoring of telematics services***

The Decree of 25 February 1993 put in place a mechanism whereby the CST and CTA may be consulted or referred to, but it did not specify the arrangements for the operational monitoring of telematics services. To date, France Télécom has been in charge of such arrangements.

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1 Act no. 96-659 dated 26 July 1996 on telecommunications regulation, published in the O.J. of 27 July 1996, p. 11384.

2 Decision no. 98-1046 of 23 December 1998 on changes to the numbering plan for non-geographic numbers in the 08AB PQ MC DU format, published in the O.J. of 4 February 1999, p. 1821.

3 Opinion no. 2001-853 of 7 September 2001 on the draft decree modifying the Posts and Telecommunications Code and relating to the French authority for telematics services as well as to the French advisory committee on telematics services, published in the O.J. on 21 February 2002, p. 3351.

In its abovementioned opinion, ART stressed that adapting the ethical framework to competition raised questions about the continuation and financing of operational monitoring. To encourage competition, this function must be carried out neutrally and impartially.

Consequently, ART believes the CST must address this issue quickly.

#### **F. The Decree of 3 May 2002 on limits on public exposure to electromagnetic fields<sup>1</sup>**

Pursuant to Article L. 32 (12) of the Posts and Telecommunications Code, originating from the edict of 25 July 2001 adapting to the Code to EU law, the basic requirements for telecoms operators have been expanded to include community health protection, with reference to electromagnetic exposure.

The article also stipulates that a decree will define the maximum values for public exposure to electromagnetic fields emitted by equipment used by telecommunications networks or by the equipment mentioned in Article L. 33-3.

Pursuant to this article, the decree on limit values for public exposure to electromagnetic fields emitted by equipment used in telecommunications networks or by radio equipment was adopted on 3 May 2002. This decree, submitted to ART for its opinion<sup>2</sup>, transposes the limit values for public exposure to electromagnetic fields set out on the European Council recommendation of 12 July 1999 for all radio

transmission equipment other than terminal or similar equipment<sup>3</sup>. These values are specifically defined in an annex to the decree.

ART considers that the adoption of such a legal instrument should clarify relations between market players and communes. In addition, the provisions implemented by the decree will make it possible to reconcile health protection and radio coverage for people living in the areas concerned.

#### **G. The Posts and Telecommunications Code now applies to Mayotte**

It should be noted that the Act of 11 July 2001 relating to the island of Mayotte<sup>4</sup>, and notably Article 46 thereof, stipulates that the Posts and Telecommunications Code now applies to department of Mayotte.

#### **H. Taxes and fees**

##### **1. Taxes**

##### **a. Changes to the Finance Act**

Telecommunications operators in France are subject to the annual Finance Acts, which specify the fees charged for filing licence applications as well as the annual charge for the administration and monitoring of licences (Article 45 of the amended 1987 Finance Act). A proportion of the sums due is a flat fee payable in full when a licence is issued, while the remainder consists of an annual payment throughout the duration of the licence.

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1 Decree no. 2002-775 of 3 May 2002 passed in application of point 12 of Article L. 32 of the Posts and Telecommunications Code relating to limit values for public exposure to electromagnetic fields emitted by equipment used in telecommunications networks or by radio equipment, published in the O.J. of 5 May 2002, p. 8624.

2 Opinion no. 02-324 dated 18 April 2002.

3 Council recommendation 1999/519/EC of 12 July 1999 relating to the limitation of the exposure of the public to electromagnetic fields (from 0 Hz to 300 GHz), published in the OJEC L199 of 30 July 1999.

4 Act 2001-616 of 11 July 2001 relating to Mayotte. Published in the O.J. of 13 July 2002 p. 11199.

The 2001 Finance Act<sup>1</sup> included some of ART's proposals aimed at reforming the tax structure and reducing tax levels. These proposals consisted in halving the level of the annual administration and monitoring fees payable by all licence holders coming under Articles L.33-1 and L.34-1 of the Posts and Telecommunications Code, harmonising the regime applicable to fixed and mobile operators, establishing a single tax scale for providers of telephone services, and taking account of the specific nature of networks and services in the overseas départements. Moreover, in the 2001 budget amendment<sup>2</sup>, the administration and monitoring fee for paging network operators was reduced to 15,000 as from 1 January 2001.

The 2002 Finance Act<sup>3</sup> does not modify the provisions of Article 45 (I and VII) of the 2001 Finance Act.

#### b. The regime applicable to operators licensed under Articles L. 33-1 and L. 34-1

The holders of licences for the telecommunications services and networks covered by

Articles L.33-1 and L.34-1 of the Posts and Telecommunications Code must pay:

- a one-off application fee payable when the licence is issued;
- an annual licence administration and monitoring fee, payable on 1 December each year for the duration of the licence.

#### • Application fee

The one-off application fee is payable when the licence is issued.

If an extension request is made in relation to the coverage area of a licence issued pursuant to Articles L.33-1 and L.34-1 of the Posts and Telecommunications Code, the associated application fee is equal to the difference between the amounts applicable to the modified coverage area and the coverage area prior to modification.

The application fee is determined according to the following principles:

Article concerned by the licence	Coverage area > 5 regions	Coverage area ≤ 5 regions	Coverage area ≤ 1 region	Coverage area ≤ 1 department	Coverage area ≤ 1 city of 100,000 inhabitants	Coverage area restricted to 1 or several overseas departments
L. 33-1	€266,786 (FF1,750,000)	€76,225 (FF500,000)	€38,112 (FF250,000)	€15,244 (FF100,000)	€7,622 (FF50,000)	€15,244 (FF100,000)
L. 34-1	€38,112 (FF250,000)					€7,622 (FF50,000)
L. 33-1 Satellite	€38,112 (FF250,000)					
L. 33-1 with call for applications	The fee is equal to the sums above multiplied by two					

*N.B.: If an operator is simultaneously licensed in accordance with Articles L.33-1 and L.34-1, the fee is equal to the sum of the fees due under each of the two articles.*

<sup>1</sup> 2001 Finances Act. Published in the O.J. on 31 December 2001 p.21131.

<sup>2</sup> Corrected 2001 Finances Act. Published in the O.J. on 29 December 2001 p.21133.

<sup>3</sup> 2002 Finance Act, published in the O.J. of 29 December 2001, p.21074.

• Annual charges

The administration and monitoring fee is payable on 1 December each year throughout the duration of the licence. In the first year, the administration and monitoring fee is calculated

on a time-apportioned basis from the date on which the licence was issued.

Administration and monitoring fees are determined according to the following principles:

Article concerned by the licence	Coverage area > 5 regions	Coverage area ≤ 5 regions	Coverage area ≤ 1 regions	Coverage area ≤ 1 department	Coverage area ≤ 1 city of 100,000 inhabitants	Coverage area restricted to 1 or several overseas departments
L 33-1	€133,393 (FF875,000)	€38,112 (FF250,000)	€19,056 (FF125,000)	€7,622 (FF50,000)	€3,811 (FF25,000)	€7,622 (FF50,000)
L 34-1	€19,056 (FF125,000)					€3,811 (FF25,000)
L 33-1 Satellite	€19,056 (FF125,000)					
L 33-1 Radio paging	€15,000					
SMP operator (1)	The fee is equal to the sums above multiplied by two					

*N.B.: If an operator is simultaneously licensed in accordance with Articles L.33-1 and L.34-1, the fee is equal to the sum of the fees due under each of the two articles.*

(1) An operator that features in the list provided for in point 7 of Article L. 36-7. of the Posts and Telecommunications Code.



## **2. Fees**

The amended Decree of 3 February 1993 pertaining to fees for the allocation and administration of radio frequencies payable by holders of licences issued under Articles L. 33-1 and L. 33-2 of the Posts and Telecommunications Code, was amended in 2001 and 2002<sup>1</sup>.

The Decree of 17 July 2001<sup>2</sup> amending the Decree of 3 February 1993 incorporates the pricing of the fixed-satellite service. Previously, the fixed-satellite service was invoiced after systematically requesting the opinion of the Budget Department of the Ministry of Economy, Finance and Industry, on bases that were equal to those that are currently included in the decree (as provided for in Article 1 thereof). The main advantage of including invoicing principles in the decree is that it brings greater transparency and visibility to the market. Subsequently, formal improvements were made to the Decree of 21 February 2002<sup>3</sup> amending the Decree of 3 February 1993 after submission to the CCR for opinion and then to ART. ART wrote to the minister. It wanted the decree to take account of the fees chargeable for using fixed-satellite service frequencies in connection with

proposals for high-speed satellite Internet services. These proposals consider that frequencies should be allocated over large areas (e.g. metropolitan France), that users' small ground stations might not be made known to ART immediately, and that fees of 305 per site seem too high for these types of projects.

In addition, the Decree of 21 February 2002 changes the method of calculating administration and allocation fees as from 2002. This change concerns WLL operators in particular. It stipulates that all fees should be charged on a time-apportioned basis applicable to the first and last year of the frequency allocation period and provides for an administration fee charged in proportion to the area covered if it is smaller than the area of metropolitan France. Each operator was originally charged a uniform administration fee of €533,571.56 (FF3.5 million), which placed a disproportionate financial burden on small WLL operators, particularly those with licences for only a few regions and in the overseas départements. For WLL operators in these départements, this fee will now be fixed, by derogation in the decree, at €1,524.

<sup>1</sup> Decree of 3 February 1993 pertaining to fees for the allocation and management of radio frequencies due from holders of licences issued in the pursuance of articles L. 33-1 and L. 33-2-2 of the Posts and Telecommunications Code, published in the O.J. of 5 February 1993, p. 1977.

This Decree was recently amended by the following texts:

Decree no.01-626 of 17 July 2001 modifying the Posts and Telecommunications Code and relating to the fees for radio frequencies payable by operators authorised in accordance with Article L.33-1 of said Code, published in the O.J. of 18 July 2001, p. 11517.

Decree no. 2001-882 of 26 September 2001 modifying the decree of 3 February 1993 pertaining to fees for the allocation and management of radio frequencies due from holders of licences issued in the pursuance of articles L. 33-1 and L. 33-2 of the Posts and Telecommunications Code, and regulating the public finances with the appointment of a principal authorising officer and an assigned accountant, and published in the O.J. of 27.09.01, p. 15273; Decree no. 2001-238 of 21 February 2002 modifying the decree of 3 February 1993 pertaining to fees for the allocation and management of radio frequencies due from holders of licences issued in the pursuance of articles L. 33-1 and L. 33-2 of the Posts and Telecommunications Code, published in the O.J. of 23 February 2002, p. 3471.

<sup>2</sup> Decree no.01-626 of 17 July 2001, published in the O.J. of 18 July 2001, p. 11517.

<sup>3</sup> Decree no.01-238 of 21 February 2002, published in the O.J. of 23 February 2002, p. 3471.

## 2. *The new European regulatory framework*

### A. Presentation of the new regulatory framework

On 7 March 2002, four directives and one decision relating to electronic communications services, electronic communications networks as well as to the related resources and services were definitively adopted by the European Parliament and the EU Council of Ministers<sup>1</sup>. These texts were published in the Official Journal of the European Communities on 24 April 2002 and the directives must be transposed within 15 months of this date. Hence, the Member States of the European Union must incorporate them into their national legislation by 24 July 2003 at the latest, so that they will be applicable on 25 July 2003. Consequently, according to procedure, the corresponding previous directives must be revoked after a transitional period<sup>2</sup>.

The most important of these directives is the one on a common regulatory framework for electronic communications networks and services, known as the "Framework" directive. Taking account of the convergence of the sectors of telecommunications, media and infor-

mation technologies, the directive establishes a common regulatory framework for all electronic communications transmission networks and related services. This framework applies only to the transmission, not to the content of the services provided by electronic communications networks. It does not jeopardise the EU or national measures aimed at ensuring media pluralism, cultural diversity or consumer protection (recital 5).

While recognising sector-specific regulation, the new framework directs regulation towards a general regime that relies more on the principles of ordinary competition law.

This new regulatory framework or "Telecommunications Networks and Electronic Communications Services Package" comprises seven texts.

The four recently adopted directives consist of the "Framework" directive and three special-purpose directives: the directive on the authorisation of electronic communications networks and services, known as the "Authorisation" directive; the directive on access to electronic communications networks and to associated facilities, including interconnection ("Access" directive); and the directive on the universal service and users' rights

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1 These texts are:

Directive 2002/21/EC of the European Parliament and Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, published in the OJEC L108 of 24 April 2002 p.33.

Directive 2002/20/EC of the European Parliament and Council of 7 March 2002 on the authorisation of electronic communications networks and services, published in the OJEC L108 of 24 April 2002 p.21.

Directive 2002/19/EC of the European Parliament and Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities, published in the OJEC L108 of 24 April 2002 p.7.

Directive 2002/22/EC of the European Parliament and Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services, published in the OJEC L108 of 24 April 2002 p.51.

Decision 676/2002/EC of the European Parliament and Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community, published in the OJEC L108 of 24 April 2002 p.1.

2 Articles 26 to 28 of Directive 2002/21/EC of the European Parliament and Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, published in the OJEC L108 of 24 April 2002 p.33.

relating to electronic communications networks and services ("Universal Service" directive).

A procedure for reviewing these four directives is planned, under which the Commission will prepare a report for the European Parliament and Council. The first report is scheduled to be presented no later than three years after the directives have been transposed. The review must pay particular attention to technological and economic developments in the market.

The new common regulatory framework also comprises a decision of the European Parliament and Council relating to a regulatory framework for EU radio spectrum policy ("Radio Spectrum" decision).

A proposal for a directive on the protection of privacy is pending adoption. It will replace Directive 97/66/EC of the European Parliament and Council of 15 December 1997 concerning the processing of personal data and the protection of privacy in the telecommunications sector. This proposal is aimed, in particular, at putting in place a system by which consumers give prior consent before receiving commercial information. Several Member States already implement such systems. Once adopted, this draft directive will form part of the common regulatory framework.

In addition to these harmonisation directives and this decision, a draft directive relating to competition in the market for electronic communications is currently being prepared. Initiated by a European Commission document published on 27 March 2001, this directive should be adopted directly by the Commission acting in its own right, pursuant to Article 86-3 of the Treaty of Rome. The aim of the directive is to amend the previous liberalisation directives.

Thus, the European regulatory framework for

the electronic communications sector has been greatly simplified: it has been reduced from 26 to 6 directives and one decision.

## **B. Text adoption procedure**

Adoption is the culmination of a review procedure aimed at adapting current regulation to developments in the telecommunications sector. The procedure was initiated on 10 November 1999 by the European Commission communication entitled "Towards a new framework for electronic communications infrastructure and associated services. A review of the communications regulatory framework", submitted for public consultation.

The outcome of this consultation led to the Commission's initial proposals for directives, published on 12 July 2000. This was followed by extensive programme of analyses and proposals. ART participated actively in this programme, notably as a member of the Information Society and Telecommunications Economic Questions Group, the Council of Ministers' working group and the Independent Regulators Group (IRG).

The discussions focused on certain provisions of the draft "Framework" directive and resulted in the adoption on 4 April 2001 of three political agreements relating to the "Framework", "Interconnection" and "Authorisations" proposals.

At the same time, in accordance with the co-decision applicable to these draft directives, the European Parliament examined their content and formulated the amendments that it deemed necessary. After the amendments had been examined, a common position was reached by the Council on 17 September 2001 and published in the OJEC on 30 November. The Parliament adopted a legislative resolution on second reading on 12 December 2001, proposing the final texts of the directives and the

"Spectrum" decision on the basis of an agreement with the Council. These texts were formally adopted by the Council and the European Parliament on 7 March 2002.

## **C. The content of the texts**

### **1. *The directive on a common framework*<sup>1</sup>**

In addition to reconfirming the principles of the independence of national regulatory authorities (NRAs) and technologically neutral regulation, this directive extends the powers and missions of NRAs. The procedures for analysing relevant markets, designating SMP operators and defining the stricter obligations applicable to them give NRAs with significant room for manoeuvre. On the other hand, the obligations for NRAs to cooperate with each other and with the Commission have been extended.

- **Creation of a harmonised framework**

The directive "establishes a harmonised framework for the regulation of electronic communications services, electronic communications networks, associated facilities and associated services" (Article 1). It confirms the independence of NRAs, which must be legally distinct from and functionally independent of all organisations providing electronic communications networks, equipment or services. (Article 3 paragraph 2).

- **Defining the overall objectives that should guide NRAs' actions**

The directive defines the overall objectives and the regulatory principles that should guide the action of Member States and NRAs, pursuant to this directive and to the specific directives. Those objectives consist in promoting

competition in the telecommunications sector, contributing to the development of the internal market and supporting the interest of the citizens of the European Union. The ways of achieving these objectives are clearly set out (Article 8).

In addition, NRAs must contribute to the development of the internal market, notably by agreeing on the types of instruments and remedies best suited to address particular types of situations in the market (Article 7 paragraph 2).

- **Strengthening the mechanism for cooperation and information between NRAs and the Commission**

Cooperation with the Commission has been considerably reinforced: Article 5 paragraph 2 on the provision of information states: "Member States shall ensure that national regulatory authorities provide the Commission, after a reasoned request, with the information necessary for it to carry out its tasks under the Treaty". Where necessary, and barring an express request to the contrary from an NRA, the Commission communicates this information to the other NRAs of another Member State. Information submitted to an NRA must be made available to another authority of any Member State to allow it to carry out its duties. Where appropriate, these exchanges must respect the confidential nature of the information.

Member States must regularly publish up-to-date information on the application of the "Framework" directive and specific directives, and mention the references of these publications in the form of opinions published in the Official Journal of which a copy is systematically sent to the Commission (Article 24).

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<sup>1</sup> Directive 2002/21/EC of the European Parliament and Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, published in the OJEC L108 of 24 April 2002 p.33.

In addition, pursuant to Article 22, the Commission is assisted in its duties by a "Communications Committee". This committee replaces the former Licensing and ONP Committees. It must foster the exchange of information between Member States as well as between these States and the Commission (Article 23).

In addition to these specific measures, efforts to bring European NRAs closer together are to be consolidated. Recital 36 of the directive stipulates that the Commission encourages EU harmonisation by supporting the creation of a European regulators group for electronic networks and communications services.

• **The relationship between NRAs and competition authorities**

Pursuant to Article 3, paragraph 5, NRAs and competition authorities must provide each other with the information necessary to the application of the new European directives.

• **The regulator's powers for analysing markets and designating powerful companies**

After public consultation, the Commission will adopt a recommendation defining a list of relevant product and service markets, whose characteristics justify the imposition of stricter obligations, provided for in the specific directives. The Commission issues guidelines determining the criteria for market analysis (Article 15). After consulting with NRAs, the Commission may also adopt a decision identifying transnational markets (Article 15 paragraph 4). Here, authorities must carry out analyses of these markets jointly.

Accordingly, and on condition that the Commission and the other NRAs are pre-informed, NRAs analyse the relevant markets and identify companies with significant market power on markets that it deems non-competitive (Article 16). NRAs establish the stricter regula-

tory obligations that shall apply to these companies.

Where NRAs intend to take measures having a significant impact on a relevant market, they are required to organise a national consultation with the parties concerned, in accordance with Article 6.

The planned system was motivated by the desire to eliminate obstacles to the functioning of the single market and avoid favouritism with regard to companies with significant market power. On certain points, the NRA is therefore obliged to take into account the opinions of its European counterparts and of the Commission, but the restrictive nature of these opinions is limited.

If an NRA intends to take a decision:

- which concerns certain fundamental articles dealing with competition issues (Articles 15 and 16 of the "Framework" directive relating to the objectives and scope of regulation and the market analysis procedure; Articles 5 and 8 of the "Access" directive relating to the powers and responsibilities of regulators and the access and/or interconnection obligations of powerful companies; and Article 16 of the "Universal Service" directive on the review of the obligations on powerful companies operating in certain markets), and

- which would have significant consequences on trade between Member States, it must first, in addition to the consultation procedure provided for in Article 6, make these proposed measures and the reasoning behind them available to the Commission and the other NRAs. The Commission and the NRAs have one month to make their comments, of which the initiating NRA must take utmost account (Article 7 paragraphs 3 and 5).

In particular, NRAs may define markets other than those provided for in the recommenda-

tion but they have to use a procedure, described in Article 7, that makes the national plans subject to the veto of the European Commission. Where an NRA intends to take a decision on whether to define a relevant market that differs from those listed in the Commission recommendation or to identify a company with significant market power, and where this decision is likely to affect trade between Member States, the Commission may postpone adoption by two months if it deems that the decision would create a barrier to the single market or if it has serious doubts about compatibility with Community law. The Commission may also set forth the conditions to be satisfied before the NRA's plan can be adopted. During this period, which cannot be extended, the Commission may ask the NRA to withdraw its proposed measures (Article 7 paragraph 4).

Conversely, a procedure for exceptional cases is provided for: where an NRA deems it urgent to act in order to safeguard competition and protect users' interests, "it may immediately adopt proportionate and provisional measures" (Article 7 paragraph 6). It must inform the Commission and the other NRAs of these measures, together with the underlying reasons. If it subsequently wishes to render such measures permanent or extend the time for which they are applicable, its decision is subject to the provisions described in paragraphs 3 and 4 of Article 7.

- **Redefining the concept of "powerful company"**

The directive brings the definition of a powerful company into line with the concept of dominance established in the decision of the European Court of Justice: "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" (Article 14 paragraph 2). The text also introduces the possibility – based on ordinary competition law – of establishing a collective dominant position by a group of companies unrelated legally and economically.

- **Extending NRAs' powers of dispute settlement**

NRAs have the power to resolve disputes arising in connection with the "Framework" directive or the specific directives between two companies providing electronic communications networks or services (Article 20). At the request of either party, the NRAs make a binding decision that must be applied within four months at the latest. If other mechanisms such as mediation exist at the national level and appear to be better suited to resolving a dispute, NRAs may refuse to intervene. However, if the dispute has neither been settled nor brought before the courts within four months, the NRA concerned can take on the case and make a binding decision that must be applied within four months at most.

In the event of a cross-border dispute between two parties in two different Member States, where the dispute lies within the competence of national regulatory authorities from more than one Member State, either of the parties may refer the dispute to these authorities (Article 21). The authorities may settle the dispute jointly or may decide jointly to refer the case to a more suitable mechanism, under the same conditions as those applying to an internal dispute within a Member State.

- **Consultation and transparency mechanism**

Any NRA that intends to take measures having a significant impact on the relevant

market must give the parties concerned the opportunity to comment on the draft measures within a reasonable timeframe. To this end, NRAs must publish their national consultation procedures. In addition, a single information point must be set up to provide access to all consultations in progress (Article 6).

- **Right of appeal against an NRA decision**

Under Article 4, users or companies affected by an NRA decision have the right, at national level, to appeal against it to an appeal body.

- **Companies' obligations to provide information to NRAs**

Companies providing electronic communications networks or services must supply NRAs with all the information, including financial information, that NRAs may require (Article 5 first paragraph). This information must be supplied promptly on request and must meet the level of detail NRAs require.

- **The obligation of certain companies concerning accounting separation and financial reports**

These measures concern companies of a Member State that provide public communications networks or publicly available electronic communications services and that have special or exclusive rights for the provision of services in other sectors in the same or another Member State. These companies must clearly identify all elements of revenue and cost relating to the provision of networks or services, either by keep separate accounts or by having structural separation for these activities. Companies whose annual revenues from these activities are less than €50 million may be exempted from this obligation (Article 13).

- **Right-of-way procedures that encourage co-location and facility sharing**

Managers of public or private property must consider requests for rights of way submitted by network operators, in compliance with the principles of transparency and non-discrimination. Consideration of these requests does not mean that property managers will systematically issue a favourable response (Article 11). Whenever possible, NRAs must encourage the sharing of facilities or property. Member States may impose the sharing of facilities or may implement measures to facilitate the coordination of the installation of facilities if companies are deprived of access to other viable alternatives because of the need "to protect the environment, public health, or public security or to meet town and country planning objectives" (Article 12).

- **Special measures to foster the harmonisation of frequency and number management**

NRAs control the assignment of all national numbering resources and the management of national numbering plans (Article 10 first paragraph). They also manage the allocation and assignment of radio frequencies for electronic communications networks in their territory (Article 9 first paragraph).

Where harmonisation of numbering resources is necessary for the development of pan-European services, the directives favour such harmonisation in terms of markets and measures. In addition, to ensure full global interoperability of services, Member States must coordinate their positions with regard to numbering, naming and addressing of electronic communications networks and services (Article 10 paragraphs 4 and 5), and promote the harmonisation and use of radio frequencies throughout the European Union (Article 9 paragraph 2).

The Commission may also implement technical implementing measures if divergence at



the national level in regulations aimed at harmonising resources creates a barrier to the single European market (Article 19 paragraph 2).

- **Measures fostering the harmonisation of standards and the interoperability of services**

The Commission will draw up a list of standards and specifications to serve as a common basis for standardisation for encouraging the harmonised provision of telecommunications equipment and services. That list is published in the OJEC (Article 17 on standardisation). The Commission may, after consulting with all the parties concerned, make implementation of certain standards or specifications compulsory. These are duly described in the list published in the OJEC (Article 17 paragraph 4).

Member States are also obliged to encourage measures favouring the interoperability of interactive digital TV services. The use by service providers of an open API (Application Program Interface) and the compatibility of reception equipment with the API are encouraged. The Commission reserves the right to directly take technical implementing measures if interoperability and freedom of choice for users have not been adequately achieved within one year of transposition of the directive (Article 18).

## **2. The directive on network and service authorisations<sup>1</sup>**

The thrust of this directive is to simplify authorisation schemes and to limit regulation as much as possible. It therefore represents a further step towards the streamlining of procedures.

- **Establishment of a general authorisation scheme**

The current EU framework allows Member States to establish general and/or individual authorisations. Under French law, an authorisation is required to establish and operate public networks and to provide public telephone services. ART examines requests for authorisation (i.e. licences) on behalf of the telecommunications minister. It also examines applications to provide telecommunications services over radio frequencies.

To encourage the development of an internal market for electronic communications networks and services throughout the European Union by offsetting the sometimes substantial differences between Member States, and to encourage the arrival of new operators on the electronic communications market, the directive simplifies the rules and conditions pertaining to authorisations (first article). The directive replaces individual authorisations by a system of general authorisations (Article 3). This system applies to the provision of all electronic communications networks and services, regardless of whether they are offered to the public, with the exception of the allocation of scarce resources.

No information shall be required prior to or as a condition for market access. The companies concerned may be required to submit a notification to the NRAs. This notification is limited to a declaration containing only the information needed by the NRAs to identify the provider and its activity (Article 3 paragraphs 2 and 3). Article 11 contains an exhaustive list of the reasons justifying an NRA's request for information. Article 6 contains an exhaustive list of the conditions that may accompany the general authorisation and individual rights of use, as

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<sup>1</sup> Directive 2002/20/EC of the European Parliament and Council of 7 March 2002 on the authorisation of electronic communications networks and services, published in the OJEC L108 of 24 April 2002 p.21.



well as specific conditions applicable to the suppliers designated to provide universal service. These additional conditions are therefore strictly defined.

A general authorisation also gives companies the right to request access to public or private property and no longer grants a systematic right of way (right of way on thoroughfares currently exists under French law) in order to set up their infrastructure. Where networks or services are open to the public, the authorisation allows companies to negotiate interconnection with other providers anywhere in the European Union and, if necessary, to obtain access to those providers' networks (Article 4 paragraph 2). Authorised companies may also be chosen to participate in the provision of a universal service and to supply this service to different parts of the national territory (Article 4 containing the list of minimum rights derived from the general authorisation).

If requested to do so by a company providing electronic communications networks or services, NRAs must issue declarations explaining the circumstances under which the company may request the right to install facilities for its infrastructure, to negotiate interconnection or to obtain access for the purposes of carrying on its business (Article 9). In addition, relevant information concerning general authorisations and rights of use must be published in an appropriate manner so as to provide easy access (Article 15).

- **Development of a special scheme for individual rights of use of radio frequencies and numbers**

The directive introduces a special scheme, separate from the general authorisation, governing the right of use for frequencies and numbers (Article 5). The rights to provide and use radio frequencies or numbers are granted on an individual basis and for specific purposes

as part of national frequency and numbering plans. Member States ensure the efficacy and proper functioning of the allocation and the assignment of radio frequencies and national numbering resources that are granted by NRAs via open, transparent and non-discriminatory procedures (Article 5; see also "Framework" directive Article 9 paragraph 1 and Article 10 paragraph 1). They also ensure that national numbering plans are properly managed. To avoid unwarranted hindrance, the directive provides that the grant procedure may not exceed three weeks in the case of numbers and six weeks in the case of frequencies (Article 5 paragraph 3), unless special conditions in the directive stipulate otherwise.

Nevertheless, when possible, notably in the absence of real risks of interference, use of radio frequencies is subject to the general authorisation scheme, in other words there are no individual conditions attaching to the grant of resources.

In the case of scarce resources, Member States may limit the number of rights of use granted for radio frequencies in order to ensure efficiency. In this case, they issue a call for applications for the allocation of rights of use. Nevertheless, their decision must be reasoned and may under no circumstances be detrimental to users or hinder competition (Article 7). If a Member State decides to allocate additional rights of use, it must first issue another call for applications. Once modes of use for radio frequencies are harmonised at EU level, it will be possible to initiate a selection procedure that is common to all Member States and that complies with international agreements, EU rules and national conditions (Article 8).

- **Possible opening of a secondary market for frequencies**

Under the directive, Member States may permit companies with rights to use for frequen-

cies to transfer these rights to another company. The rights of use must contain a clause specifying whether they may be transferred on the initiative of the holder and the conditions governing such a transfer (Article 5 paragraph 2, point 2, and Article 9 paragraph 3 of the "Framework" directive). This provision therefore paves the way for a secondary market for frequencies.

- **General right of inspection and powers of sanction**

Pursuant to this procedure for the allocation of rights of use as well as the general authorisation scheme, NRAs have the right to conduct a posteriori verification of the general conditions or specific obligations relating to the companies concerned (Article 10). The competent authority must take appropriate and proportionate measures to ensure compliance with these conditions. Member States can authorise the competent authority to impose financial penalties (Article 10 paragraph 3), as is the case for ART. In the event of serious and repeated breaches, NRAs' powers of sanction extend to preventing the company from continuing to provide electronic communications networks and services, and even to suspending or withdrawing its rights of use (Article 10 paragraph 5). Article 10 also provides for the periods of time granted to an operator to propose remedies or state its views following a formal demand from an NRA<sup>1</sup>.

The Commission regularly reviews the functioning of national authorisation systems and the development of cross-border service provision in the European Union (Article 16).

- **Administrative taxes and fees**

It is the role of the State to decide whether companies providing electronic communications networks or services should be subject to

a system of charges. These cover overall administrative costs only, i.e. management costs, the cost of controlling and enforcing the general authorisation scheme, rights of use and specific obligations. Charges are imposed on individual companies in an objective, transparent and proportionate manner (Article 12). Where a system of charges is put in place, certain provisions must nevertheless be respected: NRAs publish a yearly overview of their administrative costs and the total sum of charges collected. The directive also states that "in the light of the differences between the total sum of the charges and the administrative costs, appropriate adjustments shall be made" (Article 12 paragraph 2).

In the same way, the State may introduce a system of fees for the rights of use of radio frequencies or numbers, or the rights to install facilities on, over or under public or private property. These fees must be objectively justified, transparent, non-discriminatory and proportionate in relation to their intended purpose (Article 13).

- **Amendment of rights and obligations**

The directive strictly controls the possibility of amending the rights, conditions and procedures concerning general authorisations and rights of use or rights to install facilities. The amendment procedure, which is relatively restrictive, must be transparent. The procedure may be implemented only in objectively justified cases and in a proportionate manner (Article 14).

- **Authorisations that pre-date the entry into force of the directive**

Whenever the transposition of the provisions of the directive results in a reduction of the rights or an extension of companies' obligations under an existing authorisation, Member

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<sup>1</sup> Cf. the part concerning the ruling of 25 July 2001 above.

States may ask the Commission for permission to extend the validity of those rights and obligations by a maximum of nine months from the transposition deadline, provided this does not affect the rights of other companies in the European Union (Article 17).

### **3. Directive on access to, and interconnection of, electronic communications networks and to associated facilities<sup>1</sup>**

The directive harmonises the way in which Member States regulate access to, and interconnection of, electronic communications networks and associated facilities. It aims to foster sustainable competition, interoperability of services, and consumer benefits (Article 1). It impose no obligations on non-public networks, unless they have access to public networks and are subject to special conditions in this respect.

The directive does not make any fundamental changes to the previous system, but modifies some of its provisions. However, the markets on which the power of operators is examined are no longer identified in the directive; they are determined by NRAs in accordance with Commission guidelines. This mechanism will make the regulatory process more flexible and, where necessary, will make it possible to impose obligations on markets that have not yet been identified.

#### **• Clarification of the relationship between interconnection and access**

The directive clarifies the relationship between interconnection and access. Interconnection is a specific type of access implemented between public network operators (Article 2 point b). As defined in the directive, access excludes access by end-users. Examples of

access are provided. Thus, regulation of access encompasses: local loop unbundling, roaming, virtual network services, relevant software systems, access to buildings, ducts and masts, access to conditional access systems for digital television services (Article 2), or the provision of specified services on a wholesale basis for resale to third parties (Article 12 paragraph 1 point d).

#### **• Establishing a general framework for access and interconnection**

This framework liberalises relations between Member State companies. No restrictions may prevent them from negotiating with each other and signing agreements on the technical or commercial terms of access or interconnection. A company is entitled to request access or interconnection in a given Member State without having to produce an existing licence to conduct operations in the Member State if that company does not provide services or operate a network in that State. The directive forbids Member States from maintaining legal or administrative measures that impose different access and interconnection requirements for equivalent services in a Member State, or from imposing specific obligations that are not related to the actual access and interconnection services (Article 3).

#### **• Powers and responsibilities of NRAs**

Member States must ensure that NRAs are empowered to intervene at their own initiative where justified or, in the absence of agreement between companies, at the request of either of the parties involved, in order to secure the policy objectives defined in the "Framework" directive (Article 5 paragraph 4).

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<sup>1</sup> Directive 2002/19/EC of the European Parliament and Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities, published in the OJEC L108 of 24 April 2002 p.7.

In accordance with the procedure defined in that directive, NRAs identify operators with significant market power. They may impose obligations of transparency and non-discrimination on these operators on a case-by-case basis as well as obligations relating to accounting separation and access to, and use of, specific network resources (Articles 8 to 13).

In exceptional circumstances, an NRA may wish to impose additional access or interconnection obligations on operators with significant market power. In this case, it submits a request to the Commission, which either authorises it or rejects it (Article 8 paragraph 3).

NRAs must inform the Commission of their decisions to impose, modify or remove such obligations (Article 8).

NRAs must encourage and, where appropriate, ensure adequate access and interconnection, and interoperability of service (Article 5 paragraph 1). NRAs may impose obligations on companies controlling access to end-users in order to ensure end-to-end connectivity and may require operators to provide access to resources such as APIs and electronic programme guides (EPGs) in order to ensure end-user access to radio and digital television broadcasts. When an obligation to provide access is imposed on an operator, NRAs can determine, pursuant to Article 12, the technical or operational conditions of provision. These obligations are essentially aimed at preventing measures that would hinder the emergence of a sustainable competitive market at the retail level or that would not be in the end-user's interest (Article 5 paragraph 2, Article 12 paragraph 1). For its part, the Commission must publish a list of standards and/or specifications with a view to encouraging the harmonised provision of electronic communications networks, electronic communications services and associated facilities and services. ("Framework" directive, article 17).

Pending the review of obligations that existed before the directive came into force, these obligations have been maintained (Article 7 paragraph 1). NRAs must carry out market analyses regularly to determine if former obligations should be maintained, amended or withdrawn (Article 7 paragraph 3).

- **General rights and obligations for operators**

Public network operators have the right, when requested by other companies, to negotiate a reciprocal interconnection for the purpose of providing of publicly available electronic communications services. When the requesting company also holds an authorisation, operators are actually obligated to negotiate the interconnection (Article 4 paragraph 1). This obligation applies only to interconnection; it does not apply to access (except in the case of the provisions, cited earlier, described in Article 5 paragraph 1 of the directive).

- **Stricter obligations for operators with significant market power**

The terms and conditions of the procedure to designate operators with significant market power ("SMP operators") are clearly defined in Articles 14, 15 and 16 of the "Framework" directive. Operators designated as having significant power may be required by NRAs to comply with five types of obligation, applicable to access and interconnection (Article 8 paragraph 2) in compliance with Articles 6 and 7 of the "Framework" directive:

- transparency obligations (Article 9): NRAs may require an operator to make public a reference offer, pursuant to the rules on non-discrimination, and, where appropriate, may impose changes on such offers;
- non-discrimination obligations (Article 10);
- obligations of accounting separation (Article 11): this obligation applies in particu-

lar to vertically integrated companies and aims to prevent discrimination or unfair cross-subsidy;

- obligations of access to, and use of, specific network facilities (Article 12): NRAs may require an operator to provide another operator or company with access to, and use of, specific network elements and related facilities. This obligation concerns, in particular, unbundled access to the local loop, the interconnection of networks or network facilities and the provision of specified services needed to ensure interoperability of end-to-end services to users. When making their decisions, NRAs consider technical and economic conditions, including long-term competition objectives on the market concerned and objectives relating to the provision of pan-European services;

- obligations relating to price control (Article 13): the authority may introduce a cost-accounting system and impose cost obligations, including obligations for cost-orientation of prices.

However, it is important these obligations are established as a maximum set of obligations. The objective is to gradually reduce ex ante sector-specific rules as competition on the market develops (recital 13).

Specific obligations, together with any information relating to the parties concerned, must be made publicly available in a manner that guarantees easy access (Article 15). NRAs must submit to the Commission the names of operators deemed to have significant market power, as well as any changes to the obligations applicable to them (Article 16).

#### • Provisions relating to unbundling

In connection with the general regulation of access, the directive incorporates issues relating to unbundled access to the local loop and the provision of services made possible there-

by. However, this does not change the framework currently applicable to access. Under recital 43 of the "Framework Directive", the Commission can bring forward a proposal, at an appropriate time, to repeal the EU regulation of 18 December 2000 on unbundled access to the local loop.

When an SMP operator is subject to obligations concerning unbundled access to the twisted metallic pair local loop, as provided for in Article 12 (see above), NRAs ensure that a reference offer is published. This measure concerns both full unbundled access and shared access to the local loop. The offer must contain certain items listed in Annex II (Article 9, paragraph 4): network elements to which access is offered, information concerning the location of physical access sites and availability of local loops in specific parts of the access network, technical conditions related to access and use of local loops, ordering and provisioning procedures, and usage restrictions.

#### • Measures relating to decoders and conditional access systems

The directive keeps the regulatory framework established by Directive 95/47/EC on the use of standards for the transmission of television signals. This framework contains the requirement to supply conditional access to this sector, notably to the digital television sector, in a fair, reasonable and non-discriminatory conditions.

However, the directive recommends that technical and economic developments should be taken into account on a regular basis to determine whether EPGs and APIs, in particular, could be integrated into this regulatory framework (recital 10, and Article 5 paragraph 1 point b). The conditions that apply to conditional access systems are listed in Annex I. Member States may allow NRAs to review these conditions by undertaking market analyses.

Moreover, certain conditions can be modified or withdrawn in the event that an operator no longer has significant market power, on condition that such modifications or withdrawals do not adversely affect end-users, the development of competition for retail radio and digital television services, or conditional access systems and other related resources. This review must be repeated at regular intervals (Article 6 paragraph 3).

Moreover, public electronic communications networks established for the distribution of digital television services must be capable of distributing wide-screen television services and programmes (Article 4 paragraph 2).

#### ***4. Directive on universal service and users' rights relating to electronic communications networks and services*<sup>1</sup>**

This directive updates the concept of universal service, understood as the provision, in an open and competitive market environment, of a minimum set of services of specified quality to all end-users at an affordable price, without distorting competition. The directive also provides for the rights of users and the corresponding obligations of companies providing electronic communications networks and services that are available to the public (Article 1).

Noting that the regulatory framework established in 1998, when the telecommunications market was full liberalised, defined the minimum scope of universal service obligations, the directive stipulates that the concept of universal service will evolve in line with the technological, economic and social environment. The Commission must therefore review the scope of the universal service once every three years and submit its proposed modifications or redefinitions to the European Parliament and Council (Article 15).

In addition, the directive takes account of the commitments made by Member States and the European Union in the context of the World Trade Organization agreement concerning basic telecommunications services.

#### **• Scope and obligations of the universal service**

The universal service obligations applicable to operators are as follows.

The fundamental requirement is still to ensure that users are connected at a fixed location to the public telephone network (fixed telephony). In particular, the connection should allow users to transmit and receive data communications at speeds that are sufficient to ensure functional access to the Internet (Article 4, paragraph 2).

All users must have access to at least one comprehensive directory, which must contain fixed and mobile telephone numbers (recital 11), in a form approved by NRAs, and a comprehensive directory enquiries service (Article 5).

NRAs must be able to require companies to provide public pay telephones to meet the reasonable needs of end-users in terms of geographical coverage, number, quality of service and accessibility for disabled users (Article 6).

The directive gives greater emphasis to social service obligations, with particular reference to users on low incomes, users with special social needs and disabled users. Thus, for services coming within the scope of universal service, Member States may require designated companies to provide special tariff options that are different from those offered

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<sup>1</sup> Directive 2002/22/EC of the European Parliament and Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services, published in the OJEC L108 of 24 April 2002 p.51.

under normal trading conditions, notably to ensure that persons on low incomes or with special social needs are not excluded from these services (Article 9, paragraph 3). They ensure access to and affordability of publicly available telephone services for disabled users (Article 7).

Member States ensure that, on the one hand, companies provide specific facilities and services to allow users to monitor and control their expenditure and, on the other hand, that companies establish their terms and conditions in such a way that the subscriber is not obliged to pay for facilities or services which are not necessary or not required for the service requested. Exchanges of data relating to these services must be transparent (Article 10).

NRAs specify and monitor compliance with performance targets in the sphere of service quality for companies designated to provide universal service. Should a company persistently fail to comply with its obligations, NRAs may demand an independent verification and, if necessary, may take specific measures, in accordance with the "Authorisation" directive (Article 11).

#### • Procedures for the provision of universal service

According to the principle of subsidiarity, Member States are responsible for determining the most efficient and appropriate approach for ensuring implementation of universal service; they must also seek to minimise the resulting market distortions (Article 3). Member States also designate one or more companies to provide all or a part of the service in one or several parts of the national territory. The selection process is based on an objective and transparent procedure that a priori does not exclude any company and that is based on cost-effective provision of universal service (Article 8).

NRAs must inform the Commission of the names of the companies that have been designated to comply with these obligations as well as the names and obligations of operators with significant market power (Article 36).

#### • Mechanisms to finance universal service obligations

Should the provision of the universal service appear to represent an unfair burden for the companies that provide it, NRAs calculate the net cost of the universal service obligation, taking into account intangible benefits accruing to companies that provide this service (Article 12). If, once this calculation has been verified by the company or by an independent body, the company is indeed subject to an unfair burden, Member States may set up a compensation mechanism.

This mechanism may take several forms. The net cost may be met from public funds and/or distributed among all the companies providing electronic communications networks and services. In the latter case, the distribution mechanism is managed by each NRA directly or via an independent body (Article 13). Financing may be provided only in relation to the net cost of the universal service obligations (see above).

These mechanisms comply, in particular, with the principles of transparency (Article 14) and "minimum distortion" to the market. Financial transfers must result in the least distortion to competition and to user demand (Annex IV, B). No compensation mechanism involving specific companies may be imposed for additional mandatory services that Member States may decide to make available to the public (Article 32).

#### • Controlling retail tariffs

Until now, the directives contained no specific provisions relating to the retail price control. However, the majority of Member States have



introduced individual controls or price caps.

For harmonisation purposes, the universal service directive has introduced common rules.

Pending the future review of the universal service obligations of SMP companies, obligations relating to retail pricing that existed before the entry into force of the directive have been maintained (Article 16).

NRAs are responsible for monitoring the evolution and level of retail tariffs for services falling under universal service obligations (Article 9). Member States may require companies providing universal service to provide special tariff options, to comply with price caps or to apply a common tariffs, including geographical averaging, throughout the national territory. The terms and conditions for these services must therefore be transparent, public and applied without discrimination. NRAs may require that special price schemes be modified or withdrawn (Article 9 paragraphs 3 to 5).

Should NRAs' market analyses reveal that a retail market is not competitive and that obligations imposed pursuant to the "Access" or "Universal Service" directives would prevent the achievement of the objectives set out in the "Framework" directive, NRAs may impose retail regulation on companies with significant market power in an attempt to adjust retail prices on the basis of costs and prices in comparable markets. They may prohibit companies from charging excessive prices, inhibiting market entry or restricting competition by setting predatory prices, or unreasonably bundling services (Article 17 paragraphs 1 and 2). These regulatory obligations must be proportionate and justified.

NRAs may also impose special obligations and special accounting procedures to track these companies' costs (Article 17 paragraphs 2 and 4). In particular, where a company is subject to

retail tariff regulation or other relevant retail controls, suitable cost accounting systems must be systematically deployed (Article 17 paragraph 4).

Compliance with this system is regularly verified by an independent body, and the result of the inspections is communicated to the Commission (Article 17 paragraphs 3 and 4).

NRAs must carry out market analyses at regular intervals to determine whether effective competition exists on retail markets and whether obligations relating to these markets should be amended or withdrawn (Article 16).

#### **• Selection and preselection, portability and measures favourable to end-users**

Pending the future review of the universal service obligations of SMP companies, the obligations relating to call-by-call selection and carrier preselection that existed before the entry into force of the directive have been maintained (Article 16).

In accordance with the procedure set out in Article 14 of the "Framework" directive, NRAs ensure that companies with significant power on the relevant market offer call-by-call selection and preselection. With this in mind, prices must be oriented to access and interconnection costs, and direct charges to subscribers, if any, do not act as a disincentive (Article 19).

In addition, subscribers to public telephone services must be able to keep their numbers if they so request. Number portability is extended to mobile services. However, porting does not apply between networks providing services at a fixed location and mobile networks. Here again, the pricing of interconnection for this service must be proportional to cost, and charges to users must not act as a disincentive (Article 30). For this specific service, the NRA does not impose any retail



pricing measures that would distort competition.

Other obligations aimed primarily at defending the interests of end-users and consumers are provided for. These include access for all subscribers to public telephone services to directory assistance and information services, the integrity of the fixed public telephone network (notably uninterrupted access for all users to emergency services) (Article 23), access for any end-user of a Member State to a directory enquiry service of another Member State (Article 25), and access of all end-users to the free European emergency call number "112" (Article 26).

In addition to detailed invoices, operators must offer services such as the provision of information and the intelligibility of these contracts (Article 20). NRAs may require companies offering publicly available electronic communications services to publish comparable, adequate and up-to-date information on prices and tariffs. This information must be made available to end-users and consumers (Article 21). It must also be submitted to NRAs, at their request, before it is published. NRAs may specify certain indicators, as well as the content, form and method of publication, to ensure end-users receive information that is comprehensive, comparable and user-friendly (Article 22).

With respect to the provisions aimed at defending the interests and guaranteeing the rights of end-users, NRAs must consult all interested parties and take account of their views (Article 33).

- **Controls relating to the minimum set of leased lines**

Pending the future review of the leased line obligations of SMP companies, obligations that existed before the entry into force of the direc-

tive relating to leased lines have been maintained (Article 16).

NRAs may require SMP companies to comply with obligations relating to the provision of a minimum set of leased lines. The conditions applicable to this set are clearly defined in Annex VII of the directive. NRAs will withdraw these obligations once they observe that the market is effectively competitive. The Commission reserves the right to adopt any modifications necessary to this system in accordance with technical and economic developments on the market (Article 18).

- **EU harmonisation measures relating to numbering and standardisation**

The directive stipulates that the prefix "00" must permit access to the international telephone network in the European Telephony Numbering Space. All companies operating public telephone networks must route "00" calls regardless of the cost. However, specific arrangements allowing calls to be made between adjacent locations across borders between two Member States are authorised (Article 27). Access of all end-users of a Member State to the non-geographic numbers on the territory of another Member State is also encouraged, technical and economic conditions permitting (Article 28).

The directive encourages, in accordance with common European standards, the implementation of interoperability for consumer digital television equipment, which must be compatible with certain analogue television receivers and with equipment used to unscramble digital signals (Article 24).

In addition, it provides for access of all end-users to additional services relating to tone dialling and calling line identification, subject to technical and economic feasibility (Article 29).

- **Specific obligations: "Must carry" obligations**

In addition to these miscellaneous measures, the directive specifies that Member States may impose "must carry" obligations on companies under their jurisdiction. These obligations, for the transmission of radio and television channels or services, apply to companies providing electronic communications networks used for the distribution of radio or television broadcasts to the public where a significant number of end-users of such networks use them as their principal means to receive radio and television broadcasts. "Such obligations shall only be imposed where they are necessary to meet clearly defined general interest objectives and shall be proportionate and transparent" (Article 31 paragraph 1). They are subject to periodical review, but the timeframes are not specified.

Member States may determine a system of remuneration for the companies concerned that is appropriate, non-discriminatory, proportionate and transparent (Article 31 paragraph 2).

- **Provisions aimed at facilitating the dispute settlement procedure for consumers**

For all issues relating to the "Universal Service" directive, Member States must ensure that transparent, simple and inexpensive out-of-court procedures are available for dealing with unresolved disputes involving consumers (Article 34).

### ***5. The decision on a regulatory framework for EU radio spectrum policy*<sup>1</sup>**

The term "radio spectrum" includes radio

waves frequencies between 9 KHz and 3000 GHz; radio waves are electromagnetic waves propagated in space without artificial guide (Article 2).

The decision establishes a policy and a legal framework for the radio spectrum within the European Union. The aim is to establish a policy and legal framework in the Community to ensure the coordination of policy approaches and, where appropriate, harmonised conditions with regard to the availability and efficient use of the radio spectrum necessary for the establishment and functioning of the internal market in Community policy areas (Article 1 paragraph 1). Unlike the directives, the provisions of the decision apply not only to the domains relating to electronic communications, but also to transport, research and development (Article 1 and recital 1). They also concern users from law enforcement bodies, the armed forces and the scientific community (recital 8).

This objective in relation to coordination and harmonisation complies with the provisions of the "Framework" directive and also takes the provisions of the "Authorisation" directive into account.

The decision was drafted within the singular context of incessantly growing demand for radio spectrum frequencies, which are limited in number. This demand "will lead to conflicting pressures to accommodate the various groups of [...] users" (recital 8).

The decision does not affect measures to pursue public interest objectives implemented at national or EU level, the provisions of Directive 99/5/EC<sup>2</sup>, or the right of Member States to organise the way they manage the spectrum

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1 Decision 676/2002/EC of the European Parliament and Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community, published in the OJEC L108 of 24 April 2002 p.1.

2 Directive 99/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity, published in the OJEC L. 191 of 7 April 1999 p.10.

and to use it for the purposes of public policy, security and defence (Article 1 paragraph 4). In particular, the provisions relating to the regulation of content and audio-visual policy will not be called in question.

• **Objective and scope of the decision**

To achieve the objective specified in Article 1 paragraph 1 above, the decision aims to:

- facilitate policy making with regard to the strategic planning and harmonisation of the use of radio spectrum in the Community taking into consideration inter alia economic, safety, health, public interest, freedom of expression, cultural, scientific, social and technical aspects
- ensure the common spectrum policy is effectively implemented;
- ensure the coordinated and timely provision of information concerning the allocation, availability and use of radio spectrum;
- ensure the effective coordination of Community interests in international negotiations (Article 1 paragraph 2).

Activities carried out pursuant to this decision must take utmost account of the work of international organisations relating to spectrum management such as the International Telecommunications Union (ITU) and the European Conference of Postal and Telecommunications Administrations (CEPT), which prepare technical harmonisation measures for spectrum use (Article 1 paragraph 3). As the CEPT comprises 44 European countries, its decisions may have important consequences for Member States having borders with non-EU countries that are members of the international organisation. Activities stemming from the "Radio Spectrum" decision must take this specific situation into account (recital 13).

• **Creation of a special-purpose committee**

The decision establishes a Radio Spectrum Committee comprising representatives of Member States and chaired by a Commission representative (Article 3). The committee must work with national authorities' experts that are responsible for spectrum management, and take into account the point of view of the industry and of all users involved (recitals 6 and 12).

The committee is authorised to examine proposals for technical implementing measures concerning the radio spectrum submitted by the Commission. Should these measures come within the remit of the CEPT, that organisation takes charge of drafting them in the form of mandates issued by the Commission. The Commission decides whether the results of the work carried out within the framework of these mandates must be applied in the European Union, and may also determine their period of application. It may adopt measures to achieve the objectives of the mandate should it or a Member State deem the progress or the results of this work to be unsatisfactory (Article 4 paragraph 4).

The Commission may directly adopt technical measures not falling within the remit of the CEPT by ruling in accordance with the procedure described in Articles 5 and 7 of Council decision 1999/468/EC on the conditions for exercising the Commission's executive powers pursuant to the provisions of Article 8 of said decision (Article 4 paragraph 6).

The Commission shall periodically consult the committee in connection with wider issues relating to the formulation, preparation and implementation of the EU radio spectrum policy (Article 4 paragraph 7).

- **Availability of information**

The national radio frequency allocation table, information about rights, conditions, procedures, charges and fees concerning the use of the spectrum must be published and made available to the public as soon they are relevant (Article 5).

The coordinated and timely provision to the public of appropriate information concerning the allocation, availability and use of radio spectrum in the Community is an essential element for investments and policy making (recital 14).

- **Relations with third countries and international organisations**

The Commission follows developments relating to the spectrum in third countries or in international organisations that are likely to have an impact on the "Spectrum" decision. At the same time, Member States inform the Commission of any difficulties created, *de jure* or *de facto*, by third countries or international organisations for the implementation of the decision. The Commission makes regular reports about the results of these two types of activity to the European Parliament and Council. The Commission can propose measures to ensure implementation of the decision. If necessary to achieving the objective set out in Article 1 of the decision, the Commission may require that common objectives be agreed to ensure coordination among Member States (Article 6).

These measures do not interfere with the rights and obligations of the European Union and Member States deriving from relevant international agreements (Article 6 paragraph 4).

- **Procedures relating to the implementation and proper functioning of the decision**

Member States are obliged to provide the Commission with all information, including the results of CEPT mandates, necessary to verify the implementation of the decision (Article 7).

Member States do not divulge any information that is covered by the obligation of business confidentiality. This measure does not cover the publication of non-confidential information relating to the terms and conditions of spectrum use. Where competent authorities do divulge information for the purpose of fulfilling their duties, such disclosure must be proportionate and must have regard to the legitimate interests of companies in the protection of their business secrets (Article 8).

Every year, the Commission reports to the European Parliament and Council on the activities carried out and the measures implemented under the "Spectrum" decision, as well as actions envisaged for the future (Article 9).

Member States must adopt all measures needed to implement the decision, as well as all resulting measures (Article 10).

#### **D. Comparison of the current framework and the new framework**

The following table makes a detailed comparison between the current framework and the new framework introduced by the "Telecommunications Networks and Electronic Communications Services Package".

"Framework" directive	Current system	System provided for by the directive
Legal regime applicable to networks and services	No unified regime applicable to networks	Introduction of a common regulatory regime for all electronic communications transmission networks (including those incorporating audio-visual services) and for all related services, irrespective of the technologies used (Article 1). This framework applies only to the transmission and not to the content of the services provided by electronic communications networks.
General principles	Separation of regulatory and operational functions	According to this principle, Member States must ensure that NRAs are independent in order to ensure their decisions are impartial.
Definition of overall objectives	Definition of overall objectives and regulatory principles (1996 Act): - fair and effective competition that is to the benefit of users, - provision and financing of all elements of public service, - competitiveness, employment, innovation.	Definition of overall objectives and regulatory principles that should guide the actions of Member States and NRAs, as well as the means of achieving these objectives: - promoting competition, - developing the internal market, - supporting the interests of citizens (Articles 7.2 and 8), - taking account of convergence (recital 5).
Definition of relevant markets	4 markets are defined in the directives: - fixed telephony retail market, - mobile telephony retail market, - national interconnection market, - leased lines market.	Definition, via a Commission recommendation, of a list of relevant sector markets that would be likely to justify imposing increased obligations (Article 15). Strictly defined introduction of the possibility whereby NRAs may designate a relevant market that is not contained in the Commission's list (Article 7).
Definition of an SMP operator	An operator is deemed to have significant market power if it has a market share of 25% or more on one of the four identified markets and/or if it meets additional criteria in relation to: its revenues in relation to the size of the market, its control via access to the end-user, its access to financial resources and its experience in the provision of products and services in the market.	The evaluation of the degree of competition is based on criteria stemming from competition law. In theory, these criteria do not specify a specific threshold. Operators are considered SMP operators if they occupy a "dominant position", in the sense of competition law, on these segments of the market (Article 14). Commission guidelines exist in relation to market analysis and the assessment of market dominance, of which NRAs must "take utmost account".
Analysis of markets and obligations applicable to SMP operators	Directives define the increased obligations applicable to SMP operators on the 4 identified markets	NRAs regularly analyse the level of competition on relevant markets and designate SMP operators on non-competitive markets; NRAs decide whether to maintain, remove or modify the obligations that SMP operators must fulfil (Article 16).
NRA powers and veto rights of the Commission pertaining to the analysis of markets and the designation of SMP companies	NRA powers are strictly defined by the directives, which determine relevant markets and the corresponding increased obligations.  The Commission plays no role in the exercising of these powers	An NRA may take the decision to define a relevant market other than those listed by the Commission, or to designate or not to designate a company as an SMP operator on the market. Where this decision tends towards modifying exchanges between Member States, the Commission possesses a right of veto under certain conditions (Article 7). In order to preserve competition and protect the interests of users in an emergency, NRAs may exceptionally implement measures immediately, under special circumstances (Article 7).

"Framework" directive	Current system	System provided for by the directive
Dispute settlement	ART's scope is clearly defined: - interconnection and access, - cable networks - infrastructure sharing	NRAs are authorised to settle a dispute between two companies relating to the obligations provided for in all directives. If the case was transferred on their request to another body but was not settled after a 4-month period, the NRA concerned must intervene and make a binding decision that must be applied within 4 months (Article 20).
Cross-border disputes	No specific mechanism	In the case of trans-European markets, a specific procedure involving the NRAs concerned is provided for (Article 21).
Right of recourse	ART decisions may be appealed before the Conseil d'Etat or the Court of Appeal of Paris	All users or companies affected by an NRA decision have right of recourse (Article 4).
Provision of information by companies	Companies must supply ART with information: - about their specifications, - for statistical purposes (Art. L. 36-14 PTC), - during ART investigations (Art. L. 36-13 PTC)	Companies must provide NRAs with all of the information they require, including financial information (Article 5).
Relations with the Commission and other NRAs	No specific mechanism	Creation of a mechanism for consultation and cooperation between the different NRAs and with the Commission (Article 5); in particular, if the Commission makes a legitimate request, NRAs must provide it with all necessary information.
Relations between NRAs and the competition authorities	No specific mechanism in the directives. The 1996 Act provides for a mechanism of reciprocal consultation between the Council and ART.	NRAs and NCAs exchange any information needed to implement the directives in accordance with confidentiality provisions (Article 3).
Consultation and transparency	No specific mechanism	NRAs wishing to implement measures having a significant impact on a relevant market, must proceed with a national consultation.
Harmonisation of frequency and number management	ART allocates frequencies and manages the national numbering plan. Member States must coordinate their positions within relevant international bodies in connection with numbering. Specific provisions govern the harmonisation and use of frequencies, but the directives contain no general provisions in this regard.	NRAs control the assignment of all national resources relating to numbering and the management of national numbering plans as well as frequency allocation and assignment (Articles 9 and 10). Member States must coordinate their positions with regard to numbering and addressing of electronic communications networks and services and promote the harmonisation and use of radio frequencies throughout the European Union (Articles 9 and 10).
European group of regulatory authorities	An informal Independent Regulators' Group exists	The Commission supports the creation of a European regulatory authorities group for electronic communications networks and services (recital 36).

"Authorisation" directive	Current system	System provided for by the directive
Authorisations regime	The current EU framework allows Member States to establish general and/or individual licences. Under French law, an individual licence is required to establish and operate networks that are open to the public or networks that provide telephone services to the public.	Establishment of a general authorisation regime (Articles 1 to 3) for all networks and services that are open to the public as well as independent networks. No information as a prerequisite for access is required.
Issuance of authorisations	ART examines requests for licences for networks and services that are open to the public on behalf of the minister in charge of telecommunications (Art. L. 33-1, L. 34-1, L. 33-3) and issues licences for independent networks (Art. L. 33-2).	The companies concerned may only be requested to submit a notification to the NRAs (Article 3). Member States may, to a certain extent, limit the number of rights of use. In this case, or if Member States decide to allocate additional rights of use, they must first issue a call for applications (Article 7).
Number and frequency allocation	In most cases, frequencies and numbers are allocated individually when there is no particular reason to limit their number. A call for applications procedure is carried out if frequencies are scarce. No allocation deadline in relation to frequencies and numbers.	Where possible, the use of frequencies is not determined by an individual decision. By exception to the general authorisation regime, NRAs grant the rights of use of scarce resources (frequencies, numbers) (Article 5). Decisions on the allocation of rights of use are taken and rendered public within 3 weeks in the case of numbers and within 6 weeks in the case of frequencies (Article 5).
Right of inspection and power of sanction	ART has the right to conduct a posteriori supervision of the general conditions and the specific obligations relating to the companies concerned. ART has the power to impose financial penalties or to suspend or revoke licences.	NRAs have the right to conduct a posteriori supervision of the general conditions and the specific obligations relating to the companies concerned (Article 10). NRAs' powers to impose sanctions extend to terminating a company's activity of providing electronic communications networks and services and even to the suspension or withdrawal of its rights of use (for frequencies and numbers) (Article 10).
Term of validity for licences	15 years (20 years for UMTS licences)	No validity period specified for general authorisations. It is possible to limit the duration of the rights of use pertaining to numbers and frequencies.
Transferability of frequencies	The frequencies allocated may not be transferred.	Possible opening of a secondary market for frequencies, with transferability of frequency rights of use of by holders of these rights, under certain conditions (Article 5 and recital 19 of the "Framework" directive).
Rights of way	Rights of way regime for operators of networks	Rights of way are replaced by the right, granted to companies, to ask the administrators concerned for permission to occupy the public or private domain (Article 4, and Article 11 of the "Framework" directive).
Taxes	The sole aim of administrative tax regimes is to cover overall administrative costs; these regimes must not distort competition on the market or create barriers to entry. In France, taxes are payable on a fixed-rate basis.	Same provisions as the current regime concerning taxes (Article 12).
Fees	Under French law, fees are charged for the use of frequencies and numbers, as well as for rights of way.	Member States may introduce a system of fees for the rights of use of frequencies and numbers, or the rights to place infrastructure on or under public or private assets (Article 13).

"Access and interconnection" directive	Current system	System provided for by the directive
Status of interconnection	The relationship between interconnection and access is not clear in the directives and in legislation. Only special access is defined (and is provided for by a specific regime in the directive).	Interconnection is a specific type of access (Article 2).
General rights and obligations	Operators must negotiate reciprocal interconnection.	Establishment of a general framework for access and interconnection. New entrants to the market do not need to hold a previous licence (Article 1). Operators must negotiate a reciprocal interconnection for the provision of services to the public if requested to do so by an operator (Article 4). This obligation does not apply to the other types of access (Article 4). Pending the review of obligations that existed before the entry into force of this directive, these obligations shall be maintained (Article 7).
Increased obligations of SMP operators	Increased obligations are defined by the directives on each relevant market and apply to interconnection. NRAs have no room to manoeuvre with regard to the application of increased obligations.	Pursuant to the procedure defined in the "Framework" directive, NRAs may require SMP companies to fulfil 5 types of obligation that are comparable to the current obligations (Articles 8 to 13). This maximum set of obligations should hinder competition as little as possible. NRAs may adjust the obligations that potentially apply to interconnection and access.
Unbundling	Special regulations for unbundling exist (regulation of 18 December 2000).	Unbundled access to the local loop is integrated into the generic access regulations. Under the directive, operators concerned must fulfil the same obligations as those specified in the regulation (Article 12 and Annex II). The Commission supervises the transition between the existing and the new framework. Pursuant to recital 43 of the "Framework" directive, it can also present, at the appropriate time, a proposal aimed at repealing the EU regulation (no automatic abrogation when directives take effect).
Systems of conditional access	No specific mechanisms.	Regulation of conditional access systems is incorporated into the access regime provided for in the directive. List of special conditions provided in Annex I. Member States may authorise NRAs to review these conditions by carrying out market analyses, and even to modify or remove conditions that are no longer justified (Articles 6 and 7). Obligation to supply conditional access to the digital television sector on equitable terms (recital 10). The wide-screen format is encouraged for the distribution of programmes and related services (Article 4).



"Universal Service" directive	Current system	System provided for by the directive
Universal service obligations	Ensure end-users have a connection to the public telephone network (fixed telephone), establish a comprehensive directory and directory enquiries service, ensure the provision of public pay telephones throughout the national territory. Social service obligations with regard to users on low incomes, users with special social needs and disabled users in the form of special pricing schedules or technical conditions. Financing may be provided only in respect of these obligations.	Same obligations (Articles 4 to 7). Connection to the public telephone network must also provide users with functional access to the Internet (Article 4).  Ditto
Financing of universal service obligations	Member States may put in place a financing system if these obligations cannot be provided on a commercial basis. ART evaluates the net cost of the universal service and presents its proposal to the telecommunications minister, who officially notes it. Creation of a universal service fund in France.	If they believe the universal service may represent an unjustified burden, NRAs calculate the net cost of the universal service, taking into account intangible benefits or have this cost calculated by a third party (Article 12).  If necessary, funding may be provided by the State budget or by a universal service fund.
Tariff monitoring	No specific European mechanisms in relation to monitoring of retail prices. Member States are free to choose the corresponding tools.	NRAs are responsible for monitoring "the development and the level of retail prices applicable to the services defined as relating to the obligations of the universal service and provided by designated companies, notably in relation to consumer price levels and national incomes" and may require that certain pricing options be modified or discontinued. (Article 9). NRAs define retail prices of SMP operators on the market (Article 17). The set of obligations that are currently in effect shall be maintained until NRAs have carried out a review (Article 16).
Selection, preselection and portability of numbers	Selection and preselection mechanisms must be available. Establishment of number portability for fixed telephony services.	Same obligations (Articles 16 and 19).  Number portability is extended to mobile services.
Leased lines	ART imposes specific obligations defined by the directives on SMP operators on the leased lines market.	Provision of a minimum set of leased lines. List of the obligations that NRAs can impose in this regard on SMP operators and the conditions that apply to this set (Annex VII).
"Must carry" obligations	"Must carry" obligations for analogue television (Art. 34 of the Act of 30 September 1986) and for digital television (Decree recently adopted).	Member States can impose "must carry" obligations under certain conditions with a view to achieving general interest objectives (Article 31).

"Universal Service" directive	Current system	System provided for by the directive
Consumer consideration	ART ensures that mobile operators fulfil their obligation in relation to service quality.  ART may modify contracts between operators and consumers (Edict of 25 July 2001).	NRA must take account of the point of view of end-users and consumers when examining any issues concerning the rights of users in connection with electronic communications services that are accessible to the public (Article 33). Operators must adopt measures that are favourable to end-users: legibility of contracts, updated information on prices, service quality results, etc.
Settlement of disputes involving consumers	Users must be able to bring their disputes with operators before the NRA or an independent body. User must have easy access to an affordable dispute settlement procedure.  ART has no powers in this area.	It must be possible to settle unresolved disputes that relate to this directive and that involve consumers quickly, by means of out-of-court procedures that are transparent, simple and inexpensive (Article 34).

"Radio Spectrum" decision	Current system	System provided for by the decision
Legal regime	There is no global EU legal framework in relation to the radio spectrum.	The decision establishes a policy and a legal framework within the European Union (Article 1.1). This framework is not limited to the electronic communications sector.
The objective of the decision	No overall objective in relation to the radio spectrum.	Coordinate policies and, where relevant, harmonise the conditions relating to the availability and the efficient use of the spectrum which are necessary for the establishment and operation of the internal market (Article 1.1). This objective complies with the provisions of the "Framework" directive and also takes the provisions of the "Authorisation" directive into account.
Powers of Member States	Member States have the power to organise the way the spectrum is managed on their territory and to use it for the purposes of public policy, security and defence.	The decision does not affect the current powers of Member States (Article 1.4).
Scope: resources deployed to achieve the objective	No overall strategic planning at EU level.	The decision provides for: - the creation of a framework for strategic planning and harmonisation of radio spectrum use in the European Union, - effective implementation of the objective (Article 1.2).

"Radio Spectrum" decision	Current system	System provided for by the decision
Radio Spectrum Committee	No committee.	Creation of a "Radio Spectrum Committee" comprising representatives of Member States and chaired by a Commission representative (Article 3). The Committee works with national authorities' experts on spectrum management and examines proposals for technical implementing measures submitted by the Commission. The division of powers between the Committee, the Commission and the CEPT is clearly defined (Article 4).
Relations with third countries and international organisations	Member States participate in the work of international organisations.	Obligation to take "utmost account" of the work of international organisations, in particular the ITU and the CEPT (Article 1.3).
Cooperation of Member States and role of the Commission	No specific global mechanisms.	The Commission coordinates actions with Member States on the one hand, and the European Parliament and Council on the other hand. It also oversees the circulation of information, the adoption of measures and the implementation of actions (Articles 6, 7, 9).
Availability of information	No specific global mechanisms.	The following must be published and be consultable by the public: - the national radio frequencies allocation table, - information about rights, conditions, procedures, fees and taxes concerning spectrum use (Article 5).  Competent authorities may, under strictly defined circumstances, divulge information needed to accomplish their mission, in accordance with commercial confidentiality provisions (Article 8).



## Chapter 3

# *Forthcoming developments in regulation*

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The main regulatory projects come within the scope of this new technological, economic and regulatory environment. Their purpose is to foster growth in competition, broader availability of services and the development of new markets in ways that address the needs of all consumers throughout France.

### *1. The objectives of regulation*

The objectives of telecommunications regulation, for which responsibility is shared by the telecommunications minister and ART, pursuant to the provisions in the 1996 Telecommunications Act, are defined by law.

#### **A. Competition that benefits the consumer**

Regulation must encourage effective, fair and sustainable competition that is beneficial to consumers. This is a fundamental principle. It means that competition is not an end in itself – establishing fair competition is merely a means of serving consumer interests.

Competition has significantly reduced the prices paid by consumers and has extended the

range of services and pricing offers. But it is also the source of growing complexity. Competition should not lead to a decrease in service quality.

Thanks to the ART's efforts, it has become easier for consumers to take advantage of operators' services, such as carrier preselection for local calls, introduced recently, and lower prices for fixed-to-mobile calls.

Each year, ART carries out a survey to ensure that the quality of mobile telephony services does not deteriorate. It has also studied operator-customer relations and consumption of telecommunications services. In particular, it analysed the market and found that large companies account for a substantial share of total consumption.

ART also contributes to consumer information by publishing documents on the telecommunications market and by organising meetings with consumer groups. It also acts as a mediator between operators and their customers.

## **B. Public service and regional development**

Regulation must ensure the provision and financing of every component of the public telecommunications service. It must also recognise the interests of France's regions and ensure that all users have access to services and equipment. For that reason, nationwide coverage is one of ART's main concerns.

While the public authorities define the scope of public service, ART plays an active role in determining how it is financed. The universal service is the main component of the public service. The cost of providing the universal service is shared by operators. Each year, ART assesses the cost of providing this service and submits its assessment to the telecommunications minister.

In 2000, a social tariff scheme – an essential component of the universal service – was introduced to assist certain categories of consumer. ART assessed the cost of this component as being more than FF 1 billion in 2000 and 2001.

ART adopted many decisions that will considerably improve nationwide coverage. This applies, in particular, to invitations to tender for wireless local loop and third-generation mobile services. Nationwide coverage is a fundamental criterion in the operator selection process, and successful candidates are subject to special requirements in this respect.

The development of new services, particularly concerning mobile telephony and high-speed Internet access, has raised questions about nationwide coverage. There are fears that a "digital divide" may emerge. ART was involved in implementing the objectives set by the State in this domain, notably at the meeting of the interministerial committee on regional development on 9 July 2001, with a view to completing nationwide coverage by the mobile networks and encouraging the expansion of high-speed Internet access.

Territorial authorities also have a role to play in promoting competition and nationwide coverage. This is provided for in Article L. 1511-6 of the Local Authority General Code. ART also acts in an advisory capacity towards local representatives and elected officials.

## **C. Employment, innovation and competitiveness**

Regulators must see to the development of employment, innovation and competitiveness in the telecommunications sector. Competition in the sector is subject to an economic condition, namely that it promotes market growth.

In the French market, ART strives to encourage growth that is beneficial to all players, that creates jobs and that improves the competitiveness of the French economy. Despite the economic and financial difficulties affecting the market since mid-2000, statistics show that employment has held steady in telecommunications services, a market that saw double-digit growth in 2001, i.e. the third consecutive year, in a context of a general slowdown in growth.

It is not ART's duty to engage in research, or to design or innovate. However, through its actions, it encourages the adoption of a certain number of innovations, both commercial and technical, which will have an impact on the future market for telecommunications and multimedia services. For instance, it contributed to the widespread use of the Internet, by promoting flat-rate offers and a flat-rate interconnection model, for which the technical and price conditions are now among the best in Europe. ART was also involved in ensuring that proper conditions for competition existed with regard to the major innovations such as cable networks, wireless local loops, ADSL and UMTS.

## **D. Implications of the new regulatory framework**

Under the new regulatory framework, member states are responsible for defining the objectives that they wish to assign to their national regulatory authorities (NRAs). However, the "common framework" directive recalls several significant amendments to the objectives already defined in the 1996 Act and outlined above. These objectives are mainly concerned with promoting effective competition, consolidating the domestic European market and protecting users' interests.

The new regulatory framework seeks to foster more intensive competition. There is nothing unusual about this, since this objective was already laid out in previous directives.

The biggest changes introduced by the new framework do not affect the objectives themselves but the way in which they are to be attained. Underpinning the new regulatory framework is a trend towards technological convergence in the telecommunications sector, which makes future developments uncertain. As a result, the directives no longer stipulate specific mechanisms for the member states to implement to foster competition in a particular market segment; they generally set forth harmonised procedures to assist regulators to deal with questions that may arise. Proper regulation thus consists in a capacity to foresee difficulties and implement the stipulated procedures.

## **2. Priority issues**

### **A. The local loop and high-speed services**

The development of competition on the local loop is essential, especially to increase the availability of high-speed Internet access. There are several available technologies: xDSL techno-

logies, particularly ADSL, are now a key component of ART's action. Cable Internet access is developing, though primarily among urban users. The wireless local loop is used mainly by SMEs and territorial authorities..

Satellite and RLAN technologies are also developing rapidly. In 2001, ART examined several requests for licences to deploy satellite networks intended notably for provision of high-speed Internet access. At the end of 2001, ART also launched a public consultation on the technical, economic and regulatory questions raised by the use of RLANs, in particular for high-speed Internet access.

ART has thus been working for several years to foster the development of alternative and complementary channels for high-speed access. This is one of ART's main objectives.

#### **1. ADSL and local loop unbundling**

ADSL technology will need to be developed to extend the availability of high-speed services to a broad customer base across the whole of France. Growth must be competitive since clearly, ADSL deployment must not be monopolised by a single operator.

This will involve a new stage in the unbundling process, which entered an active phase in autumn 2001 and, as yet, primarily concerns large companies in urban areas. Competition must expand beyond these segments, still too limited, to new customers and new geographical areas.

In April 2002, there were some 600 unbundled lines, and they are increasing by around 100 by month. Unbundling is a complex process, where the main difficulties concern operational procedures and price conditions. For this reason, ART asked France Télécom, in a decision dated 16 April 2002, to modify its reference offer for unbundling, notably to offer

more attractive tariffs to operators and to improve operational procedures.

On 8 April 2002, ART also ruled on a dispute between LDCom and France Télécom. There were several points to the dispute. The two main ones were the availability of a monthly filtering service, key to the development of competition in the residential market, and a service enabling operators to guarantee line restoration within four hours, essential if operators are to offer their business customers a comparable level of service quality to France Télécom's.

ART is also working to improve other offers to access providers and operators, under conditions that enable all these actors to operate in the ADSL market in an economically viable manner.

The development of high-speed access must be open to competition across all the segments in the value chain. For consumers to continue to benefit into the long term, all categories of player must be able to operate cost-effectively on this chain and, in particular, to cover their expenses.

Although ART will continue to pursue its natural objective of ensuring that consumers have access to high-speed services at affordable prices, its other aim is for consumers to continue to enjoy a genuine choice between diversified offers. Sacrificing competition for the sake of a short-term reduction in prices, which would destabilise most operators in the chain, would not benefit consumers in the long run.

It is desirable and beneficial for France Télécom to reduce the price of services for Internet service providers, but only if this does not eliminate competition from other operators. France Télécom must provide these other operators with substantially improved interme-

diate offers (option 3). To this end, in January 2001 ART initiated an extensive consultation process on option 3.

The sound development of high-speed access in a way that will continue to benefit the consumer in the longer term requires a delicate balance. In 2002, ART will endeavour to determine the key parameters of a solution.

## **2. The wireless local loop**

The wireless local loop (WLL) is an attractive Internet access channel for small and medium-sized enterprises. WLL technology is vital to open, efficient competition.

In 2001 several operators merged and several licences were revoked, as a result of the financial difficulties that affected the sector. Despite these difficulties, several commercial offers were made in around 30 towns or cities of more than 30,000 inhabitants – a sign of the effective deployment of some operators and a first significant step towards widespread access to this technology.

At the end of the year 2001, there were nine WLL operators present in the market, seven of which had started to deploy a network. Nearly 200 ground stations were installed at 31 December 2001, which is a significant degree of deployment and faster than in other European countries.

At the beginning of 2002, ART began to assess the state of deployment of operators at 31 December 2001. Owing to the economic downturn, not all operators have been able to honour their coverage commitments. Penalty procedures were initiated against the four operators the farthest from achieving their commitments.

ART remains confident in the potential of the wireless local loop in France. In this regard, it



should be stressed that the conditions for introducing this technology in France have been recognised as the most efficient in Europe, and that France is one of the few countries where the wireless local loop is being effectively deployed.

### **3. Cable networks**

#### **a. Major development prospects**

The development of new technical capacities on the cable networks since the 1990s and a new telecommunications regulatory framework since 1996 has opened up new opportunities for cable operators in a sector still plagued by pessimism five years ago. Cable operators are now preparing to develop multi-service platforms combining digital television, "always on" high-speed Internet access and a telephone service. The cable operators now have business plans based on breaking even in the medium term, something that was inconceivable a few years ago.

The significant development of cable networks can be seen in the continuous development of telecommunications service offers (telephony and Internet access) combined with audiovisual service offers, and in the fact that commercial operators are taking over the cable networks (e.g. Noos).

At end 2001:

- All towns and conurbations of more than 100,000 inhabitants have or will soon have cable;
- 11 million households can be connected in time, out of a total of 26 million households and 29 million individuals;
- Almost 200,000 people are connected to the Internet via cable;
- 60,000 people use the telephone service of

a cable operator, and this figure is set to increase considerably in the coming years with the planned entry of Noos into this market.

#### **b. The regulatory framework is detrimental to the cable networks and should be amended**

However, the regulatory framework is especially detrimental to the cable networks and is indirectly holding back their development. Different legal provisions apply to the telecommunications networks depending on the medium used:

- To establish a cable network, the operator must have a licence issued by a commune (local administrative area) or group of communes. The same operator must therefore obtain a separate licence for each cable network it builds<sup>1</sup>.
- To establish a telecommunications network on any medium, only one licence is required. This licence, which may have nationwide coverage, entitles the operator to install networks on the intended sites after obtaining the necessary permits to build on the roadway<sup>2</sup>.
- To establish a satellite telecommunications network exclusively for audiovisual services, no licence is required.

This complex situation creates considerable legal uncertainty for territorial authorities and is a disincentive to any plans to install cable networks. Furthermore, Article L. 1511-6 of the Local Authority General Code does not allow territorial authorities to exercise the activities of telecommunications operator. As a result, they cannot be Internet service providers on the cable networks that they own and manage commercially, directly or by delegation, e.g. to a semi-public company. Under the existing legal framework,

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1 Article 34 of the Act of 30 September 1986 on freedom of communications.

2 Article L. 33-1 of the post and telecommunications code.

when communes seek ART's opinion, it has no option but to dissuade them from becoming involved in this type of project.

This solution is not satisfactory, because the result is that it deprives some towns of high-speed Internet access. The current legislation therefore needs clarification: responsibility needs to be shared differently between operators and communes, such as by allowing communes to sell their cable networks to operators.

ART regrets that the Information Society bill approved by the council of ministers on 13 June 2001<sup>1</sup> did not provide for the harmonisation of the legal provisions applicable to all telecommunications networks, even though this was the original intention.

ART would therefore like this omission to be rectified as soon as possible, because unless amended, the bill will contradict the new European regulatory framework for telecommunications, which provides for a harmonised licensing system for all networks, including those carrying audiovisual services.

## **B. UMTS**

From the outset, ART has been actively involved in the preparations for UMTS. At the beginning of 1998, it launched a consultation process via the Radiocommunications Advisory Committee, followed in 1999 by a public consultation, which set the parameters for the first call for applications. Under the Act, ART is required to submit to the telecommunications minister the conditions for awarding licences and to conduct the selection procedure.

### **1. Milestones in the year 2001**

The results of the first licensing procedure

were published on 31 May 2001. The two applicants, Orange and SFR, were both awarded licences. On that occasion, ART presented its analysis of the situation and suggestions for a second call for applications and for the financial terms for UMTS in France. Infrastructure sharing was also a key topic of discussion in 2001.

#### **a. Financial terms**

On 16 October 2001, the government set new financial terms, whereby operators pay a fixed upfront fee ( 619 million) and thereafter a variable fee based on revenues. On 30 November, the government set the variable fee at 1% of revenues. This is the lower figure and it was decided in exchange for commitments by the operators that already have a licence to intensify their efforts to complete nationwide coverage of their GSM networks.

This choice, which ART had supported since May, is favourable to market development because it significantly reduces the amount of the upfront fee paid by the operators and staggers the remaining payment over time.

#### **b. Launch of a second call for applications**

On 29 December 2001, the government launched a second procedure to award the remaining two licences, by publishing the proposal submitted by ART.

Regarding the schedule, the deadline for applications was set at 16 May 2002. The results must be published by 30 September 2002. In April 2002, Bouygues Télécom announced that it would be applying for a licence under this call for applications.

In terms of content, to ensure fairness and legal consistency, ART has not made any sub-

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1 The Information Society bill No. 3143 transposes the European directive of 8 June 2000 on electronic commerce.

stantial changes in relation to the first procedure, except for two amendments to the conditions for roaming.

### **c. Infrastructure sharing**

In December 2001 ART also published its analysis of procedures for infrastructure sharing that would be compatible with the conditions for issuing 3G licences, on the basis of the discussions conducted by the Radiocommunications Advisory Committee. Five levels are planned:

- Sites and passive elements;
- Antennas;
- Ground stations;
- Radio Network Controllers (RNCs);
- Core network elements.

There are possibilities for sharing on the first four levels, but sharing core network elements is not compatible with the French regulatory framework. Geographical sharing, via roaming, is also possible as long as it is compatible with operators' coverage obligations.

## **2. Analysis of the French system**

At the end of 2001, the French system had several distinctive aspects.

All the provisions adopted in 2001 are naturally favourable to market development and should, following the second call for applications, create conditions for effective competition between operators.

In this area, ART's objective was to ensure that the French market keeps pace with the general movement, with the best possible starting conditions and optimal visibility. There is no lag in French UMTS market, taking account of the time required for the ongoing standardisation process, which should be completed in time for a market launch in late 2003-early 2004, in France as in the rest of Europe.

ART's actions are motivated by a desire to establish effective competition for third-generation mobile services, in line with French market potential. The system set in place should enable France to play its role in Europe and contribute to the development of a new technology vital to the emergence of the information society.

## **C. Regional development**

The year 2001 was marked by an important event concerning the role of territorial authorities in the development of telecommunications: an interministerial committee meeting on regional development devoted to the information society was held in Limoges on 9 July.

During this meeting, the government decided to focus on the development of the "Information Society for all", with two key objectives: to ensure balanced deployment of information and communication networks across the whole country, particularly in disadvantaged areas, the least economically developed or the least populous, and to support the government action plan for the information society in these areas.

ART has noted this commitment and, within the scope of its authority, is contributing actively to ensure that the objectives of the State are realised.

At operational level, in 2001 a unit dedicated to territorial authorities was set up at ART. The unit aims to develop ART's institutional positioning in relation to these bodies in charge of regional development, whether associations of elected officials or government bodies.

### **1. Mobile telephony**

The interministerial committee meeting on 9 July 2001 provided for a system for achieving

nationwide coverage by GSM mobile telephony. ART had already launched two series of measurements of the actual coverage of each of the three existing mobile networks: Orange France, SFR and Bouygues Télécom Mobiles.

ART published the results of these two surveys. Owing to limited financial resources, the surveys focused on 100 cantons (townships) making up a representative sample of the geography of France.

A new method was used, based on two types of tests:

- measurements of field strength, i.e. strength of the radioelectric signal received by each network at a given point;
- test calls, to show the correlation between field strength and the probability of actually establishing a call from a mobile phone.

Considering the limited number of cantons surveyed, definitive conclusions about the whole of France cannot be drawn from the results. The results do, however, reveal significant disparities between cantons, and between operators within a given canton.

ART offered its method to territorial authorities so that they can conduct their own surveys to measure actual coverage in the zones that concern them. For this purpose, on 17 October 2001 ART signed a partnership agreement with an association of départements, to provide the General Councils concerned with the specifications for the coverage survey.

At the end of 2001, some ten départements signed individual agreements with ART. All together, some 30 départements should have conducted a coverage survey by July 2002, which will allow ART and the association of départements to produce a summary of the data collected. At the beginning of 2002, the

studies conducted on 14 départements showed that average coverage was 72% in the sample.

## **2. Progress on high-speed Internet access**

ART expressed its position on the amendment of Article L. 1511-6 of the Local Authority General Code, when parliament approved the Act of 17 July 2001 that includes various provisions of a social, economic and cultural nature, and on the various measures taken by the public authorities, particularly at the interministerial committee meeting on regional development.

### **a. Amendment of Article L. 1511-6 of the Local Authority General Code as at 17.07.01**

Territorial authority officials have been faced with a lack of offerings that would enable them to satisfy their high-speed access requirements on reasonable terms. The amendment to Article L. 1511-6 of the Local Authority General Code takes into account the expectations of local players, thus recognising the vital role of local authorities in expanding digital technology across France. Article 1511 of the Convention states that: "The territorial authorities, or public bodies in charge of local development, to which responsibility has been devolved to this effect, may, after a public consultation to assess the needs of operators or users, install infrastructure to support telecommunications networks" and make this infrastructure available to operators.

ART pointed out that the first draft application of the current provisions of Article L. 1511-6 of the Local Authority General Code led to problems in areas such as the disclosure procedure, the notion of shortcomings and the investment depreciation period. When consulted about the Information Society bill, ART issued an opinion on 2 May 2001<sup>1</sup>.

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<sup>1</sup> ART opinion No. 01-143 of 2 May 2001 on the Information Society bill.

ART was satisfied that the provisions set forth in Article 30 of the bill were compatible with its proposals. In particular, Article 30 of the Information Society bill, finally drafted in identical terms as ART's opinion in the Act including various provisions of a social, economic and cultural nature, introduced into Article L.1511-6 of the Local Authority General Code significant amendments on the following points:

- extension of involvement beyond high-speed networks;
- the disclosure procedure intended to reveal a lack of private initiative (shortcomings) is abolished and replaced by a public consultation;
- provision of infrastructures at a rate ensuring that costs will be covered, taking public (regional development) subsidies into account;
- the eight-year limit on the investment depreciation period is abolished.

However, since many infrastructure projects were begun by local authorities since the Act was passed, there is a need to clarify the provisions for enforcement of Article L.1511-6 to ensure legal certainty. At the beginning of 2002, the government requested ART's opinion, under Article L.36-5 of the Posts and Telecommunications Code, on the draft circular for application of Article L.1511-6 of the Local Authority General Code on the involvement of local authorities in telecommunications infrastructure.

In its opinion issued on 5 March 2002, ART stressed the following points:

- The involvement of territorial authorities must comply fully with the principle of competition. The aim is to make life simpler for operators, but not to take their place or to grant them government assistance. This distinction is vital and must be clearly stated in the provisions for enforcement of the act.
- Given the scale and complexity of the involvement of territorial authorities, a gui-

dance and supervision system taking account of all legal and economic aspects will be required, in line with the stakes of competition regulation in the sector. ART believes that this supervision should be organised in a way which takes account of all these questions at the earliest stage and in a consistent manner. This will necessarily mean close involvement on the part of the regulator and a reinforcement of its operational cooperation with the territorial authorities and the decentralised authorities of the State.

#### **b. Possibility of using electric power grid infrastructure**

The interministerial committee meeting of 9 July 2001 asked the telecommunications minister to investigate the pre-conditions for a trial deployment of optical fibres on some of the infrastructure of the national electric power grid as a way of developing high-speed access.

The telecommunications minister asked ART to participate in the working group run jointly by the Division of Information Technology and Posts and the Department of Energy Demand and Markets. This work led to the publication of a report by the telecommunications minister on the conditions for using electricity towers. The working group approved the feasibility of a trial, subject to certain conditions listed in the information notice published for local authorities.

In the light of the information at ART's disposal, there does not seem to be any reason not to proceed with the trial. However, several important preliminary remarks can be made about these trials:

- Regarding form: The information notice lists ten pre-conditions for the implementation of a trial. Not all of these conditions (particularly of a legal nature) can be met in the short term.

Therefore only the study phase may begin, not the operational trial phase (actually using the optical fibre of the grid).

- Regarding economic aspects: The new technique may not reduce network leasing tariffs for the operators by as much as expected. Although the cost of laying electricity transmission lines is low, this accounts for only a limited share (around 40% at the most) of the costs borne by the infrastructure manager that will market the fibre.

- Regarding technical aspects: The operating constraints specific to the grid have implications for service quality (maintenance and emergency work) and routes (independent from the main economic routes and stopping outside towns), which territorial authorities will have to factor into their network architecture.

These factors do not diminish the value of the trial, which could encourage the deployment of other infrastructure, by showing that the electricity network fibre can be a useful network complement. Territorial authorities and infrastructure managers are interested in being able to complement other existing infrastructure – underground fibres, radio relays – or to replace leased lines on some limited sections, particularly for security reasons (redundant loop).

The power grid could be a useful complement to other solutions available to the territorial authorities, such as laying optical fibres along public railway lines, which seems to offer significantly more attractive conditions than other conventional options (buried in open ground, alongside roads or along waterways). Under this option, territorial authorities could have their own fibres on a network that extends into the centre of towns, even in rural areas. The cost of laying the fibre and occupation fees would be low, and they could stagger the costs over the depreciation period of the fibre.

Beyond these specific matters, ART would naturally like public policy to favour the emergence of a diversified high-speed offer in areas that are not well served by telecommunications infrastructure, through an approach that would combine the public authorities' support and operators' initiatives.

However, the imminent arrival of satellite projects designed to provide high-speed telecommunications service packages also needs to be taken into account. By construction, this still-emerging technology serves all regions of France. In this regard, current regional development issues – which are legitimate today – could be profoundly changed in the years to come.

Therefore, regarding the implementation of regional development projects, the public authorities must be careful in their assessment of the long-term implications in the light of technological and economic developments in telecommunications.

### **3. ART's advisory role**

ART is increasingly consulted by territorial authorities seeking advice upstream of decisions regarding their projects. Confronted with a fairly unstable regulatory environment and rapidly changing technology, the territorial authorities appreciate ART's permanence.

ART performs this advisory function towards territorial authorities, which is quite separate from the advisory missions of its consultants, when Board members or section heads visit local authorities, or at ART's head office.

### **4. ART's institutional positioning**

Aware of the importance of regulation in regional development, ART ensures that its opinions and work are taken into account at discussions organised by the public authorities.

ART was heard on several occasions by members of parliament in 2001, on issues as diverse as UMTS licences, the new European regulatory framework and the review of deregulation of the telecommunications sector.

In January 2002, ART organised the first meeting of the correspondents from the network for the information society in the regions, including the ICT representatives to the General Secretariats of Regional Affairs, the representatives of the Regional Departments of Industry, Research and the Environment and the ICT representatives from the Regional Councils.

In an opinion of 5 March 2002 on the draft circular, ART expressed its support for the introduction of monitoring of territorial authorities' telecommunications projects. ART considers that the advisory and supervisory role in projects that it has performed for several years should be institutionalised.

## **D. Adapting regulation to economic and regulatory changes**

### ***1. Factors in the development of regulation***

Since it was first set up, ART has been responsible for implementing telecommunications market opening within the regulatory framework defined by the 1996 Act. This act, itself a transposition of previous European directives, has largely determined the regulator's role, though this role has evolved in response to inevitable changes in the telecoms markets, both fixed and mobile.

Today however, the economic and regulatory contexts are such that ART is no longer called upon simply to respond to an evolving environment, but to address many fundamental changes. For the first time in its brief history, ART is entering a whole new stage in the regulation process.

### **a. The economic context**

In the early days, the regulator applied a system of asymmetrical regulation based on the need to break up national monopolies in order to establish fair and sustainable competition. Though these principles are still the driving force behind the regulatory process, it is also clear that their conditions of implementation have changed substantially.

Firstly, the multiplication of telecoms operators, a "natural" consequence of market opening, has been followed by a consolidation phase whose effects have still not been fully measured. The number of operators on the European market has decreased, to the point where there is a risk that new oligopolistic trends will emerge, with impacts on the markets that raise new problems of competition and hence of regulation.

At the same time, notably on the key segment of access to end consumers, incumbent operators are still in a position to generate major distortions of competition. As we know, in France as in all European countries, the action of the regulator is vital for the creation of a truly competitive telecommunications services market, including free access to Internet, whose development is a decisive factor in the emergence of the information society.

Lastly, and this is probably one of the most positive effects of telecommunications sector liberalisation, the very nature of the markets has changed. Increasingly, operator strategies are based on segmentation according to a product/customer pair. Consequently, certain operators are refocusing on niche markets in the hope that specialisation will safeguard their long-term future. Though this trend may limit the market power of global operators over time, it is also giving rise to new practices which, in some cases, are liable to create new obstacles to the establishment of true competition.



Clearly, these developments generate crucial new challenges to be addressed by the regulator now and in the future. Though asymmetrical regulation is still a necessary component of its action, ART will increasingly be confronted by a real asymmetry of information concerning not only the incumbent operator, but indeed all players present on all segments of the telecoms market now open to competition. This increasing complexity will necessarily oblige ART to produce analyses that are much more fine-grained than at present. And alongside its traditional legal and technical expertise, ART will, in coming years, be required to develop its competencies in economic and financial analysis, not only to understand the complex mechanisms governing the sector's value chain, but above all to foresee or correct any anti-competitive effects.

Hence, and contrary to hypotheses that might have seemed feasible in the mid 1990s, far from rendering regulation obsolete, market opening calls for greater vigilance and stronger action on the part of the regulator, and a broadening of its powers beyond mere supervision of the incumbent operator. Given that regulatory action of any nature, be it arbitration or a decision, may have a significant impact on a sector highly sensitive to variations in its economic and regulatory environment, it is now essential to strengthen the powers and adapt the role of ART not only for the benefit of consumers, but also for the industry as a whole, as regulatory action of any nature, be it arbitration or a decision, may have a significant impact on a sector highly sensitive to variations in its economic and regulatory environment.

#### **b. The regulatory context**

If the role of ART is to evolve and broaden in scope, the legal framework guiding its actions must make way for these changes. In this respect, the new European regulatory framework

, integrating changes in the telecommunications sector, imposes legislative changes which, in some cases, will have an inevitable impact on ART's role.

One of these changes, essential both in the spirit of the Community legislator and in the letter of the Framework Directive, concerns the definition and analysis of the relevant markets upon which the regulator is required to act. This directive very clearly imposes new duties of expert economic analysis on the national regulation authorities, based on Community competition doctrine. ART will be required to produce economic analyses of all relevant markets and to regulate their activity, notably by designating SMP operators and by imposing specific obligations upon these operators. In addition, and on the basis of these economic analyses, the choice of proportionate and appropriate regulation tools will be one of the corollary but essential duties of ART, be it for access or interconnection.

Lastly, this new economic regulation function must always be conducted in accordance with the Commission's own analyses and in coordination with the national competition authorities. This new role devolved upon the NRAs by the European directives in response to the market developments presented above, will call for a strengthening of the powers of ART well beyond a mere adaptation process.

The second key factor arising out of the new regulatory environment is the switch from a regime of individual licences to a system of general authorisations. Though this major modification of the legal framework, specific to the telecommunications sector, is also a logical response to changing markets and the need for simplification that must accompany the growth in competition, it will not reduce ART's workload. Indeed, under the planned system of simplified notification, the regulator is required to manage a new system of declarative informa-



tion which is nevertheless insufficient to cover all aspects of its economic and technical regulation duties. It will therefore need to reinforce its after-the-fact controls and develop new competencies in economic investigation and analysis covering all players in the telecommunications sector. Only by setting up and managing reliable databases, will ART be in a position to perform its new economic regulation functions in a pertinent and responsive manner.

Finally, the last structuring aspect for ART will be a new focus of activity, arising directly out of the implementation of the new directives, and that can be grouped under the generic term of institutional relations. Indeed, the creation of the European Regulators Group (ERG) establishes and formalises the closer involvement of national regulators in the work of the Commission and, secondly, as pointed out earlier, ART will need to maintain closer relations with the competition authorities. Lastly, the new directives include measures to take account of growing convergence. If the sectoral regulation system remains as it stands, this will call for permanent coordination with the audiovisual regulator to define and harmonise shared areas of jurisdiction while maintaining the specific nature of the areas covered by each. Though it is outside the scope of the present report to speculate on the future organisational structure, it is nevertheless certain that in coming years these new duties will constitute a crucial component of the regulation activity.

### **c. The impact of transposition of the directives**

Quite apart from the inevitable effects of directive implementation, it is important to consider potential changes which may or may not occur, depending on the public policy decisions made when the directives are transposed.

A key issue, which will raise many questions at the time of transposition, is that of tariff approval. Indeed, tariff approval is a temporary instrument which should become redundant when effective competition prevails on the markets concerned. Moreover, with the implementation of universal service obligations, a certain number of telecommunications services will remain subject to a priori tariff monitoring. The new directives, and notably the one concerning "universal service and users' rights relating to electronic communications networks and services" confirm the importance of tariff monitoring as a means to prevent anti-competitive behaviour and clearly designate the national regulators as the executors of this tariff monitoring process. It should be noted that such monitoring, as laid down in the directive, should be accompanied by proprietary powers enabling NRAs, on the basis of their economic analyses, to lift tariff obligations on a given market if the state of competition so permits.

For ART's tariff monitoring activities, as for all of its duties, a clear distinction should be made between the missions of each body concerned: though it is the natural role of government and Parliament to define public policy objectives, it is the role of ART to implement them under Parliamentary supervision.

Regional development is another area which, though not directly covered by the European directives, may nevertheless be viewed in the light of these directives at the time of their transposition. The State is clearly responsible for defining regional development policy, though its implementation may, in part, come under a system of regulation.

It is well known that the government wishes to implement a public policy which spreads the financial burden of deploying infrastructures for nationwide high-speed Internet and mobile access, notably in zones where operators

have no economic incentive to invest. At the same time, these operators clearly expect to receive financial assistance from the public authorities and more precisely from the territorial authorities for the deployment of their networks. At the same time, certain local elected representatives are eager to take practical action to encourage operators to deploy their service offers locally.

The involvement of territorial authorities must be supervised and monitored so that the full impact of their initiatives in the field of telecommunications infrastructures can be gauged. Overall network consistency, respect for competition, interests of consumers and regional development are all factors that will call for close involvement on the part of the regulator and a reinforcement of its operational cooperation with the territorial authorities and the decentralised authorities of the State.

## ***2. ART is preparing for change***

In view of the above considerations, it would appear that far from playing a less prominent role in years to come, telecommunications regulators will have an even broader range of duties, both in quantitative and qualitative terms.

The success of the liberalisation process launched in 1998 will depend largely on the ease with which they adapt their role to the new environment in a sector weakened by recent financial upheaval and the uncertainties still weighing upon its future.

Yet the socio-economic stakes are high and the regulator must have sufficient skills and resources to address the challenges ahead, so that industry players benefit from the regulatory visibility that is vital to their performance.

For this reason, in early 2002, ART launched an overall review to prepare for future changes

in the telecommunications sector. It published its conclusions in July 2002.

These changes can be divided into five main themes.

### **a. Adapting the regulatory framework to increasing competition**

With the transposition of the new European regulatory framework, some of ART's powers will be adapted to reflect the growth of competition.

The two main developments, as we mentioned above, are the establishment of a system of general licences and the implementation of a more flexible regulatory framework for designating operators with significant market power ("SMP operators"), and more stringent enforcement of those operators' compliance with their obligations.

With the new framework, general licensing becomes the rule, and individual permits will be the exception, reserved for the allocation of scarce resources. This development will have major consequences, particularly on the relationship between the regulator and the sector (identification of operators, decisions to keep or remove some categories of actors, rights and obligations of actors, disclosure of information to the regulator, etc.).

The new European framework provides for regulation that can be adapted in two ways, firstly in accordance with the characteristics of each relevant market (defining relevant markets and imposing differentiated obligations on SMP operators), and secondly in accordance with the increase in competition on each of the markets identified (via regular competition analyses that will make it possible to adjust the requirements of SMP operators on each relevant market). These changes will alter regulatory working methods and organisation. Mar-

ket analysis will take on new importance in ART's daily action. In addition, efficient performance of analytical and regulatory functions according to markets could require adjustments to ART's organisation.

All the regulatory functions – management of scarce resources, tariff monitoring and relations with consumers – may have to be adapted, not only because of the application of the new regulatory framework, but also to adapt regulation to a market that has changed over the past five years.

#### **b. Convergence**

Taking account of the technological convergence of networks, the new "framework" directive provides for a common regime for all networks and for the provision of services over them, irrespective of the technologies used (fixed or mobile, fixed-wire, radio satellite, cable networks, etc.). These provisions, which do not apply to content, will lead to an adaptation of national regulations in the telecommunications and audiovisual sectors. ART is working to assess the concrete consequences of this change on the practice of regulation.

#### **c. The contribution of regulation to public policy objectives**

For five years, ART has been responsible for the implementation of public telecommunications policy, mainly by assessing the cost of the universal service and through its contribution to regional development.

Although the new European framework does not fundamentally alter the definition of the universal service, it will probably change the implementation of public policy, notably new conditions for assessing the universal service, the adaptation of provisions governing territorial authorities' involvement in the sector, and a changed role for ART to support territo-

rial authorities' regional development projects.

#### **d. The international dimension of regulation**

The European and international dimension of regulation is set to expand. The new framework provides for relations between national regulators and the Commission to be institutionalised, notably concerning the analysis of relevant markets and the designation of SMP operators. The establishment of the European Regulators Group, set forth in the "framework" directive, is also part of this trend towards the institutionalisation of relations. The conditions for exchanges of information with the other NRAs and the Commission are set out precisely by the texts. This will need to be integrated into the practice and organisation of regulation.

ART is also developing regular relations with its counterparts in Europe and the rest of the world.

ART's expertise enables it to participate more actively in expressing and negotiating France's position in the telecommunications sector.

#### **e. The role of regulation in the institutional environment**

While the objectives of regulation set forth by the Act are still perfectly relevant, the conditions for the implementation of regulation probably warrant some adaptation, i.e. simplification and clarification of responsibilities. The principle of a clearer distinction between public policy-making and regulation, i.e. the application of public policy, could be used as a guideline for improving and simplifying the current system.

The efficiency of regulation could also be improved with the use of various tools, for example for surveys, dispute settlement and penalty procedures.

Appropriate human and financial resources will also be necessary to handle the many new changes. Note that ART's resources are smaller than most of its European counterparts with a similar scope.

Lastly, the economic and regulatory changes under way will probably have an impact on ART's operation and organisation. The regulator will need to be prepared for this.

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