



# Conditions for the Development of New Ways of Working and Electronic Commerce in France

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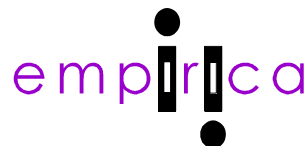
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Philippe BAUDOIN

**IDATE**

institut  
de l'audiovisuel  
et des télécommunications  
en europe

Contact:



Gesellschaft für Kommunikations- und Technologieforschung mbH,

Oxfordstr. 2,

D-53111 Bonn

Tel.: (+49 02 2) 9 85 30-0,

Fax: (+49 02 28) 9 85 30-12,

Email: [info@empirica.com](mailto:info@empirica.com),

<http://www.empirica.com>, <http://www.ecatt.com>,

Contact: Werner B. Korte

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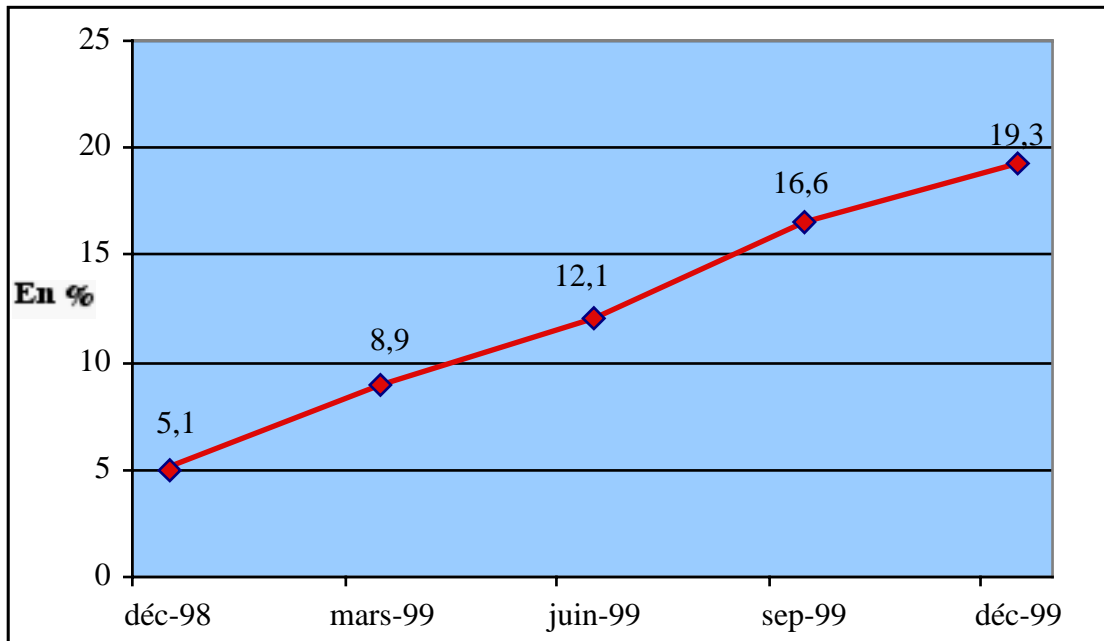
## 1. Executive Summary

### Telecom Market

With over 70 fixed services licence having been issued by the end of 1999, the French market is now indisputably fully open.

In January 2000, the market share of rivals to France Telecom raised 19,3% for international and long distance telephony. The evolution trend of France Telecom's competing operators is showed on the the graphic.

Share of France Telecom's competing operators in international and long distance telephony



Source : France Télécom

This trend, however, should be put into perspective in that the competition is focused on corporate services and long-distance traffic, while virtually all local traffic (excluding mobile) remains in the hands of the national operator. It is also to be recalled that while France was recognised by the European Union as the good boy of the class in regard to respect of the deadline for liberalisation, it seems to be lagging somewhat behind its major neighbours in areas such preselection, number portability and unbundling.

Several scenarios are taking shape for the opening up of the local loop: installation of more fibre optic local loops in the main business districts, development of telecoms services on cable networks, future allocation of wireless local loop operating licences (due by the end of the first quarter of the year 2000), announced partial unbundling of France Télécom's local loop for offering high-speed services, etc.

### Internet market

The beginnings of the Internet in France were probably hapered by the Minitel ; which continues to generate very substantial revenues for France Telecom and service providers. 1998 was the year that saw the real take-off of the Internet in France (IP traffic has increased fourfold and PSTN traffic generated by the Internet has trebled) but France has still not cuaght up with its main European partners (Germany,United Kingdom) while the

Internet remains still less used than the Minitel, which has kept its 15 million users (but with a downward trend in traffic).

The residential market is dominated by large players like France Telecom/Wanadoo, Cegetel/AOL Compuserve, Club Internet and Infonie. The majority of Internet connection is over PSTN (from 28.8 to 56 kbps).

Free Internet provided by ISP like Libertysurf, Free.fr or World Online (among a total 15-20 Free Internet providers) are gaining a significant market share in France, with around 25% of the French residential market.

The professional market is dominated by large players like France Telecom (Transpac and Olean), Cegetel and Uunet France. Beyond these major players, the professional market is organised around national ISP and regional ISP. The Internet connection is divided between PSTN and ISDN. Internet connection over leased lines is devoted to large companies.

Broadband access (notably ADSL, Internet over cable network) is now commercially provided on a limited number of cities by France Telecom, some ISP, and cable operators.

### **Information society : initiatives and policies**

The French government launched a national programme for the promotion of information society called PAGSI. One of the main objectives is to democratise the use of ICTs in France and, in particular, the Internet. The programme represents a budget of 5.76 billion FF (around 880 million EURO).

Six priorities have been highlighted by the PAGSI :

- ✓ Education
- ✓ Culture and arts
- ✓ The modernisation of public services
- ✓ Businesses and e-commerce
- ✓ Research and innovation
- ✓ Juridical regulation

The Government multiplied initiatives to make companies aware of the stakes of information society, particularly with regard to electronic commerce. The last step has been the adoption by the French parliament of the law on digital signature in February 2000.

### **E-commerce**

According to different market studies, e-commerce in France in 1999 represented a market of 1,3 – 1,6 billion FF (198-244 million EURO). In 2001, e-commerce could represent 1% of retail market. The development of e-commerce sites for French companies is raising considerably and 2000 French companies were active in e-commerce in January 2000 (source web marchand).

The results of the survey and their associated figures are very disappointing for France, as for many criteria France ranks between 8<sup>th</sup> and 10<sup>th</sup>. With the exception of some criteria, France appears as one of the few laggards in Europe and the gap in comparison particularly with Scandinavian countries is very significant.

This situation extracted from the ECaTT survey has the advantage of giving a comparable perspective of e-commerce development within the ten European countries, the methodology applied being the same in all these countries.

On the one hand the ECaTT picture of the e-commerce in France is in line with the shared statement of the backward position of France as regards to ICT. Much debate has taken place about whether Minitel has been one of the reasons for this. Those who believe its role has been considerable say that Minitel is an obstacle to the use and acquisition of Internet PCs. Others claim that France was the first to use e-commerce, even before the Internet. At the end of the nineties everybody agreed that France's situation was typical in a sense that the turnover of online sales was the largest one in Europe, thanks to Minitel, and that the transition from Minitel to Internet was well underway. Some analysis has shown that the French backward situation is no longer applicable, as the usage growth rate was among the largest in Europe.

On the other hand, the ECaTT picture of the French position has to be balanced with other market analysis which concludes that the French position is not as worse as EcaTT concludes. For example the results of the UFB-Locabail survey on computerisation and Internet in SMEs which represents a reference survey in France. Since 1998, the survey has broadened its scope and it now has a European dimension which covers the UK, Germany and Italy along with France. The aim is not to compare results between both surveys but to extract some information concerning the implementation and usage of the Internet within French SMEs. UFB-Locabail defines SMEs as those businesses with fewer than 250 employees.

- ✓ the level of PC penetration is quite high for French SMEs and ranks as 94%
- ✓ 61% of French SMEs are connected to the Internet and 72% for the four other surveyed countries (as compared to 47,4% for France in ECaTT and 62,4% for the same four countries (UK, France, Germany and Italy))
- ✓ 75% of the connected SMEs use email and 83% for the 4 surveyed countries.
- ✓ 46% of the French SMEs use Internet for data exchange with suppliers/customers and 56% for the 4 surveyed countries (there is a significant difference between the two surveys as this activity was a key one for France in ECaTT and appears less important in UFB –Locabail).
- ✓ 27% of the French SMEs have a website on the Internet (28% for ECaTT).
- ✓ 25% of the French SMEs claimed to use the Internet for online sales and 22% for the 4 surveyed countries (only 4,7% for France and 8,3% for the same 4 countries in ECaTT survey).

The EcaTT clearly concludes that different European countries are committing themselves to the information age at different rates :

- ✓ Scandinavian countries are the frontrunner countries for both equipment and usage
- ✓ Middle-Europe countries, ranging from the UK, Netherlands and Germany have developed a medium rhythm in implementing ICTs
- ✓ Southern European countries (Spain, Italy, France) are lagging behind.

Effort in France has to be sustained to close up the gap.

### **Telework**

Telework is not taking off in France at the same rate as in other European countries. With a current rate of 2.9% of the total workforce and a 10% increase rate between 94 and 99, France remains behind most of the rest of Europe. When talking about telework in France, it is always the same examples that pop up : for instance, in March 2000, IBM France unveiled its large initiative of neighborhood centres in the Paris region.

The comparison between telework practice and interest is particularly significant in France. A lot of executives agree on the interest of telework but very few launch telework initiatives within their establishments.

In fact there exists a significant gap between the number of organisations practising telework, 32% of French establishments claim to practise regular telework, and the number of teleworkers, 2,9% of the French workforce.

The French are alone in that executives are not interested in permanent teleworking but greatly prefer the idea of alternative telework. Barriers in implementing telework remain high in France and are the same as those expressed in 1994.

So in summary, it is proving difficult for telework to be accepted in France but at the same time the widespread availability of the Internet is providing the opportunity for more and more people to work occasionally at home without being considered teleworkers. It seems as if there is confusion in executives' and people's minds as to what constitutes telework.

Therefore the results presented in ECaTT need to be counter-balanced to somehow better reflect reality, especially in terms of unofficial telework practice.

## 2. Introduction

ECATT launched a survey mid 99 on e-commerce and new ways of working. Two targets were identified : the general public and the makers. The survey was carried out on the same basis in 10 european countries, of which France.

The objective of this report is to highlight the survey's results for France and to put them in perspective of national initiative for the promotion of Information Society.

The first section presents an overview of the current status of telecom deregulation in France and the market structure of both telecom and internet.

The second part outlines initiatives and policies undertaken by french public authorities. A specific attention is given to governmental programme for the promotion of Information Society.

The last two sections are devoted to the analysis of the survey's results for France.

## 3. Telecoms and Internet in France : policy and market background

### 3.1.1 Profile of the french Telecom market

#### 3.1.1.1 Presentation of the market

With over 70 fixed services licence having been issued by the end of 1999, the French market is now indisputably fully open. The effects of this, still little felt in 1998 (with reductions in charges of only 5.5% for households and 10.8% for business firms), seem to be intensifying in 1999. During the first half of the year, rivals to France Télécom in the fixed sector increased their market share from 5.1% to as much as 8.9%.

This trend, however, should be put into perspective in that the competition is focused on corporate services and long-distance traffic, while virtually all local traffic (excluding mobile) remains in the hands of the national operator. It is also to be recalled that while France was recognised by the European Union as the good boy of the class in regard to respect of the deadline for liberalisation, it seems to be lagging somewhat behind its major neighbours in areas such as preselection, number portability and unbundling.

Several scenarios are taking shape for the opening up of the local loop: installation of more fibre optic local loops in the main business districts, development of telecoms services on cable networks, future allocation of wireless local loop operating licences (due by the end of the first quarter of the year 2000), announced partial unbundling of France Télécom's local loop for offering high-speed services, etc.

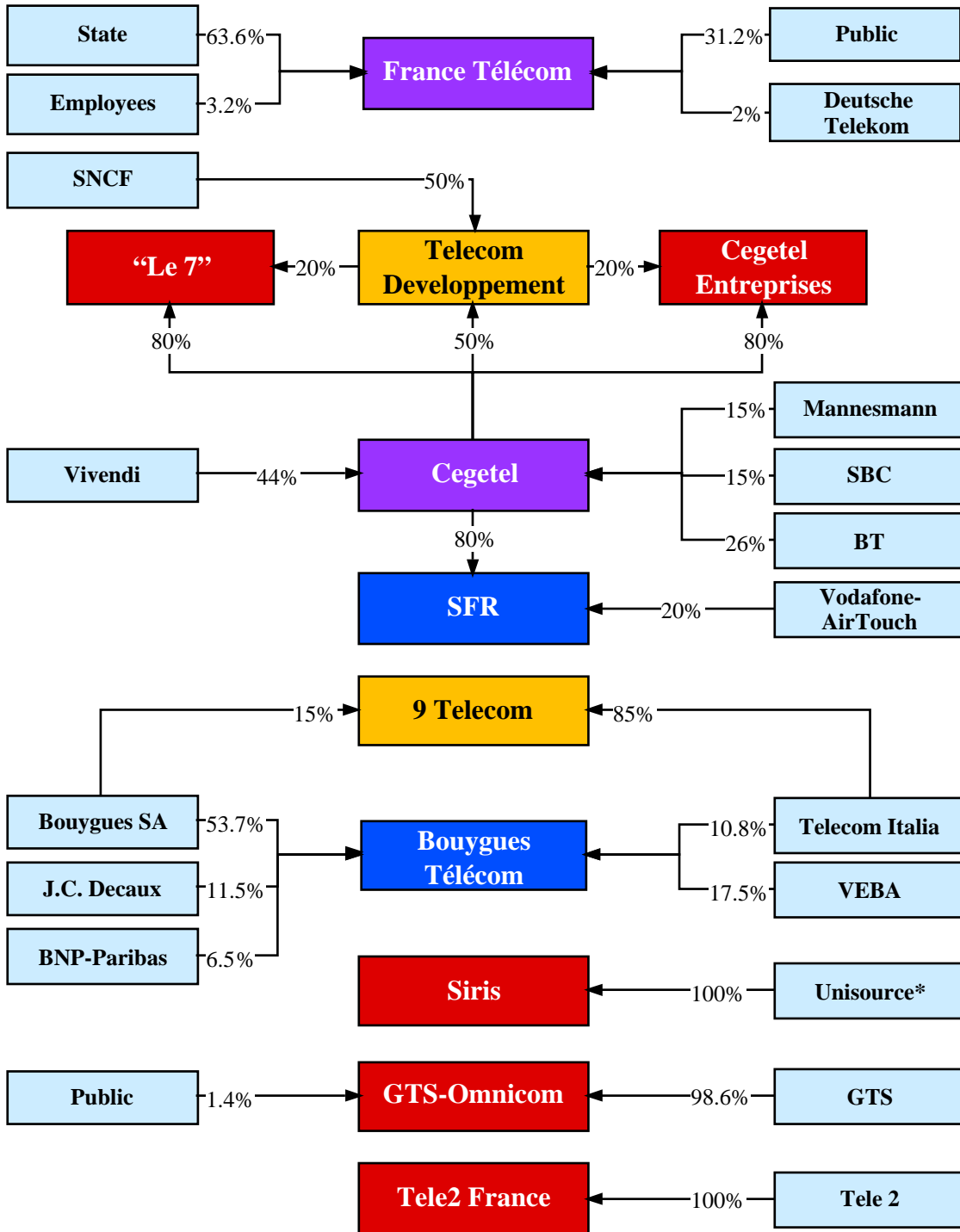
In regard to the structure of the market, a consolidation trend is already afoot, notably with the alliance between Omnicom and Esprit Telecom within GTS Omnicom and with other moves in sight: the sale of Siris by Unisource, a reshuffling of resources in the context of the Cable Plan, etc.

In the mobiles segment, France Télécom has once again retained its lead, although its market share has fallen to just under 50%.

In the Internet sector, the Wanadoo access service with its 850 000 subscribers is well ahead of Cegetel's AOL service and Club Internet.

3.1.1.2 Market structure

Figure SEQARABISCH: Main telecommunications operators in France (1)



Source: IDATE

(1) For new fixed operators, limited to France Télécom's competitors holding a "short" long-distance prefix.  
 \* In November 1999, Deutsche Telekom announced the total takeover of Siris.

### 3.1.1.3 Market figures

Table 1: The telecommunications market in France

	1996	1997	1998	1999(e)	2000(f)
<b>Total market (billion Euros):</b>	23.7	24.5	27.4	32.5	38.0
of which fixed telephony	14.7	14.2	13.8	14.7	15.7
of which mobile services	2.1	3.5	6.1	9.6	13.1
of which data services	2.2	2.4	2.8	3.4	3.9
<b>Main lines (million)</b>	33.0	33.7	34.0	34.3	34.7
Fixed teledensity (%)	56.4	57.1	57.1	57.2	57.3
Cellular subscribers (million)	2.4	5.8	11.2	18.5	24.0
Cellular teledensity (%)	4.2	9.8	18.8	30.8	39.7
<b>Cellular market shares (subscribers, '000):</b>	As at 1.09.99				
France Telecom	1 560	3 087	5 552	7 630	
SFR (Cegetel)	942	2 233	4 201	5 653	
Bouygues Telecom	90	505	1 406	2 202	

Source: IDATE

Figure 2: Growth trends in the telecommunications market in France (billion Euros)

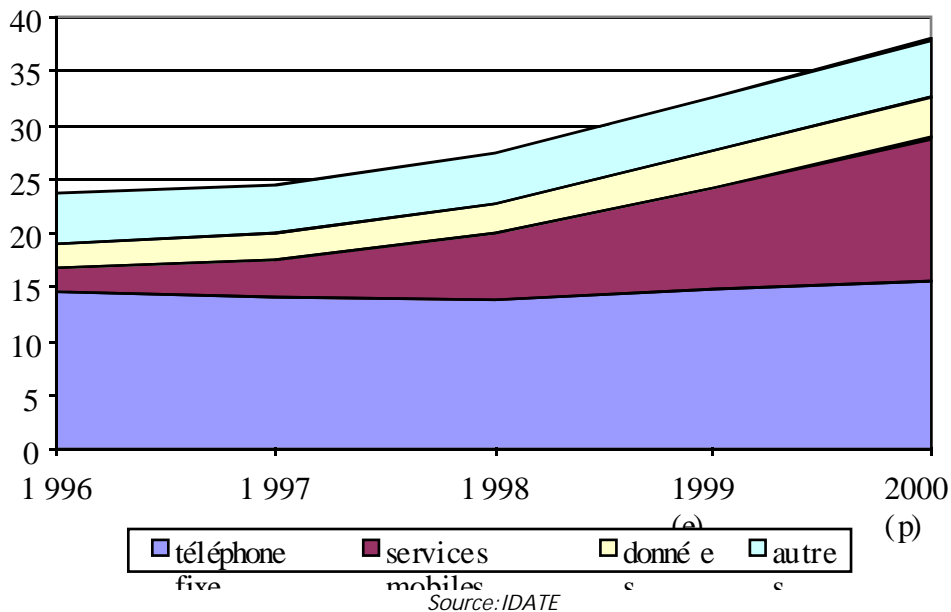
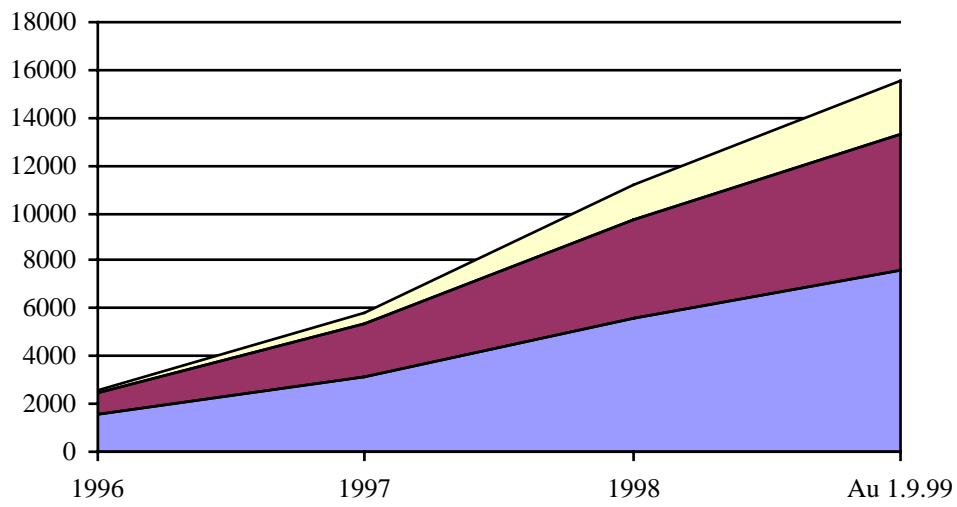
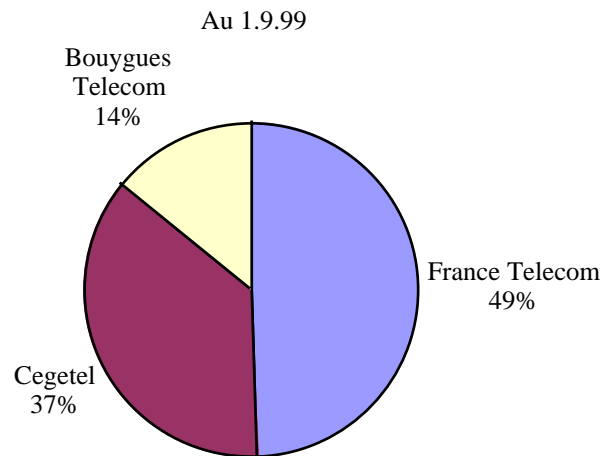


Figure 3: Mobile telephony market in France  
(number of subscribers, '000)



Source: IDATE

Figure 4: Operators' shares of cellular subscribers in France



Source: IDATE

### 3.1.1.4 France Télécom charges

Table 2: Charges applied by France Télécom

Euros per minute, incl. VAT at 20.6% (09/99)

	<i>Peak hours</i>	<i>Off-peak hours</i>
Local calls	0.0499	0.0252
Long distance calls	0.1799	0.0899
International calls (New York)	de 0.210 à 0.224	

Peak hours: Monday to Friday: 6 am - 7 pm and Saturday 8 am - 12 noon

Off-peak hours: Monday to Friday: 7 pm - 8 am

and weekends from 12 noon on Saturday to 8 am on Monday.

Source: Tarifica

### 3.1.2 Telecom regulation in France

#### 3.1.2.1 Regulatory authorities

The office of the Secretary of State for Industry is responsible for establishing the regulatory framework and issuing licences. ART (Autorité de Régulations des Télécommunications) and ANF (Agence Nationale des Fréquences) were set up on 1 January 1997; ART is charged with the examination of licence applications, approval of interconnection schedules, allocation of resources (frequencies, numbering, etc.) and settling disputes; ANF is responsible for planning the microwave spectrum and allocating frequencies to government departments.

#### 3.1.2.2 Key dates of regulation in France

- 1987** The opening up of the telecommunications market in France to competition starts with the liberalisation of the mobile services sector and the allocation of a first competitor licence to SFR, followed in 1994 by a licence for Bouygues.
- 1990** In December, liberalisation of the sector is extended to corporate telecommunications services [closed user groups (CUG)], call-back and re-routing services.
- 1993** On 1 January, liberalisation is further extended to data transmission services; infrastructure operators can now apply for a licence for simple carrying (licences awarded to Transpac, BT France, Unisource, Air France, CGV).
- 1996** The law of 1 July provides for the setting up of an independent regulatory authority, splits the responsibilities of the Ministry of Telecommunications and specifies the licensing system within the framework of total liberalisation scheduled for 1 January 1998.
- 1997** The government proceeds with the sale of 25% of the capital of France Télécom.
- 1998** In conformity with European recommendations, the market is officially fully liberalised. By November, close on 50 licences have been allocated. Together with an increase in capital of 5% and the sale of 2% to Deutsche Telekom (share swap), a second tranche of 6% is put up for sale to the public in November. These operations leave the State with a 63% holding.

### 3.1.2.3 Regulatory highlights of 1999

#### Interconnection catalogue

In January 1999, France Télécom's interconnection catalogue was approved by ART. It comprises a 14.4% reduction in interconnection charges, calculated on the basis of a basket of switched traffic conveyance services). Two additional offerings are included in the catalogue in the form of switched access to virtual private networks and access to complementary, enhanced services and functions. In one of its notices, however, ART has put a brake on the growth of free Internetac by imposing a ceiling on the level of payments to alternative operators.

#### Opening up of the local loop

Direct access to the subscriber through the introduction of competition in the local loop is one of the prime objectives in liberalising the telecommunications sector. In this respect, 4 solutions for the unbundling of the telephone line were considered in the public consultation launched by ART in April 1999:

- ✓ Access to the copper pair wireline,
- ✓ Access to rates,
- ✓ Access to a permanent virtual circuit,
- ✓ Access to the operator's ADL platform.

While recommending that this range of possibilities be opened up, most of the companies responding to the survey stressed the need for a mode of unbundling that would allow them to install their own equipment.

Two task forces charged with examining the question of the unbundling of the local loop were set up by ART in November 1998 with a view to launching a public consultation in 1999. This was eventually opened in April 1999.

#### Wireless local loop

The introduction of the wireless local loop is an important step towards the opening up of local traffic to competition. Following measures approved in April 1998, ART initiated a transitory experimental phase lasting up to 31 December 1999, which has allowed for 19 trials in the 3.5 GHz and 28 GHz frequency bands. In November 1999, the authority issued an invitation to tender for the allocation of licences for operating the wireless local loop in the 3.5 and 26 GHz bands. Allocation is to be completed by mid-2000: two national operators and two operators per metropolitan region will be designated.

## ADSL

In July, ART gave permission for the introduction of high-speed Internet access services in the zones suggested by France Télécom, with a moratorium of 15 weeks at the maximum aimed at giving other ISPs a chance to test ADSL for use with their respective services. France Télécom is thus obliged to ensure that ISPs are able to hook up to the ADSL system and therefore be in a position to offer their services to end users of an ADSL line in a range as wide as that offered by France Télécom.

## Charges for fixed calls to mobiles

In June, ART decreed a reduction of at least 20% in charges for fixed calls to mobiles to come into effect before 1 October 1999. This decision followed round table discussions held with the three mobile operators. At the origin of the dispute between the authority and the operators is a clause in the Telecommunications Act of 1996 enabling mobile operators to fix the level of this charge themselves. This has meant that while the charge for mobile to mobile calls has been falling continuously (to become one of the lowest in Europe), operators have increased their revenues by artificially maintaining high charges for fixed calls to mobiles.

Moreover, this charge has occasioned some telecoms companies to offer a rerouting service at lower costs by transiting abroad so as to profit from the international tariff system.

On the initiative of ART, the problem is finally moving gradually towards its solution by cost-oriented interconnection charges being imposed on the all-powerful mobile operators (France Télécom and SFR).

## UMTS

At the end of 1998, the Commission Consultative des Radiocommunications (CCR) published a report containing a number of recommendations concerning the introduction of UMTS in France, accompanied by a provisional timetable. All players are to be allowed to take part in the selection procedure for UMTS operators. Symmetrical frequency blocks in the 1920-1980/2110-2170MHz paired bands and blocks in the 1900-1920/2010-2025 non-paired bands are to be allocated, as well as 3 contiguous duplex channels of 5 MHz in the paired bands and an additional simplex channel of 5 MHz in the non-paired bands.

- ✓ January 1999: public consultation (the public authorities invite comments on the arrangements to be made for introducing UMTS systems in France)
- ✓ May-June 1999: return of the results of the public consultation
- ✓ second half of 1999: licence allocation methods and conditions: based on a proposal from ART, the Minister in charge of telecommunications publishes the methods and conditions applying to the allocation of licences
- ✓ first quarter of 2001 at the latest: allocation of UMTS licences and decisions on the allocation of frequencies.
- ✓ The Secretary of State for Industry recently let it be understood that the use of auction procedures was not altogether out of the question, but both ART and the majority of players do not seem to favour this method.

## Internet access flat rates and free Internet access

ART has authorised France Télécom to offer Internet access at a flat rate of 20 hours of local communication (between 6 pm and 8 am, on Wednesday afternoons, at weekends and on public holidays) for a monthly subscription fee of 100 FF, plus VAT. This authorisation obliges France Télécom to enable all providers to benefit from this type of flat rate option, thus embracing subscribers to providers who do not use the services of France Télécom. In addition, France Télécom has to undertake to provide indirect interconnection for access to the Internet (going via an outside operator) in order to promote innovative offerings from alternative operators. In this way, these operators will be able to offer subscribers their own flat rate options.

## Local communities

Following on the initiative of a number of urban municipalities (e.g. Lyons and Nancy) and objections on the part of France Télécom, the law governing national and regional development (passed on 15 June 1999, art. L1511-6) gives local authorities permission « *when the high-speed telecommunications networks or services they demand are not available from market players at affordable prices or do not satisfy their technical or quality requirements, to build infrastructures designed to carry telecommunications networks to be placed at the disposal of licensed telecommunications network operators (...)* ».

Several features of the law, however, still leave the regulatory situation unclear or indirectly put constraints on the action of local authorities such as the depreciation time allowed (8 years, while civil engineering works are generally amortised over 20 years), and the imprecise definition of non-availability and its observation.

### 3.1.3 Internet in France

#### 3.1.3.1 Presentation of the market

The beginnings of the Internet in France were probably hampered by the Minitel; which continues to generate very substantial revenues for France Télécom and service providers: in 1998, the Minitel accounted for revenues of 12.6 billion FF (\$2.1 billion). The national operator is today calling itself the "Net Company" and is pursuing a much more voluntarist strategy, as shown by its measures in regard to tariff schedules (Internet flat rate), in content, partnerships (with Microsoft and Netscape) and the acquisition of ISPs in France and other parts of Europe (Oléane).

1998 was the year that saw the real take-off of the Internet in France (IP traffic has increased fourfold and PSTN traffic generated by the Internet has trebled), France has still not caught up with its main European partners (Germany, United Kingdom), while the Internet remains generally less used than the Minitel, which has kept its 15 million users (but with a slight downward trend in traffic).

### 3.1.3.2 Regulation

ART is the telecommunications regulatory body in France and the Secretariat of State for Industry, represented by STSI, is the government authority in this sector. In the last 18 months, ART has ruled on many Internet issues: the Internet in schools, Internet access via cable, Internet charges.

Access to the Internet market is completely free in France. Nevertheless, to ensure respect for the rules of competition, barriers may be raised in the context of package deals that telecoms operators might offer. For example, in March 1998, a project by France Télécom to introduce an offering priced at 119 FF (\$19.7) per month for a second line and 15 hours of Internet connection was blocked by ART, which considered that the price was "predatory" and would harm competition.

In 1999, acting on a government request, ART also held negotiations with France Télécom on a new flat rate offering dedicated to the Internet. A decision was published in May 1999 (see section on charges).

On 7 July 1999, ART gave its approval for France Télécom's ADSL access offering, but accompanied by a set of conditions aimed at ensuring that competitors to France Télécom would be given fair use of the platform. On 12 July, however, the government approved France Télécom's ADSL tariffs without maintaining the conditions laid down by ART. Nevertheless, at the request of an ISP plaintiff, the Competition Council obliged France Télécom to delay the commercial launch - which eventually took place in November 1999 - to give ISPs time to prepare suitable offers.

These difficulties bound up with the introduction of ADSL were based partly on the ongoing debate on the question of unbundling. Not being specifically provided for in the law, it has been rejected by France Télécom. However, while a consultation on this theme organised by ART revealed a strong demand for unbundling, which would allow operators and competing ISPs to install their own ADSL equipment on France Télécom's copper pairs, a declaration issued by the Secretary of State for Industry expressed the government's wish to see the implementation of unbundling early in 2000. The declaration has not yet, however, appeared in any specific form.

On the demand of the Prime Minister, a report on the law and the Internet was prepared by the Council of State in September 1998. The Council does not recommend the drafting of specific legislation for the Internet but suggests that existing texts, modified where necessary, be applied. The report clarifies the legal status of transactions over the Internet and confirms that they constitute a form of mail order.

Early in 1999, however, the current laws showed their limits in the case of the free Web site host provider, Altern, which was found guilty by the French court of having hosted images of a well-known figure in a state of undress on one of its sites. Following its conviction, Altern was compelled to discontinue its activity, thus depriving many of the Web sites it was hosting of their audiences. As a result of this, within the framework of the Trautman law on audiovisual activities, an amendment concerning the responsibility of Web site host providers was approved in the beginning of June 1999 by the National Assembly.

The text relieves the host provider of all responsibility on condition that it has not played an active role in the offence and that it has quickly taken all the steps necessary for stopping the dissemination of the offending content.

In January 1999, the government softened its stand on encryption, with a view to promoting e-commerce in France. This led to the passing of a decree in March 1999 whereby the level of encryption software keys for free sale and use was raised from 40 to 128 bits.

Also early in 1999, the government took a stand on the question of personal data protection on the Internet, notably by increasing the means and powers of control of the Commission Nationale de l'Informatique et des Libertés (CNIL).

The CSA (Conseil Supérieur de l'Audiovisuel), in turn, has pronounced in favour of regulating audiovisual services disseminated on the Internet and is currently studying this subject in collaboration with regulators in other countries.

Lastly, in August 1999, the government announced that it would be launching studies with a view to defining the law governing the Information Society that is expected to enter into force during 2000.

In this context, a national consultation was launched on 5 October 1999. The coming law will make it possible to clarify the main legal problems bound up with the use of the Internet such as copyright, cryptology, consumer protection, etc.

### **3.1.3.3 Organisation of access provision**

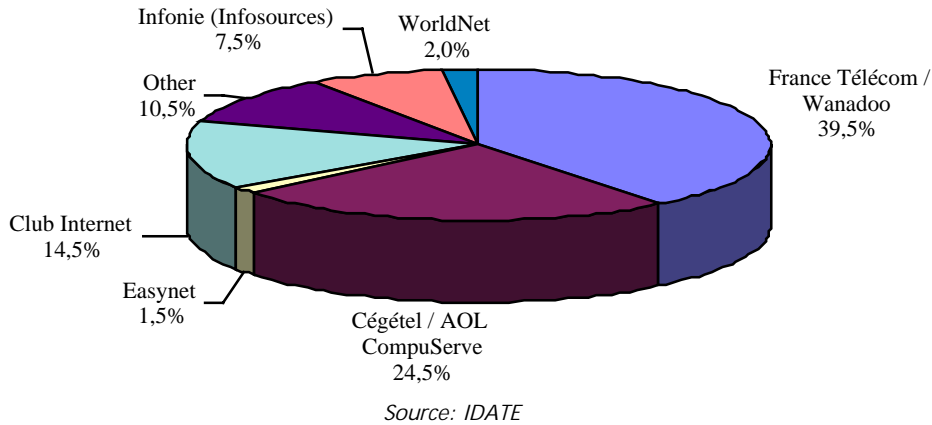
#### **3.1.3.3.1 Residential market**

Main players in the residential market are France Télécom with Wanadoo and Vivendi through Cegetel and its alliance with AOL/CompuServe, Bertelsmann and Canal+. Further down the list come Easynet, WorldNet and MagicOnline.

Most Internet connections in France are effected in PSTN mode at 28.8 to 56 Kbps. Despite promotional campaigns conducted by France Télécom and its recent iToo offering, ISDN connections are not widely used and are not enjoying the success expected among residential subscribers.

In recent months, the leading ISPs in the residential sector (Wanadoo, AOL, Club-Internet, Infonie) have gone in for mass communication and have launched numerous advertising campaigns backed by TV commercials. Their strategy also comprises package deals and special offers including a free modem (Infonie and Club-Internet) or guides and CD-ROMs (Wanadoo) accompanying the subscription.

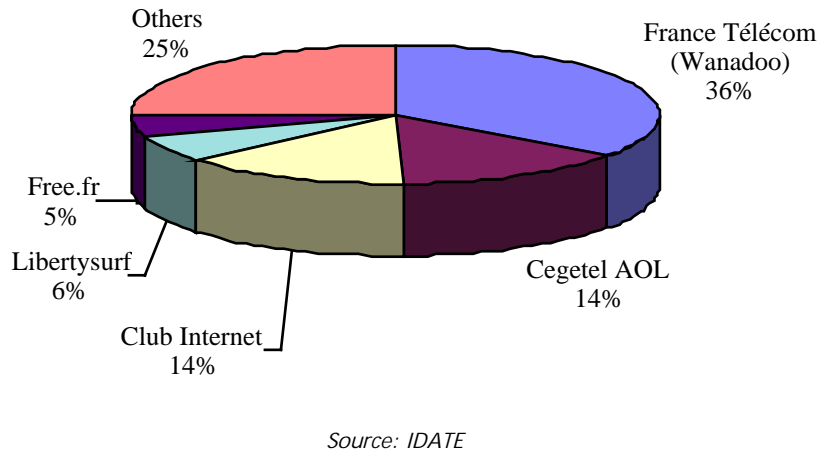
Dial-up access market shares (7/1/99)



As in other European countries, the appearance in France of free Internet has boosted the residential market. Among the players present in this arena, World Online, LibertySurf and Free.fr seemed to stand out in October 1999.

The following figures, taken from the latest study by NetValue, provide some idea of how these players have penetrated the national market.

Dial-up access market shares (10/99)



### 3.1.3.3.2 Professional market

Although the professional access market in France remains quite fragmented with a large number of regional and local ISPs, the concentration of players has continued in recent months. Following numerous acquisitions of ISPs by operators during the first half of 1998, the trend continued in the second half and into 1999. Two significant examples are the takeover by PSINet of the two regional professional ISPs, Satelnet and Planet.net (3/99), and the acquisition by operator Completel of ASI, leading ISP in the Lyons region (5/99).

The three main players of national size today are France Télécom through Transpac and Oléane, Cegetel and UUNET France. After this top trio come ImagiNet, Easynet, Siris, PSINet France, FranceNet, EUnet, World-NET and ISDnet.

At the end of 1998, ISDN accounted for 15-20% of Internet connections by SMEs, with PSTN access representing the bulk of the professional market. Leased line access is reserved mainly for large business enterprises.

### 3.1.3.4 Internet access market

	1995	1996	1997	1998	1999	2000	2001	2002
Number of ISPs	6	150	230	280	300 (6/99)	-	-	-
Number of servers (previous counting)	151 170	245 500	-	-	-	-	-	-
Number of servers (new counting)	228 270	326 500	333 300	488 050	-	-	-	-
Number of users	300 000	600 000	1.8 M	3.7 M	5.6 M	8 M	10 M	12 M
Number of users for 100 inhabitants	0.51	1.02	3.06	6.29	9.52	13.61	17.01	20.4
%of homes connected	0.3%	1.2%	2.1%	4.5%	6.5%	11%	16%	21%

Lagging two years behind other advanced countries in Europe, the Internet market in France has suffered for a long time from the success of the Minitel. Aftel figures for February 1999 indicate 25 000 Télétel (Minitel) services, 80 000 Web sites, of which 25 000 .fr sites and 55 000 .com sites.

In recent months, however, ISPs operating in the residential market have stepped up their promotional activities, with package offers and intensive advertising campaigns. Some of them have even joined forces with distributors in offering computers at reduced prices with an obligatory Internet subscription. For example, following Infonie's offer of computers at approximately 2000 FF, on condition that the buyer signs a 2-year subscription, computer manufacturer Cibox did the same by teaming up with ISP NetClic and putting 10 000 PCs at 1990 FF on the market.

All these new offers and the availability of multimedia PCs at increasingly attractive prices have helped to boost the residential Internet market, which is expected to comprise close on 2 million subscribers by the end of 1999.

According to IDC, 3.7 million computers were sold in France in 1998 to give a household penetration rate of 23% at the end of the year. Forecast sale of computers in 1999 is 4.4 million units.

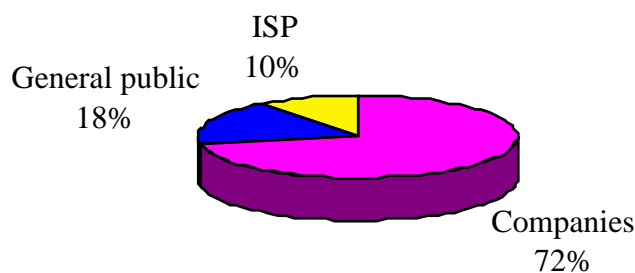
The other factor that has boosted the residential Internet market in France was the arrival in February 1999 of the free Internet. Some months later, in November, there were scores of free ISPs operating in the country. It was estimated in September 1999 that these non-subscription access providers controlled close on 11% of the switched market in France.

The French hook up to the Internet for an average of 9 hours per month, below the European average of 12 hours. Young people seem to be among the drivers of Internet growth in France. In June 1999, according to Ziff Davis, 12% of French people aged 18 or more had already visited the Web. French women, too, are visiting the Net on an increasing scale, according to a survey by Mediangles that shows that the proportion of women among French Internauts has risen from 29% to 37%.

The Internet market in France still offers favourable growth prospects, especially in the professional sector where there is still a high growth potential compared with other European countries. According to the Cesmo agency, the Internet is expected to generate revenues of 7.3 billion FF in 1999 (as against 3.7 billion in 1998), split between final access (38%), hosting (30%) and backbone (18%). This estimate takes all Internet sectors into account: access, hosting, services.

Breakdown is shown below:

Breakdown of the French Internet market in 1999



Source: Cesmo

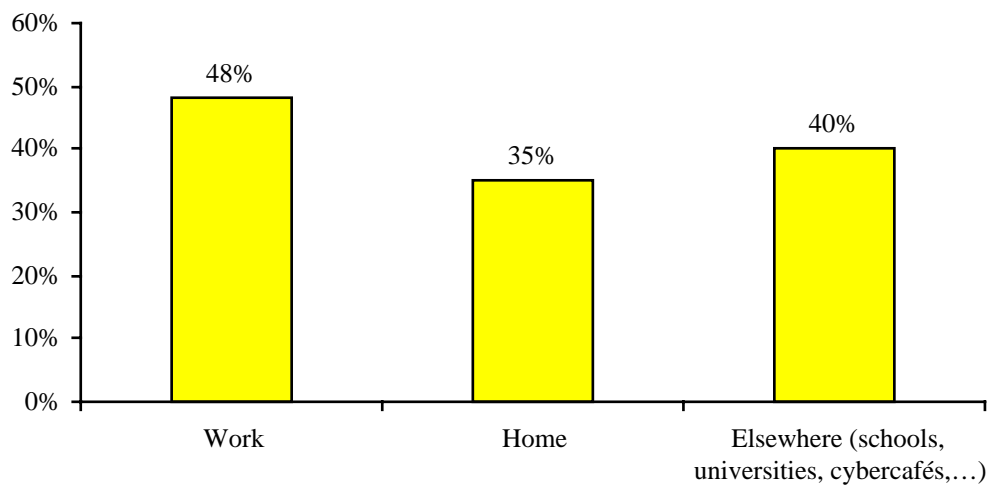
It is thus business firms that still account for the major part of the Internet market in France. At the beginning of the second half of 1999, 37% of firms with between 20 and 99 employees were connected to the Internet, 71% of firms with 100 to 499 employees and close on 90% of firms with over 500 employees. At the end of 1998, only 30% of large French corporations possessed a Web site and there were just under 10 000 Intranet Web servers at the end of 1998, compared with 3 300 at the end of 1997.

Access remains the major source of revenue for ISPs (60%), followed by services (20%) and site hosting (20%). Although access will continue in this role in the immediate future, professional ISPs are endeavouring to diversify into services in order to meet the competition: Intranet/Extranet, security, etc.

With the acquisition of SkyWorld by Cegetel, InternetWay by WorldCom, CalvaCom and 2 regional ISPs by PSINet, ASI by Completel and Oléane by France Télécom, France has not escaped the worldwide phenomenon of control of the access provision market being in the hands of telecoms operators. The acquisition trend in France started early in 1997 as a result of the price war in the residential market declared by major groups ready to take losses in order to capture market share. The smallest companies then turned to the business market and are now endeavouring to expand their range of services by offering Web site design and hosting or Intranet/Extranet solutions.

The leading cable operators such as Lyonnaise Câble and France Télécom Câble all offer Internet access via cable in several towns of France. With 2.6 million cable TV subscribers at the end of 1998 out of a total of 6.9 cable points, Internet access via cable represents a not insignificant potential in the overall access market in France. Moreover, the arrival in 1999 of UPC and its Chello service via Médiaréseaux and the commercial launch by NC Numéricâble and AOL of their cable access offerings should greatly speed up activity in this particular sector in France.

Breakdown of sites of access to the Internet (8/99):



Source: Médiamétrie

### 3.1.3.5 Internet charges

Average access charges for 12 hours of connection per month  
(rates applied by major ISPs as at 1/7/99)

<i>Type of access</i>	<i>ISP subscription in 1999 (\$/month)</i>	<i>Local call in 1999 (\$/hour)</i>	<i>Total charges (\$/month)</i>	<i>Remarks</i>
Residential switched (STN or ISDN access)	0 (unlimited connection)	0.7 (France Télécom tariff, Primaliste Internet <sup>1</sup> on 1/6/99, subscription: \$1.7/month)	10.1	WorldOnline tariff with France Télécom's Primalist Internet option.
Professional switched (STN or ISDN access)	12.4 (unlimited connection)	2,8 (France Télécom tariff <sup>2</sup> on 1/7/99)	46	Wanadoo tariff
Leased line access (64 Kbps)	780 (unlimited connection)	0 (leased line subscription included in the pack)	780	Oléane Avantage tariff
Leased line access (2 Mbps)	4 650 (unlimited connection)	0 (leased line subscription included in the pack)	4 650	Oléane Avantage tariff
Cable access	33 (unlimited connection for 125 MB of traffic then \$0.4/MB)	0	33	CyberCâble tariff (excluding modem rental)
Cable access	46 (unlimited connection for 125 MB of traffic then \$0.4/MB)	0	46	CyberCâble tariff (including modem rental)
Satellite access (400 Kbps on the downlink and return channel via STN)	50 (unlimited connection with downlink only)	2,8 ( France Télécom tariff <sup>3</sup> on 1/7/99)	83.6	Wanadoo Sat tariff (on test only)
ADSL access (500 Kbps on the downlink, 128 Kbps on the uplink)	44 (France Télécom Netissimo 1 offer) + 22.4 (ISP)	0	66.4	Wanadoo offer, Club Internet, World Online (ADSL modem rental for extra \$7.5/month, access rates: \$128.5)

France Télécom estimates that Internet connections based on local call costs generate annual revenues of 350 million FF (\$58 million). With a share of local calls accounted for by the Internet estimated at 7% in 1998, the figure for 1999 is likely to be 13% and as much as 50% within 3-4 years.

<sup>1</sup> Reduction available only on weekdays and from 10 p.m. to 8 a.m.

<sup>2</sup> Peak hour tariff : 8 a.m. to 7 p.m.

<sup>3</sup> Peak hour tariff : 8 a.m. to 7 p.m.

In October 1998, as a result of complaints by Internauts concerning the excessively high cost of local calls, on which France Télécom has a *de facto* monopoly, the operator introduced its Primalist Internet service: for a fee of 10 FF/month (\$1.66), the user obtains a 50% reduction on Internet communications after 10 p.m., but only on weekdays. The cost per hour then falls to 4.35 FF (\$0.72). Another option offered by France Télécom to Internauts is a flat rate of 30FF (\$4.97) for only 6 hours/month of connection time, available from 6 p.m. on weekdays, during weekends and on public holidays.

On 13 December 1998, considering these measures too restrictive, and on the initiative of ADIM, Internauts in France, as in most other European countries, went on strike. This was followed by a similar movement on 31 January 1999. As a result of these protests, a number of political heads took a stand on the Internet charges applied in France and the government commissioned ART to work out a solution together with France Télécom.

In this context, on 31 May 1999, ART approved the new Internet flat rate offered by France Télécom of 20 hours of connection time for 100 FF/month (\$16.6). This is applicable on weekdays from 6 p.m., on Wednesdays from 2 p.m. and during the weekend and public holidays. However, ART has imposed two conditions: firstly, France Télécom will have to offer this option to all ISPs and not only those using its Internet backbone (Transpac or Global Extranet / Kiosque Micro services) as it would have liked; secondly, ART requires France Télécom to provide alternative operators with specific interconnection for Internet access, as is the case for long-distance calls. In this way, these operators will be able to practise an end-to-end relationship with the Internaut (billing) in the same way as with customers for their long-distance services.

The government approved this decision, making clear that it would authorise the flat rate proposed by France Télécom, provided that the two conditions laid down by the regulator are respected.

France Télécom was somewhat apprehensive about introducing its flat rate Internet option to all ISPs. The point is that in cases where an ISP installed his access point on an alternative operator's network, France Télécom, in accordance with the interconnection schedule currently applying, would have to pay 5 to 7 centimes per minute to the alternative operator for each Internet call for termination of the call on its network. This is deemed too high, given that in the 20 hours/month option offered by France Télécom, the Internaut is billed 8.3 centimes per minute.

At the end of June 1999, ART came out in favour of the introduction of 2 interconnection systems: one reserved for voice traffic with payment for termination of the call of around 10 centimes/minute and the other reserved for Internet calls with a lower payment of 3.8 centimes/minute. ISPs were then offered special national numbers of the 0860 or 0861 type. Certain numbers allow them to provide Internet access and offer France Télécom's flat rate option, while others provide for Internet access with the minute of communication subject to a slight surcharge (which will allow payments to a possible ISP partner, or even free Internet).

In October 1999, ART dedicated a new, non-geographical series of 0868 numbers for switched Internet access. The creation of a new series of this type is in line with ART's aim of obtaining a better insight into the relationship between access numbers and charges.

Following ART's clarification of this issue, France Télécom launched its 20 hours/month option under the name Libre@ccès on 2 August 1999.

In June 1999, Club-Internet decided to waste no time and dive into the breach opened up by ART: it teamed up with alternative operator Kertel in offering 5 000 subscribers in the Paris region a flat rate option of 177 FF/month under the name "transparence" made up of a normal subscription of 77 FF (\$12.80) for unlimited connection and 20 hours/month of telephone calls for 100 FF (\$16.60), starting on 1 July.

November 1999 saw several ISPs offering monthly fixed options including telephone calls, e.g. Club Internet and its flat rate option of 97 FF/month (\$16.10) comprising unlimited Internet connection and 20 hours of local calls with no fixed times. Infonie, too, joined forces with Siris in offering a 20-hour option for 100 FF/month (\$16.60). At the end of 1999, in an effort to combat free Internet access offers, France Télécom launched several Wanadoo flat rate options including local calls, under the name Intégrales:

Intégrale 3 heures: 39 FF/month (\$6.50)

Intégrale 10 heures: 99 FF/month (\$16.40)

Intégrale 18 heures: 159 FF/month (\$26.40)

### 3.1.3.5.1 Free Internet

As in other European countries and particularly in the United Kingdom, 1999 saw the arrival of free Internet in France. Revenue sources for ISPs offering Internet connection without subscription and billed exclusively at local call rates are of four kinds: advertising, e-commerce, a quite costly hotline (2.23 FF/minute) and payment by third party operators of revenues they could claim from the national operator for terminating the call on their networks.

Starting in the second quarter of 1999, offers of free Internet access have proliferated in France. In July, there were some fifteen free access providers offering STN access at 56 Kbps and even ISDN access at 64 Kbps in some cases.

At the end of June 1999, there were close on 400 000 subscribers to a free Internet service in France. This figure, however, should be considered with caution as a high proportion of the free Internet subscribers still use "classical" access via an ISP. The number of real new Internauts is estimated at 75 000.

Estimated number of subscribers to free ISPs (6/99)

ISP	<i>LibertySurf</i>	<i>Free.fr</i>	<i>World Online</i>	<i>FreeSurf</i>	<i>Fnac.net</i>	<i>VNU.net</i>	<i>LOKACE Online</i>
Number of subscribers	120 000	90 000	65 000	60 000	35 000	20 000	15 000

Source: IDATE

The recent decision by ART on Internet calls coming on to France Télécom's network and ending on that of an alternative operator could be a serious blow to free Internet access in France. The fact is that ART recommends that France Télécom's payments to an alternative operator for the termination of an Internet call be set at 3.8 centimes/minute as opposed to the 6.6 centimes/min which Cegetel requested. This will make for a corresponding fall in revenues for free access providers. Operators such as COLT, for example, have in fact already concluded payment agreements with several free ISPs.

Leaders in the residential sector in France have reacted to the upsurge in free Internet access. For example, in August 1999, France Télécom announced an access service without subscription at a cost of 0.28 FF/minute (\$0.046) and applied to ART for the necessary approval. Club Internet, in turn, introduced a subscription-free Internet access service in September 1999 at 0.22 FF/minute (\$0.036), with a minimum billed amount of 10 FF (\$1.66) every 30 days. Lastly, in October 1999, AOL announced its coming subscription-free Internet offering called «Sérénité à la carte» for 0.25 FF/minute (\$0.04).

#### 3.1.3.5.2 Internet access without subscription

Internet access offers without subscription but involving call charges higher than the local rate are also available in France. This type of service is intended for occasional Internet users or for those who use only e-mail services.

By way of example, Jet Multimédia has been offering non-subscription on-line services via France Explorer since 1997. Following the advent of free Internet access, which could be fatal for this type of service, France Explorer lowered its connection charges per minute in May 1999 by 30 to 40% with a view to arriving at an average charge of 50 centimes per minute. France Explorer claimed to have 600 000 users in May 1999 and a turnover in 1998 of 65 million FF. It is aiming at a figure of 100 million FF in 1999. Having launched its service in Spain (IberExplorer), in Switzerland (SwissExplorer) and in April 1999 in Belgium, Jet Multimédia took on the Netherlands in June and Italy in September.

## 4. Information Society, Telework, E-Commerce : initiatives and policies

### 4.1.1 Information society

#### 4.1.1.1 Presentation of the government program

The public authorities seemed hesitant about deciding to promote the development of the Internet. However, the measures announced by Prime Minister Lionel Jospin during his speech at Hourtin in August 1997, as well as the **PAGSI<sup>4</sup> programme that followed on in January 1998**, changed this environment.

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<sup>4</sup> (\*Government action programme for the information society)

The main objective of PAGSI is to democratise the use of ICTs in France and, in particular, the Internet. The programme represents a budget of 5.76 billion FF (\$955 million) over 2 years, of which 1999 will account for 3.6 billion FF (\$597 million). 40 million FF (\$6.63 million) will be spent this year on building a governmental Intranet.

At European level, the French government also teamed up with the Spanish government last January to submit a demand to the Union that Internet access be included in universal service.

According to several reports, compiled at the request of the government have served as further proof of the fact that France is still lagging behind:

- ✓ The Oudet report of October 1998 on "The Internet and foreign administrations" points out that, despite its growing awareness, France is way behind nations such as Australia and Canada in using the Internet for contact with the country's citizens
- ✓ The Abramatic report of June 1999 on "The technical development of the Internet" condemns the way France is lagging behind and highlights the lack of content on the French Web, as well as the absence of high speeds at final access level.

#### 4.1.1.2 Key Dates of the Government Program

- **Speech of August 25th, 1997** : after a ministerial committee meeting on January 16th, 1998, the Government releases its Action Plan for France's entry into the Information Society.
- **19th, 1999** : Prime Minister Lionel Jospin reviews a year of Government action and announces important new measures.
- **August 26th, 1999** : the Prime Minister presents the main thrust in the second phase of his policy on the development of the Information Society: a new research initiative on information technologies and Internet Next Generation ("Internet 2"), the fight against cyber-crime as well as the adaptation of French Law to the Information Society – by the end of spring 2000, three law bills will be presented to Parliament.

#### 4.1.1.3 Details of the government program

##### 4.1.1.3.1 The Prime Minister speech at the Hourtin University of Communication

The speech given by the Prime Minister, Lionel Jospin, on 25th August 1997 at the Hourtin University of Communication, marked a shift in public thinking in France. Preparing for France's entry into the information society was made a priority of Government policy. The Prime Minister has reaffirmed this priority on many occasions, notably at the Interministerial Committee for the information society on 19th January 1999.

In 1997, in spite of its undeniable assets (outstanding telecommunications networks, recognised international research centres such as INRIA or CNET (the R&D arm of France Télécom), the experience of the Minitel online services), France was lagging behind in the use of information technologies, reflected by the low numbers of personal computers in homes and the limited number of French internet users. A number of factors were suggested to explain this delay.

The lack of quality French-language services on the new networks, the insufficient amount of support available for small and medium-sized businesses, especially for the newest ("start-ups") and innovative businesses, the weakness of the computer culture and the marginal position of ICTs in our education system were all put forward as possible explanations.

As a consequence, the State has three roles to play :

- ✓ it must make businesses and citizens aware of the issues associated with the information society and encourage them to become actively involved
- ✓ it must lead the fight against the dissemination of racist and revisionist material or material which undermines human dignity and promote user security and the protection of privacy. It is also responsible for the smooth operation of economic aspects, notably the respect of contracts, intellectual property or consumer rights. The State must also take an active part in international negotiations on various issues associated with the information society, which are especially important given the worldwide nature of the internet;
- ✓ the State is itself a major player in the information society. The modernisation of the way it operates and its relationships with businesses, local authorities and citizens can improve the quality of service to the public and motivates the other economic players.

During his Hourtin speech, the Prime Minister defined the priorities of Government intervention with respect to the information society. These are:

- ✓ schools;
- ✓ arts;
- ✓ electronic commerce;
- ✓ the businesses of the information and communication technology sector;
- ✓ the modernisation of public services;
- ✓ regulation.

Because of this, the Government decided to implement an ambitious action plan, which was made public on 16th January 1998.

#### 4.1.1.3.2 The Government action programme of January 1998 (PAGSI<sup>5</sup>)

The Government action programme for the information society (PAGSI), adopted during the information society Interministerial Committee on 16th January 1998 and followed up by that of 19th January 1999 laying down the salient issues for 1999 and 2000, set out to implement the priorities of Government policy.

##### 4.1.1.3.2.1 *PAGSI is hinged around six priorities*

**Education:** equipping and bringing online of establishments, training of teachers, development of appropriate paedagogical tools (support for the creation of multimedia software industry and sites devoted to paedagogical matters).

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<sup>5</sup> (\*Government action programme for the information society)

**Arts:** support the creation or development of businesses producing cultural material, the development of attractive state-produced material, international cooperation and development of French material on the network.

**The modernisation of public services:** now systematic recourse to internet standards, training of staff, development of electronic procedures.

**Businesses and electronic commerce:** awareness campaigns and implementation of fiscal, financial and administrative measures to assist businesses with these changes

**Research and innovation:** increase public research initiatives, encourage innovative business creation in the ICT field (development of risk capital, launch of new network trials, etc.).

**Juridical regulation:** adaptation of the legal framework and judicial and security operations to take account of new technologies and the internet.

Each of the priorities outlined in PAGSI is given clear Government attention. This action programme thus represents a point of reference for the administrative authorities, but also, and above all, for other players in society who seek determined, comprehensible and sustainable Government action.

#### ***4.1.1.3.2.2 PAGSI is mobilising all administrative bodies***

Rather than create a centralised institution "responsible for new technologies", the decision was taken to involve all public services at both national and local level. The overall strategy is founded upon the following:

- **an Interministerial committee for the information society (CISI).** This has already met twice: on 16th January 1998 for the adoption of PAGSI, and 19th January 1999 to take stock of its implementation and to decide upon the new measures to be adopted during the second phase covering the period 1999-2000;
- **"Information society correspondents"** chosen within each ministry, both in ministerial offices and within the various departments. These have linked their colleagues and their correspondents in businesses, associations and local authorities. The implementation of PAGSI is not restricted therefore to experts in new technologies;
- **Ministerial action programmes for the information society (PAMSI),** drawn up for each ministerial department. These action programmes were made public and brought online at the beginning of 1999;
- **An Interministerial technical support mission for the development of information and communication technologies in Government administration (MTIC)** created in August 1998 to reinforce interministerial coordination. Also, within the Interministerial delegation for State reform (DIRE) a **Mission "for the use of new information and communications technologies by the Civil Service"**.

The circulation of case histories, technical support and the supervision of interministerial projects will thus be maintained. Furthermore, **the information and communication legal and technical department (SITI)** was made responsible for the operational administration of PAGSI, promoting the circulation of information between "information society" correspondents and drawing up PAGSI progress reports. Public information is provided in the main by the **Government information Service (SIG)** which manages the [www.internet.gouv.fr](http://www.internet.gouv.fr) web site.

#### 4.1.1.4 Progress of the government program after one year (31st December 1998)

At the second Interministerial Committee for the information society which met on 19th January 1999, the Government recorded the progress of PAGSI one year after its launch: 70% of the objectives set had been achieved (153 out of 218), most of the others were well underway and only very few were in the position of not being met at all (around ten out of 218).

Progress report of the PAGSI after one year :

- ✓ **EDUCATION** : the task of equipping and connecting schools has made excellent progress (almost 90% of secondary schools connected), due mainly to a support fund of 500 M F
- ✓ **CULTURE** : support mechanisms were set up for projects relating to the French language and multimedia publishing. 98 "Multimedia Culture Centres" were set up as was a Bank for programmes and services.
- ✓ **GOVERNMENT DEPARTMENTS**, set up or developed numerous sites (in particular Legifrance and Admifrance), which make available online a large amount of public data (legal texts and reports) and 300 forms covering 50% of the volume of procedures. Remote-access services were started (for tax payments). The unification of computer standards around those of the Internet made good progress. The Health Care network was deployed to the whole country by the end of 1998.
- ✓ **ELECTRONIC COMMERCE** : the State multiplied initiatives to make companies aware of the stakes of the information society, in particular electronic commerce, the euro and the year 2000. Various aid and certification procedures were established to encourage companies to use the Internet for exports and to have small-to-medium-sized businesses modernize their information systems.
- ✓ **INNOVATION AND RESEARCH** : industrial and technological research was strongly encouraged by developing capital risk finance through the creation of a fund that reached 900 MF (137 M euros), and by extending fiscal measures in the finance laws for 1999 to encourage new entrepreneurs in the new technology sector. Regarding research, an "information society" programme was granted 300 MF (45.7 M euros), and the National network for telecommunications research will receive an annual grant of 260 MF.
- ✓ **REGULATION** : the reports of Mr. Guy Braibant (March 1998) relative to data of a personal nature and of the Council of State (September 1998) on related legal issues were presented to the Prime Minister. It is worth noting that the Government has begun liberalizing the use of encryption methods.

#### 4.1.1.5 Meeting of the Interministerial Committee on the Information Society - January 19th, 1999

During the meeting of the Interministerial Committee on the Information Society of January 19<sup>th</sup>, 1999, the following decisions were taken :

- ✓ Build a legislative framework to protect exchanges and privacy,
- ✓ Develop the culture, content and presence of France on the Internet,
- ✓ 1999-2000: transform to an electronic administration,
- ✓ Implement an Information Society embracing **solidarity: access for all, social and regional**.

#### 4.1.2 E-commerce

##### 4.1.2.1 The situation of E-Commerce in France

Already made popular by the Minitel, electronic commerce continues to make progress in France. Firstly in business transactions between companies, and in their exchanges with government departments, where invoicing, ordering, and dispatching of projects via email and even remote payment, allow for the reduction of administrative costs and accelerate production processes.

In March 1999, Online purchasing still only affects a minority of internet users, around 15% in France (versus 25% in the United States and almost 19% in Germany). Purchases made and paid for by individuals on the internet represented around 300 million francs (45.7 million euros) in 1998, i.e. six times more than a year previously, but barely 0.01% of total household spending. It should be remembered that purchases made by individuals on Minitel (apart from information services) represent 7 to 8 billion francs (1.07 to 1.22 billion euros): 5 billion (760 million euros) for traditional mail-order sales, and the rest distributed between travel and a multitude of categories: flowers, shows and exhibitions, etc.

Internet purchases involve the same product categories as in the United States: computer hardware and software, travel and "cultural products".

However, all estimates point to the fact, that there will be an explosion in purchases made by individuals via the internet. These were already estimated to represent 50 to 90 billion francs (7.6 to 13.7 billion euros) worldwide in 1998, concentrated in North America (85%). These are likely to exceed 650 billion (99 billion euros) in 2003<sup>1</sup>.

The impact will vary from sector to sector. The most "intangible" products (financial services, software, information, music. etc.) or those most likely to benefit from the "market transparency" made possible by the internet (car industry, travel) are the sectors most concerned in the short term. Ultimately, all distribution activities - as well as a large number of industrial and service sectors - will be affected.

##### 4.1.2.2 State of achievement of the government action program in January 1999 in the E-Commerce field

The State multiplied its initiatives to make companies aware of the stakes of the information society, particularly with regard to electronic commerce, using the Euro, and

the year 2000. Different procedures for aid and for certification were set up to incite companies to use the Internet to export and small-to-medium-sized businesses to modernise their information systems. Electronic commerce projects in state departments, including experimentation of electronic means of payment and the simplification of administrative measures, have progressed considerably.

- ✓ A budget of 50 million FF (7,6 M. euros) was allocated in 1998 to raising levels of Internet awareness and competence within SMEs.
- ✓ An industry seal of approval (?) and a specific budget of 20 million FF (3,0 M. euros) will be allocated to promote French export business on the web
- ✓ In June 1998, the Paris Chamber of Commerce and Industry presented a proposed contract for e-commerce activities stipulating the rights and duties of both client and buyer.
- ✓ Development of the e-wallet will be promoted through creating a dialogue on a national scale, launching a call for proposals aimed at promoting products which are compatible with EURO, and contributing to the definition of a European standard.
- ✓ A dialogue with the Internet players has been entered into in order to establish a "quality charter" for e-commerce sites.

Public services will become industry leaders of e-commerce, by creating websites for National French Documentation, the Ministry of Economy, INPI, etc

#### 4.1.2.3 January 1998 – November 1999 : key events

- ✓ November 10<sup>th</sup> 1999 : the e-commerce mission directed by Francis Lorentz is renewed for two years. Specific tasks will include the evaluation of public work in this field, the identification of workable and efficient solutions and the defining of criteria at six monthly intervals of e-commerce in France (?).
- ✓ October 5<sup>th</sup>, 1999 : launch of a national. The coming law will make it possible to clarify the main legal problems bound up with the use of the Internet such as copyright, cryptography, consumer protection, etc.
- ✓ 5<sup>th</sup> September 1999: draft proposal of the law regarding the protection of personal data and private details.
- ✓ 1<sup>st</sup> September 1999: bill on proof and electronic signature.
- ✓ August 1999 : the government announced that it will be launching studies with a view to defining the law governing the Information Society that is expected to enter into force during 2000.
- ✓ 27<sup>th</sup> May 1999 : adoption by the French Parliament of the audiovisual communication bill (amending the previous law number 86-1067 of 30<sup>th</sup> September 1986 'Freedom of Communication')
- ✓ March 19<sup>th</sup> 1999 : "eElectrophées", the e-commerce awards are presented. The five award winners are : NetGem, Isagri - Terre-Net, Informusique S.A, Paniers et Eat On Line

- ✓ 4<sup>th</sup> February 1999 : "the new rules of e-commerce" : 1998 achievements and prospects. The mission led by Francis Lorentz on behalf of the French Government meets 300 experts to discuss the various issues of e-commerce. Seven priorities are identified :
  - ▶ The implementation of policy decisions taken to adjust the legal environment: electronic signatures, protection of data on individuals, encryption.
  - ▶ The extension of official formalities in electronic form relating to companies and public works contracts.
  - ▶ The setting up of status and progress indicators for Internet communications quality and the measures taken to raise its level.
  - ▶ The deployment of a secure European system (or interoperable systems) for payment based on smart bank cards.
  - ▶ The focusing of French and European research and development aid on "Future Internet".
  - ▶ The expediting of initiatives taken by the founders of start-ups and SMEs active in fields linked to electronic commerce.
  - ▶ Consideration of the impact on employment of the development of electronic trading: changes in employee qualifications and an evaluation of the requirements for initial or on-going training.
  
- ✓ January 1999 : the government softened its stand on encryption, with a view to promoting e-commerce in France. This led to the passing of a decree in March 1999 whereby the level of encryption software keys for free sale and use was raised from 40 to 128 bits.
  
- ✓ The creation of a website dedicated to the e-commerce mission on the website [www.finances.gouv.fr](http://www.finances.gouv.fr).
  
- ✓ 16<sup>th</sup> June 1998: the key players in French e-commerce announce their decision to adopt a common technical solution for securing payment. The SET protocol is selected by Europay France and the consortium e-Comm.
  
- ✓ 4<sup>th</sup> June 1998: a practical guidebook on the new legal framework for encryption is published by the State Secretariat for Industry.
  
- ✓ May 6<sup>th</sup> 1998 : following the conclusions and recommendations of the Lorentz report on e-commerce, the Minister of Economy, Finance and Industry presents 10 measures for the development of e-commerce in France. These deal with security of transactions, quality of access to the Internet, the supporting role of public authorities, promoting awareness among SMEs, and creation of a mission policy for e-commerce.
  
- ✓ January 8<sup>th</sup> 1998 : Lorentz report on e-commerce. The conclusions are publicly available and can be discussed and commented upon on the web.

### 4.1.3 Telework

Teleworkers in Europe at the end of 1997

	Total number of teleworkers	% of the active population
Denmark	250 000	9,7 %
France	240 000	1,1 %
Germany	600 000	1,9 %
Italy	250 000	1,2 %
Netherlands	600 000	9,1 %
United Kingdom	1 800 000	7 %
Total European Union	4 630 000	3,1 %

Source: *European Telework Development*

Telework is developing at very different rates throughout Europe, and in very different ways. Scandinavia, Ireland, the UK and the Netherlands stand out with their strong development. Germany, France and Southern Europe remain more attached to traditional forms of work organisation.

The reluctance of certain businesses or certain employees to move over to teleworking can also be explained by objective factors, which must be taken into account if we wish to promote its development.

A fear of isolation, of being disconnected from the company and of seeing career opportunities pass one by encourage "partial" forms of telework, in which the employee spends a few days per week at his/her company, or the development of new forms of socialising. Telework also requires that a company's training policy be more clearly defined, since the "informal" part of training provided by daily contact with one's peers or superiors doesn't exist for teleworkers.

Neither must telework become a form of underpaid work. A "freelance" worker whose income is dependent on a single company has the same relationship of dependence on his/her employer as an employee, without the same advantages and protection. A situation whereby "mobile" communication tools only mean that an employee is constantly at the "beck and call" of his/her employer must also be avoided: a right to "switch off" must be maintained.

Finally, the physical or financial possibility of teleworking is dependent on factors as prosaic as the cost of computer and telecommunications equipment, the size and facilities of homes, and taxation systems. Thus, a 1997 Danish tax clause allowing companies the right to consider the provision of a home computer for one of their employees as an investment (and not a remuneration item) has helped to encourage growth in the number of teleworkers, or at least part-time ones, now estimated at around 200,000.

In France, telework was promoted as such by the public authorities until the mid-90s. Two specific calls for tenders were launched by DATAR on telework and succeeded in awarding around 200 projects in total. However, today telework is almost non-existent in public policies. It is as if the term telework is not anchored in French mentality.

Looking at the PAGSI, telework is cited as an organisational mode to be supported but no specific budget is allocated to any supporting actions or initiatives. Within the programme an incentive is targeted at SMEs in rural areas. The call for tender for 'teleservices outreach training for very small companies' launched by DATAR was allocated a budget of 5 million French Francs. (762 thousand EURO). Its objectives were to raise ICTs awareness in very small companies (fewer than 10 employees). Self-employed workers and micro-companies located in industrial reconversion areas and rural areas were the main targets.

France is now a participant in the European initiative 'European Telework Award'. Last November, during the specialised exhibition Telework.com in Paris, the launch of the French Telework Award was announced. The initiative is sponsored by France Telecom. Four categories have been established :

- ✓ France Telecom Award : the best example in a large organisation
- ✓ [M@yetic](#) Award : the best example of teleservices creation
- ✓ French Association for Telework and Teleactivities Special Award
- ✓ ADAPT Award

The results will be announced during the national week of 'The Future of Work'.

#### 4.1.4 Private sector

With regards to e-wallet initiatives, two schemes should be mentioned :

- ✓ the association of the RAPT (the public transport organisation in Paris), the SNCF (the French rail network company), la Poste and the banks Société Générale and Caisses d'Epargne to deal chiefly with public transport
- ✓ the association of the banks BNP and Credit Agricole which aims to integrate the e-wallet and the traditional credit card.

#### 4.1.5 Educational

##### 4.1.5.1 The government's position

According to french government, computers have a role to play in education :

- ✓ The use within a classroom environment, as long as there is some adaptation of teaching methods, provides a degree of motivation and knowledge acquisition exceeding that in traditional "lecture" situations.
- ✓ Using computers to manipulate objects, to carry out simulations and to search for and creatively combine information, supplements and supports the instruction provided by the teacher.
- ✓ The design of web pages by a class or exchanges via electronic mail with French or foreign correspondents teach the virtues of group work and, for some pupils, have even seemed to rekindle interest in the written word.

- ✓ Computers and the networks can also contribute to the development of different forms of distance learning and make them more effective. Local materials (for example on CD-Rom) combined with some form of permanent exchange with the teacher and within a group environment can counter the isolation felt by students and improve teaching through more frequent and less formal interaction.
- ✓ Video-conference tools enable classes to "meet" from various locations throughout the country and to interact with a distance-learning teacher.
- ✓ Some subjects that are not readily available locally, may be accessible to all students across the country. In particular, the teaching of so-called "obscure" languages, which in reality are amongst the most widely spoken in the world (Chinese, Russian, Hindi, Arabic, etc.), may benefit from new technologies. Developing their teaching would be of great benefit to our country.

Distance learning and training is also fully taken into consideration.

Distance learning and training in Europe  
(other than university teaching)

Country	Number of pupils
Germany	280 000
Spain	556 000
France	404 000
United Kingdom	148 500
EU Total	1 888 000

*Source: Voctade/Le Monde de L'Education*

- ✓ In France, where distance learning is well developed, mainly in the secondary sector and technical fields, new distance learning technology has a major role to play.
- ✓ Businesses can also take advantage of the introduction of new information technology as a means of updating employees skills or changing their ongoing training practices. Sending an employee out to a training centre, which may be a long way from the workplace, is expensive and does not always provide the benefits that a series of possibly shorter sessions at distance can. These also enable the employee to organise his/her time more freely. In 1996, one third of the 40 billion francs (6.1 billion euros) that businesses spent on training was directed at logistics (travel, rooms, materials).
- ✓ At home, computers are used as an educational support, but also as a tool for discovery, in which play and learning are closely linked. Households with children are equipped with more PCs and internet access than others. There are several thousand educational or cultural CD-Roms in existence, of which nearly 500 have been classed as being of "recognised pedagogical use" by the National educational authorities.
- ✓ A growing number of teachers have also learned to use computers and the internet in the context of their teaching practice. They use them as a teaching support for some periods of their class and to prepare or update lessons, exchange documents and ideas with colleagues and gather information.

#### **4.1.5.2 Results of the government program in schools in 1998**

1998 was a year of many accomplishments. School establishments were equipped with computers and connected up to the internet thanks to the creation of a support fund, made up of some of the receipts from the floating of France Télécom shares, and the agreements reached with internet access providers and computer manufacturers.

In one year, the number of establishments connected to the internet went from 40% to 90% in high schools; from 20% to 70% in middle schools and from 1% to more than 15% in primary schools. The pupil-computer ratio also improved. It is 7 for secondary schools (a little lower for vocational secondary schools), 17 for middle schools (compared to 30 the previous year) and 30 for primary schools.

The training of teachers was also a priority: one third of teacher training is now in the field of new technology in education and an emergency plan for the University teacher training institutes (IUFM) was adopted. The creation and circulation of paedagogical material was encouraged, notably through the opening of a one-stop strategy for the labelling of educational multimedia products and a 40 million Franc fund (6.1 million euros).

#### **4.1.5.3 EDUCASOURCE, The website for educational resources on the Internet**

Designed for all teachers, from pre-school to university, EDUCASOURCE is an Internet site that selects electronic resources based on their benefit for teaching. Two resource categories are offered on the first page of the site: teaching products, designed to be used directly, and external information sources which are of interest in a teaching context or when designing a teaching product.

"[www.educasource.education.fr](http://www.educasource.education.fr)"

#### **4.1.5.4 EDUCNET, the website for multimedia in education**

This site connects people involved in education, from pre-school to university, in matters that relate to the new information and communication technologies and facilitates the development of methods linked to these technologies. It presents the policies of the Ministry of Education with regard to ICT and initiatives carried out with local councils and companies.

EDUCNET distributes usage charters, applied by schools, teachers and regional education departments, and follows the progress of projects and teaching practices, for example, pilot projects, calls for French and European projects, and discussion forums.

[www.educnet.education.fr](http://www.educnet.education.fr)

## 5. Electronic Commerce and Telework Penetration and Trends : The Main ECATT Findings for France

### 5.1 Electronic Commerce

#### 5.1.1 Overview of the situation in France

##### 5.1.1.1 Electronic commerce

This is already a reality in France where transactions are effected via the Minitel. The market in 1996, for example, was worth 15 billion FF. Despite a number of encouraging signs, e-commerce over the Internet is only just at the dawn of its development in France.

The number of sites offering e-commerce services increased 175% in 1998. In June 1999, there over 950 shopping sites on the Web. The shopping area on the Wanadoo portal is particularly well stocked through its directory containing the names of 1 000 cyber retailers. Among the more successful instances, mention may be made of Les 3 Suisses, a mail order company present on the Web since the end of 1995 and now offering over 60 000 articles on line. Another striking example is the Nouvelles Frontières travel agency which, since October 1998, has been holding weekly auctions on its Web site of plane tickets and tourist trips. Lastly, Bertelsmann and Havas have joined forces in launching BOL France, selling French-language books on the Internet. Spending 42 million FF in 1998, the Pinault-Printemps group is the largest investor in France in e-commerce sector, with a further 80 million FF investment planned for 1999.

In 1998, only 210 000 French people are said to have bought items on the Internet. According to IDC, e-commerce on the Internet in France was worth 1.6 billion FF (\$265 million) in 1998. This compares favourably with the 1997 figure which was 13 times lower. It is expected that the figure for 2003 will reach 300 billion FF (\$49.7 billion).

In May 1998, France Télécom launched its electronic commerce platform, Télécommerce, which offers a complete range of services for traders and gives access from its Web site to all their customers' virtual shopping malls. The goal is to establish a quality label, ensuring truly secure transactions. Positioning itself as a third-party certifying body, France Télécom hopes to put an end to reluctance on the part of Internauts in regard to electronic commerce. Developed by Open Market, the platform manages all types of payment, provides security of transaction, takes charge of billing and ensures contact with the banks for collection, etc. The service costs 10 000 FF for installation and 900 FF per month for maintenance. The trader is also required to pay the operator 3% of the value of transactions.

One year after launch, Télécommerce registered its 100th operational shopping site and now claims to hold 10% of the market. Between the months of December 1998 and February 1999, Télécommerce was chosen by almost 20% of all new shopping sites opened in France, and has set its sights on reaching a figure of 500 by the end of 1999.

The public enterprise, La Poste, also decided to go in for e-commerce and launched a number of services in 1999. By 2000 it expects to capture close on 10% of the total e-commerce market in France, i.e. 200 million FF (\$33.2 million).

#### 5.1.1.2 On-line banking

According to Benchmark Group, 4% of French Internauts make use of on-line banking services. BNP is the bank with most Internaut customers (35 000 subscribers), followed by Crédit Lyonnais, Crédit Mutuel, Banque Directe, Crédit Mutuel de Bretagne, Bred and CCF.

#### 5.1.1.3 Advertising

Although on-line advertising expenditure in France did not exceed 110 million FF (\$18.2 million) in 1998 (30 million in 1997, ie \$4.97 million), IAB predicts that Internet-based advertising in France around 2001-2002 will be worth as much as cinema advertising today, i.e. approximately 500 million FF (\$82.9 million).

According to IAB France, revenues from Internet advertising in the first half of 1999 amounted to 170 million FF (\$28.2 million), a 150% increase over the total for 1998.

#### 5.1.1.4 Portal sites

According to a NetValue survey, the following were the 10 sites most frequently visited by French Internauts in May 1999:

1. Wanadoo	2. Yahoo! France
3. Multimania	4. MSN
5. Voilà	6. Microsoft
7. Netscape	8. Club Internet
9. AltaVista	10. AOL

Wanadoo is the leading portal with 700 000 pages read daily in July 1999. France Télécom reckons that 80% of its subscribers keep the Wanadoo home page.

### 5.1.2 PC and e-mail usage, internet and online services access and use by the population

The level of PC equipment at home in France is the lowest in EUR10 (the ten European countries surveyed in ECATT). Prospects for growth for 2001 are not expected to change the current situation. Looking at the figures the keyfindings of the survey for France are the following:

- ✓ 31.1% of households are equipped with a PC (both online and offline PCs)
- ✓ 8.8% of households are equipped with an online PC
- ✓ the estimate for 2001 predicts that half of the French households will be equipped with a PC.

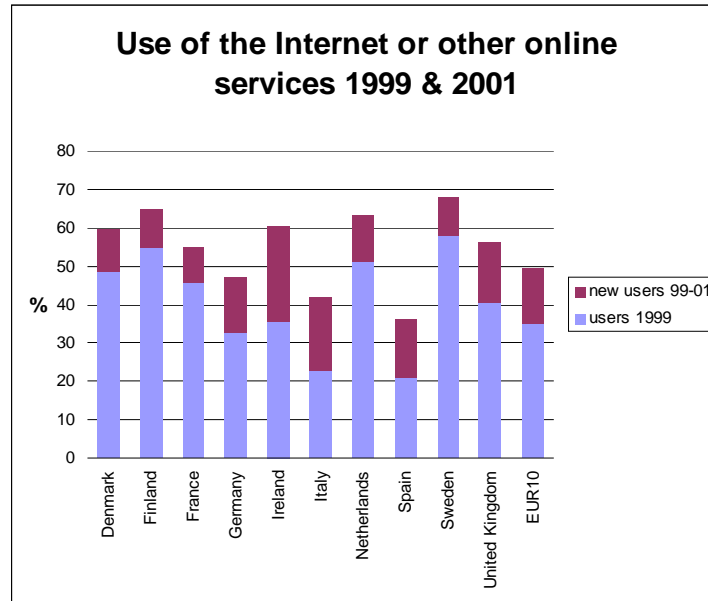
In terms of usage, the situation is slightly different, and differs according to the type of usage.

- ✓ EMAIL: 12.6% of the French population is uses email compared to the EUR10 average of 17.5%. The European country with the greatest number of users in the population (40%) is Sweden.
- ✓ Prospects for growth for 2001 are not expected to change the situation, despite the fact that the number of French email users is currently more than doubling with 30.6% (EUR10 is 37.6% and Sweden 62%).
- ✓ In total, 14 million French people will use email in 2001.
- ✓ INTERNET: the level of awareness is high, with France ranking second , behind Sweden but before Finland., One reason for this is thought to be the widespread use of the Minitel in France. This is particularly true when comparing the users and the balance between Internet users and other online services. In France, there were more other online service/Minitel users in 1999 (23.2%) than internet users (22.3%). The total number of users is high and the position for France is ranked 5. However when only considering Internet users, France has a very low ranking of 9.
- ✓ In 1999, the overall number of Internet and online services users in France was 20.8 million people, with 8.2 million f regular users. In 2001the total number of users is expected to reach 25.1 million.
- ✓ In terms of gender, the Internet in France appears to be a male phenomenon and will remain so in 2001.
- ✓ According to age, the situation for France is affected by Minitel usage which explains in particular the high score among the elderly (17.2% of >64 years old compared to the EUR10 average of 8%).
- ✓ The level of use of Internet and online services increases with the level of educational . There is a wide gap between a low level of education with only 14.5% of users, and a high level of education with 73.5%. The gap is larger in France than in average for the EUR10. The higher a person is qualified, the more likely s/he is to be an internet user. This situation is very marked in countries like Germany, Spain, Italy and France. In the Scandinavian countries and the UK the share of access to the internet by less qualified people is much higher and reaches figures which are at least three times as high as those in Germany.

Use of Internet or other online services 1999 and 2001 (in %)						
	Users 1999	New users 1999-2001	Users 2001	Growth 1999-2001	Ranking 2001	Ranking (Growth)
Denmark	48,5	11,2	59,7	23,1	5	6
Finland	54,9	10,1	65,0	18,4	2	9
France	45,5	9,3	54,8	20,4	7	8
Germany	32,9	14,2	47,1	43,2	8	4
Ireland	35,6	24,6	60,2	69,1	4	3
Italy	22,7	19,1	41,8	84,1	9	1
Netherlands	51,1	12,0	63,1	23,5	3	6
Spain	20,7	15,5	36,2	74,9	10	2
Sweden	57,9	10,2	68,1	17,6	1	9
United Kingdom	40,6	15,5	56,1	38,2	6	5
EUR10	35,2	14,4	49,6	40,9%		

base: all respondents (n= 7.700)

© empirica 1999

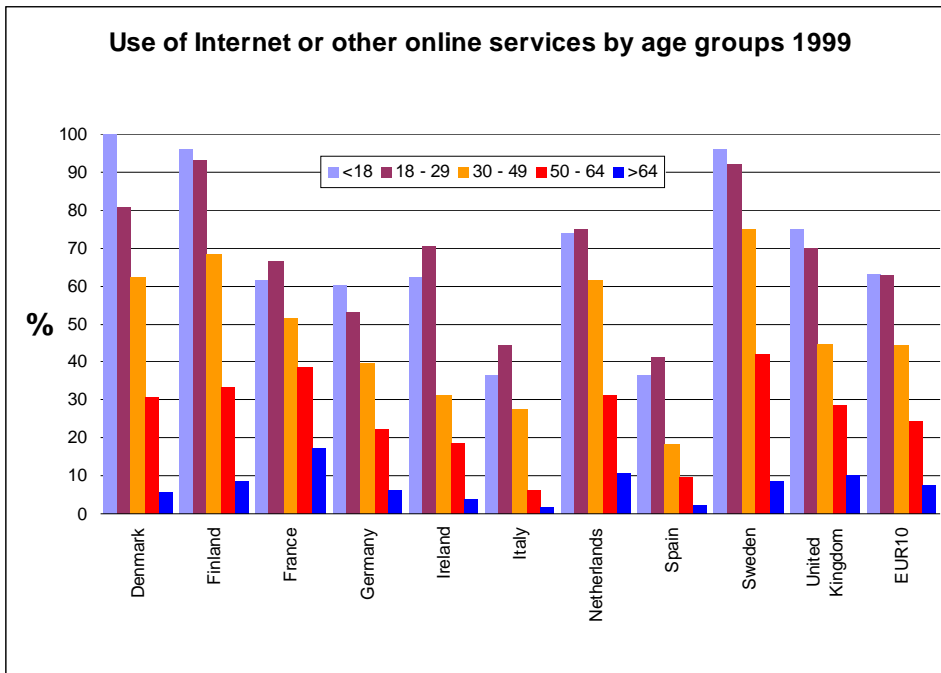


© empirica 1999

Use of Internet or other online services (all users) according to age (in %)					
	< 18	18 - 29	30 - 49	50 - 64	> 64
Denmark	100	80,7	62,5	30,9	5,9
Finland	96,1	93,2	68,6	33,3	8,5
France	61,5	66,5	51,6	38,6	17,2
Germany	60,2	53,2	39,7	22,3	6,0
Ireland	62,5	70,5	31,1	18,7	3,8
Italy	36,4	44,4	27,7	6,1	1,9
Netherlands	73,9	75	61,6	31,3	10,7
Spain	36,4	41,3	18,2	9,5	2,3
Sweden	95,9	92	74,8	42	8,6
United Kingdom	75	69,8	44,7	28,7	9,9
EUR10	57,2	57,7	40,9	22,8	8,0

base: all respondents (n= 7.700)

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### 5.1.3 Online activities with relevance for electronic commerce: online shopping and banking by the population

In 1999 only a small share of the European population is actively engaged in online activities relevant for electronic commerce varying between 2% (ordering groceries) to 14% (supplier information search). When analysing the purposes of use of online services and the internet it becomes apparent that these are mainly used for information search activities followed by game playing and registering as website user. Online activities like making payments online and the different online shopping activities rate low. Even ordering of books, CDs and videos only reach figures of less than 5%. Making payments online achieves very low 4% with the extremes being 1% in Spain and still rather low 7% in the UK. Europeans throughout the countries show an extreme caution when it comes to making payments online.

Growth rates for the next two years will be impressive if the plans of the interviewees become reality. The result will then be that a quarter of the European population will be active with online information search activities and around 15% using the internet for online shopping of various goods. Many of the Europeans also expect secure and usable online payment facilities to be in place in 2001 since an average of 10% indicates that it would make use of these by then. The extremes again are between Spain (6%) and the UK (18%).

The analysis of online activities for France in comparison to observations for the EUR10 is affected by the Minitel usage. The top five activities in France are :

- ✓ search for travel information
- ✓ search for information about suppliers
- ✓ search for price information
- ✓ retrieving information from banks

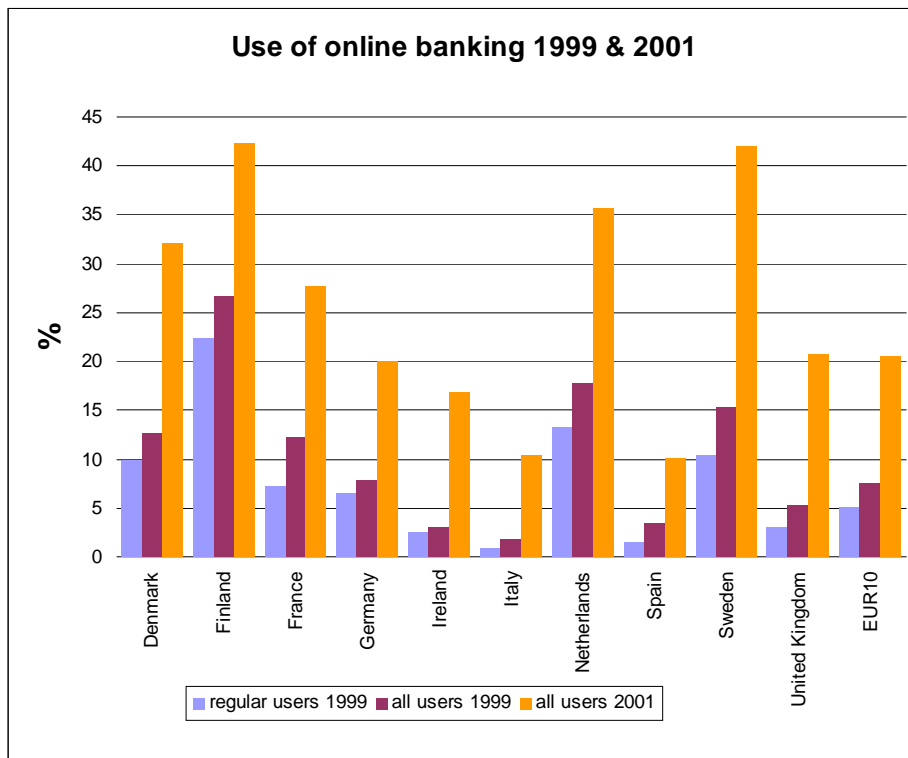
✓ online game-playing.

All these activities were among the top activities for Minitel even though today the change-over from Minitel to Internet is in progress (?). The figures for 2001 mark a significant growth for almost all the activities with an average multiplier factor of 2. The ranking order of activities is more or less the same for the top five, the only difference being the arrival of ordering train/hotel tickets at number five in place of online game-playing.

Use of online banking (in %)							
	Regular users 1999	Occasional users 1999	All users 1999	New users 1999 - 2001	All users 2001	Ranking 1999	Ranking 2001
Denmark	9,9	2,8	12,7	19,4	32,1	4	4
Finland	22,5	4,2	26,7	15,6	42,3	1	1
France	7,2	5,0	12,2	15,5	27,7	5	5
Germany	6,5	1,3	7,8	12,2	20,0	6	7
Ireland	2,6	0,4	3,0	13,9	16,9	9	8
Italy	0,9	0,9	1,8	8,6	10,4	10	9
Netherlands	13,3	4,4	17,7	17,9	35,6	2	3
Spain	1,5	2,0	3,5	6,6	10,1	8	10
Sweden	10,4	5,0	15,4	26,6	42,0	3	2
United Kingdom	3,0	2,2	5,2	15,6	20,8	7	6
EUR10	5,1	2,4	7,5	12,9	20,4		

base: all respondents (n= 7.700)

© empirica 1999



Online banking is seen as a “killer application” for electronic commerce. However, the share of online bankers among the population is still rather low with a European average of 7% out of which just 5% account for regular users. France shows a better performance than the EUR10 but is still far beyond Finland, the leading country in Europe. Italy and Spain are lagging behind with just 2% and 4% respectively. The expected growth rates are high and it can be expected that by 2001 the figures in France will have gone up twofold and reach 27.7%.

#### 5.1.4 Barriers to online shopping

The key barrier to online shopping is the perception that many products are not as desirable. Dangers such as fraud are also among the key barriers and is difficult to counter this, as it is very subjective. Electronic transactions and virtual transactions by their very nature represent a danger because people are unable to manage all aspects of the transaction entirely. It seems as if significant use of Internet leads to increased anxiety about fraud and security. This is the situation of the frontrunner countries in which fraud ranks high.

Surprisingly, the lack of equipment is not considered as a key barrier in France despite there being fewer PCs than in other countries.

#### 5.1.5 Advantages of online shopping

Europeans believe that online-shopping will involve less effort (68%), one gets products faster (59%) and it bears the potential that one finds more interesting things to buy (59%). 1/3 believe online shopping saves money. The biggest online shopping enthusiasts in terms of interest can be found in Ireland and Spain. France is globally less enthusiast than other Europeans but believes that online shopping enables products to be obtained more quickly and with less effort.

#### 5.1.6 E-mail usage, internet and online services access and use by establishments

France lags behind EUR10 for the usage of email with less than 40% of businesses being email users. Prospects for growth in 2001 are not expected to change the situation and France will remain far behind the EUR10 (61.2% instead of 77.8% for EUR10).

All sizes of businesses (from 0 to 9 to 500 plus) are below the EUR10. The difference is smaller among the larger establishments as the use of email is over 80%, and the gap is expected to close in 2001 with a predicted usage level of more than 90% (92% for 200 to 499 and 100% for 500 and more).

Countries like Denmark or Finland have already achieved 100% of email usage for at least two or more categories of businesses.

Looking at the distribution of usage among different sectors of industry, manufacturing is surprisingly the sector that uses the most email, ahead of financial and business services. This situation is in line with the EUR10.

Only ¼ of those with up to 10 employees use e-mail, those with 10-50 employees reach 50% and those up to 200 employees 75%. Among the very large establishments with more than 500 employees the 100% are almost achieved. Despite high growth rates in all size groups the situation in Germany will be rather far away from the one for instance in Finland and Denmark where in 2001 an e-mail account will be almost as self-evident as a telephone even in SMEs.

Use of e-mail, internet und intranet in French establishments according to size of organisation in 1999

	0-9 empl.	10-49 empl.	50-199 empl.	200-499 empl.	>500 empl.	Average
e-mail user	14,7%	19,8%	33,3%	81,1%	91,4%	40%%
Internet-user	21,4%	35,1%	65%	83,9%	91,5%	47%
Intranet user	7,1%	14,1%	42,9%	43,9%	58,2%	25,5%

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A similar picture emerges concerning the use of the Internet in France with an average of 47% of French establishments having internet access whereas the EUR10 is 70% and Finland leads with 90%

### 5.1.7 E-mail and internet "censorship"

France is the least permissive country in Europe for access of external email to employees. 21.9% of French organisations allow access to external email to the majority of staff. By comparison the EUR10 average is 40,6% and Finland almost 80%. In terms of the size of businesses, the situation is particularly poor for companies with fewer than 50 employees.

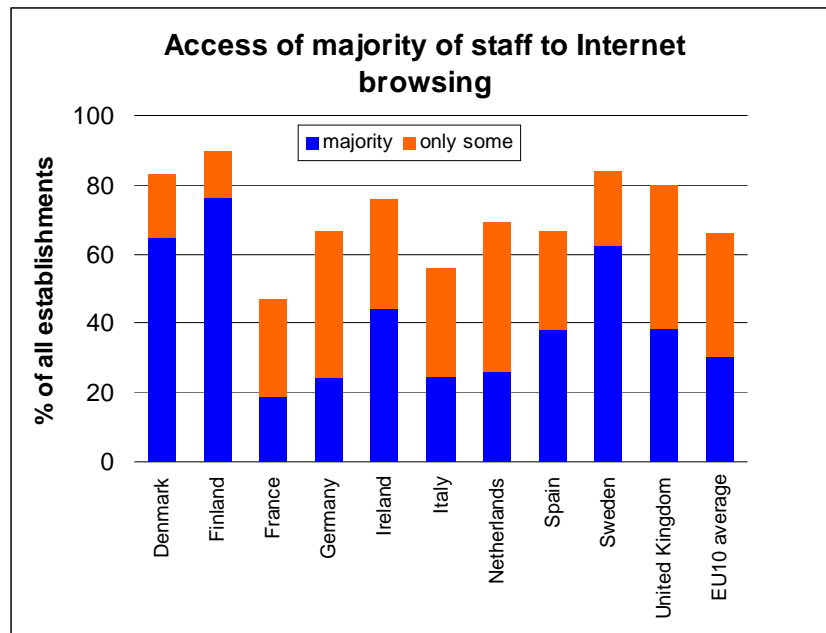
The situation is pretty much the same with respect to internet access. 40% of those with internet access allow the majority of their employees to use it.

An interesting issue concerns the differentiation according to the type of region. France is a unique case, as there is a very significant difference between urban/suburban areas and rural areas, the former areas having twice as many users than in rural areas. This highlights the 'country planning' debate in France. The same statement is true of email usage and intranet.

Staff access to Internet browsing (in %)				
	(1) Majority have access	(2) Only some have access	Ranking of (1)	(1) as % of all user establishments
Denmark	64,9	18,2	2	78,1
Finland	76,3	13,4	1	85,1
France	18,6	28,4	10	39,6
Germany	24,2	42,3	9	36,4
Ireland	44,4	31,6	4	58,4
Italy	24,5	31,5	8	43,8
Netherlands	25,7	43,7	7	37,0
Spain	38,1	28,6	6	57,1
Sweden	62,3	21,7	3	74,2
United Kingdom	38,5	41,6	5	48,1
<i>Total Sample</i>	<i>39,1</i>	<i>31,0</i>		<i>55,8</i>
<i>EU10 average</i>	<i>30,5</i>	<i>35,4</i>		<i>46,3</i>

*Base: All establishments (n=4.158)*

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The figures for the Intranet are in line with email and Internet. France lagged behind in 1999 and prospects for growth in 2001 do not significantly alter the situation.

### 5.1.8 Online and electronic commerce activities by establishments

Fewer than 30% of French businesses have internet presence, which is very low compared to EUR10 (41,4%). The comparison is even worse with the frontrunner countries like Finland (66,1%), Denmark (55,6%) or Sweden (54,2%). The situation is not expected to change dramatically in 2001, with only half the French establishments expected to have internet presence.

The differentiation according to company size is in line with the EUR10 trend. The establishments with fewer than 50 employees are less likely to have their own websites on the Internet.

Most websites provide free information and are used for advertising and marketing activities and for exchanging data with suppliers/customers. The implementation of joint business transactions is not yet widely used and online sales are still marginal. Concerning online sales, Finland is the exception in Europe with almost a third of establishments using this method.

Looking more specifically at the French establishments with online sites, the situation is somewhat different. France in particular is developing data exchange with suppliers/customers and joint business transactions. The implications of this is that French organisations who have websites have clearly understood the advantages of the Internet for developing new activities like data exchange with suppliers/customers and joint business transactions. France is expected to be the European leader in 2001 for these two activities among online companies.

Use of Internet/ Online-Presence for Data Exchange with Suppliers/ Customers (in % of Establishments with Online Presence)		
	1999	2001
Denmark	49,6	56,4
Finland	55,8	66,7
France	59,3	80,4
Germany	46,2	62,7
Ireland	41,0	62,0
Italy	57,5	66,6
Netherlands	33,6	59,2
Spain	41,2	64,8
Sweden	46,9	53,9
U.K.	47,9	63,7
<i>Total sample</i>	<i>47,8</i>	<i>62,3</i>
<i>EUR10</i>	<i>48,1</i>	<i>65,4</i>
<i>Base: All establishments that offer information on the Internet (n = 1.835)</i>		
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Use of Internet/ Online-Presence for Joint Business Processes (in % of Establishments with Online Presence)		
	1999	2001
Denmark	39,7	45,2
Finland	33,7	45,5
France	38,6	71,3
Germany	32,5	47,9
Ireland	28,4	42,9
Italy	54,1	69,0
Netherlands	19,2	32,5
Spain	27,7	44,3
Sweden	42,3	49,0
U.K.	28,1	45,8
<i>Total sample</i>	<i>33,8</i>	<i>49,2</i>
<i>EUR10</i>	<i>33,1</i>	<i>51,3</i>
<i>Base: All establishments that offer information on the Internet (n = 1.835)</i>		

The opposite becomes apparent when looking at the business-to-consumer area. Just 10% practise online sales. This amounts to 21% of those establishments with an online presence. Germany will continue to rate below the European average here, despite some rapid growth over the next two years.

Purpose of www activities: Distribution of information with charge (in %)					
	Users 1999	New users 99-01	Users 2001	Ranking 1999	Ranking 2001
Denmark	8,6	6,3	14,9	2	2
Finland	10,8	12,0	22,8	1	1
France	3,0	7,9	10,9	9	7
Germany	6,4	6,7	13,1	4	5
Ireland	6,1	7,4	13,5	5	4
Italy	2,8	4,8	7,6	10	9
Netherlands	3,7	6,0	9,7	7	8
Spain	5,1	7,0	12,1	6	6
Sweden	3,5	1,9	5,4	8	10
United Kingdom	6,7	7,0	13,7	3	3
<i>Total Sample</i>	<i>5,5</i>	<i>6,7</i>	<i>12,2</i>		
<i>EU10 average</i>	<i>5,1</i>	<i>6,6</i>	<i>11,7</i>		
<i>Base: All establishments (n = 4.158)</i>					

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### 5.1.9 Barriers to online sales and online procurement

There appears to be consensus among many organisations in Europe as to the need and usefulness of online sales in so far as around 40% of those currently not offering online sales do not want to deal with that subject. Further reasons given for not starting online sales activities include (in the sequence of relevance) product characteristics (products are not suitable for online sales) and the expectation of a missing customer demand. Dangers related to privacy, data security and fraud do not rate very high and it appears as if these are not the decisive factors when it comes to decide for the pros and cons of online sales.

Barriers to online selling (in %)									
	Missing Customer Demand	No Need	Costs	Lack of Know-how	Dangers (data security)	Dangers (Fraud)	Product characteristics	External Conditions	Others
Denmark	38,0	48,6	3,5	9,6	0,0	0,0	1,5	0,0	0,0
Finland	15,1	30,0	2,3	0,0	1,9	0,7	42,3	0,0	4,9
France	15,6	48,4	5,7	9,5	1,4	0,4	26,7	1,5	0,7
Germany	26,6	42,8	7,6	4,9	0,6	0,3	35,0	3,0	0,0
Ireland	20,9	50,8	2,6	2,0	0,4	1,7	15,8	0,2	16,9
Italy	13,7	53,1	2,0	4,3	1,1	0,4	24,2	0,0	1,0
Netherlands	16,5	14,2	3,7	4,1	3,7	2,8	53,7	5,5	4,1
Spain	9,2	29,7	3,1	9,7	2,7	0,8	39,1	0,7	5,5
Sweden	8,7	35,0	1,2	4,2	1,8	1,3	40,6	1,1	0,8
U.K.	18,1	49,7	5,3	6,6	1,3	0,4	26,0	0,5	3,5
<i>Total sample</i>	<i>17,9</i>	<i>41,7</i>	<i>3,9</i>	<i>6,0</i>	<i>1,4</i>	<i>0,8</i>	<i>29,9</i>	<i>1,2</i>	<i>3,3</i>
<i>EU10 average</i>	<i>18,3</i>	<i>43,6</i>	<i>4,9</i>	<i>6,3</i>	<i>1,3</i>	<i>0,6</i>	<i>31,2</i>	<i>1,5</i>	<i>1,9</i>

*Base: Establishments neither using nor planning to introduce online selling (n=2913)*

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A very high over 50% of those establishments neither using nor planning to introduce online procurement do not see a need for this. Further important reasons include product characteristics (i.e. products do not lend themselves to online sales) and a lack of supply of online offers by suppliers. It appears as if there is a wide field for clarification and "market education".

Barriers to online procurement (in %)									
	Lack of supply	No Need	Costs	Lack of Know-how	Dangers (Data Security)	Dangers (Fraud)	Product Characteristics	External Conditions	Others
Denmark	18,4	67,1	3,0	10,9	0,0	0,0	0,2	0,0	1,0
Finland	14,7	48,5	1,6	0,4	2,8	2,8	9,2	0,2	2,9
France	9,3	52,4	7,6	13,3	5,2	6,4	10,6	3,4	1,8
Germany	19,0	57,8	6,0	6,7	1,3	1,5	14,3	2,5	0,6
Ireland	12,0	63,5	3,3	4,3	6,9	0,2	5,6	0,1	12,1
Italy	10,4	67,7	2,1	4,5	1,7	1,1	9,0	0,4	0,0
Netherlands	5,6	24,9	2,8	5,6	4,5	1,1	26,0	4,5	18,6
Spain	9,0	43,1	1,0	9,5	2,6	0,9	24,1	3,7	10,4
Sweden	6,0	47,4	1,1	7,6	2,3	1,3	14,5	3,3	0,8
U.K.	10,8	60,8	5,3	9,0	6,9	3,1	8,3	1,0	3,2
<i>Total sample</i>	<i>11,5</i>	<i>54,4</i>	<i>3,7</i>	<i>7,7</i>	<i>3,4</i>	<i>2,1</i>	<i>12,4</i>	<i>2,0</i>	<i>4,6</i>
<i>EU10 average</i>	<i>12,1</i>	<i>55,8</i>	<i>4,6</i>	<i>8,1</i>	<i>3,4</i>	<i>2,5</i>	<i>12,8</i>	<i>2,2</i>	<i>3,2</i>

*Base: Establishments neither using nor planning to introduce online procurement (n=2282)*

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### 5.1.10 Resume

The results of the survey and their associated figures are very disappointing for France, as for many criteria France ranks between 8<sup>th</sup> and 10<sup>th</sup>. With the exception of some criteria, France appears as one of the few laggards in Europe and the gap in comparison particularly with Scandinavian countries is very significant.

This situation extracted from the ECATT survey has the advantage of giving a comparable perspective of e-commerce development within the ten European countries, the methodology applied being the same in all these countries.

On the one hand the ECATT picture of the e-commerce in France is in line with the shared statement of the backward position of France as regards to ICT. Much debate has taken place about whether Minitel has been one of the reasons for this. Those who believe its role has been considerable say that Minitel is an obstacle to the use and acquisition of Internet PCs. Others claim that France was the first to use e-commerce, even before the Internet. At the end of the nineties everybody agreed that France's situation was typical in a sense that the turnover of online sales was the largest one in Europe, thanks to Minitel, and that the transition from Minitel to Internet was well underway (?). Some analysis has shown that the French backward situation is no longer applicable, as the usage growth rate was among the largest in Europe.

On the other hand, the ECaTT picture of the French position has to be balanced with other market analysis which concludes that the French position is not as worse as EcaTT concludes. For example the results of the UFB-Locabail survey on computerisation and Internet in SMEs which represents a reference survey in France. Since 1998, the survey has broadened its scope and it now has a European dimension which covers i the UK, Germany and Italy along with France. The aim is not to compare results between both surveys but to extract some information concerning the implementation and usage of the Internet within French SMEs. , UFB-Locabail defines SMEs as those businesses with fewer than 250 employees.

- ✓ the level of PC penetration is quite high for French SMEs and ranks as 94%
- ✓ 61% of French SMEs are connected to the Internet and 72% for the four other surveyed countries (as compared to 47,4% for France in ECaTT and 62,4% for the same four countries (UK, France, Germany and Italy))
- ✓ 75% of the connected SMEs use email and 83% for the 4 surveyed countries.
- ✓ 46% of the French SMEs use Internet for data exchange with suppliers/customers and 56% for the 4 surveyed countries (there is a significant difference between the two surveys as this activity was a key one for France in ECaTT and appears less important in UFB –Locabail).
- ✓ 27% of the French SMEs have a website on the Internet (28% for ECaTT).
- ✓ 25% of the French SMEs claimed to use the Internet for online sales and 22% for the 4 surveyed countries (only 4,7% for France and 8,3% for the same 4 countries in ECaTT survey).

The EcaTT clearly concludes that different European countries are committing themselves to the information age at different rates :

- ✓ Scandinavian countries are the frontrunner countries for both equipment and usage
- ✓ Middle-Europe countries, ranging from the UK, Netherlands and Germany have developed a medium rythm in implementing ICTs
- ✓ Southern European countries (Spain, Italy, France) are lagging behind.

Effort in France has to be sustained to close up the gap.

## 5.2 Telework

### 5.2.1 Telework penetration and growth

In 1994 a high level expert group advised the Commission to set a target for Europe of 10 million teleworkers by 2000. New survey results from the ECaTT project show that this target will be achieved: there are already 9 million Europeans teleworking.

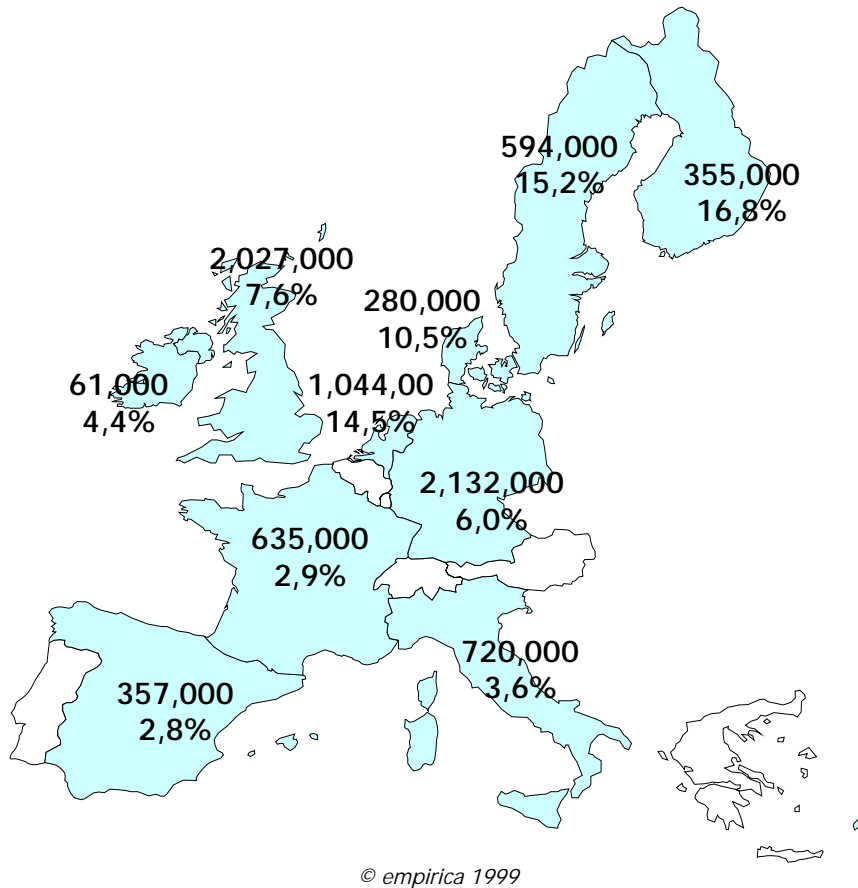
The figure of 9 million teleworkers covers all kinds of telework, not only those regularly working a day or more per week away from the office at home or on the road using computers and online connections (6 million) but also those who do so less often, the "occasional" or supplementary teleworkers (3 million).

The overall European figure translates into an average of 6% of the European workforce. Here the ECaTT survey exposes huge variation across the Member States. Whereas in some countries only half the average has taken up telework to date, in other countries such as Finland a massive 17% of the workforce is already taking advantage of these new techniques.

In France, 2,9% of the workforce are currently involved in telework. This figure shows that France is distinctly below the average and comes second after Spain. The figure shows too the gulf between countries like Sweden and Spain. In France, the majority of teleworkers are home-based (57%) , the category " self employed in SOHOs" represents 11% of the total teleworkers and "mobile teleworkers" represent 32% of total. In general in Europe, as in France, "home based telework" and "mobile telework" is very developed. It's important to stress the sustained increase of the mobile form of telework organisation.

	Teleworkers	supplementary teleworkers	total incl. supplementary
Denmark	176.000	104.000	280.000
Finland	229.000	126.000	355.000
France	499.000	136.000	635.000
Germany	1.562.000	570.000	2.132.000
Ireland	26.000	35.000	61.000
Italy	584.000	135.000	720.000
Netherlands	593.000	451.000	1.044.000
Spain	259.000	97.000	357.000
Sweden	313.000	282.000	594.000
UK	1.273.000	754.000	2.027.000
<b>Total EU 10</b>	<b>5.515.000</b>	<b>2.690.000</b>	<b>8.205.000</b>
<b>Total EU 15</b>	<b>6.049.000</b>	<b>2.960.000</b>	<b>9.009.000</b>

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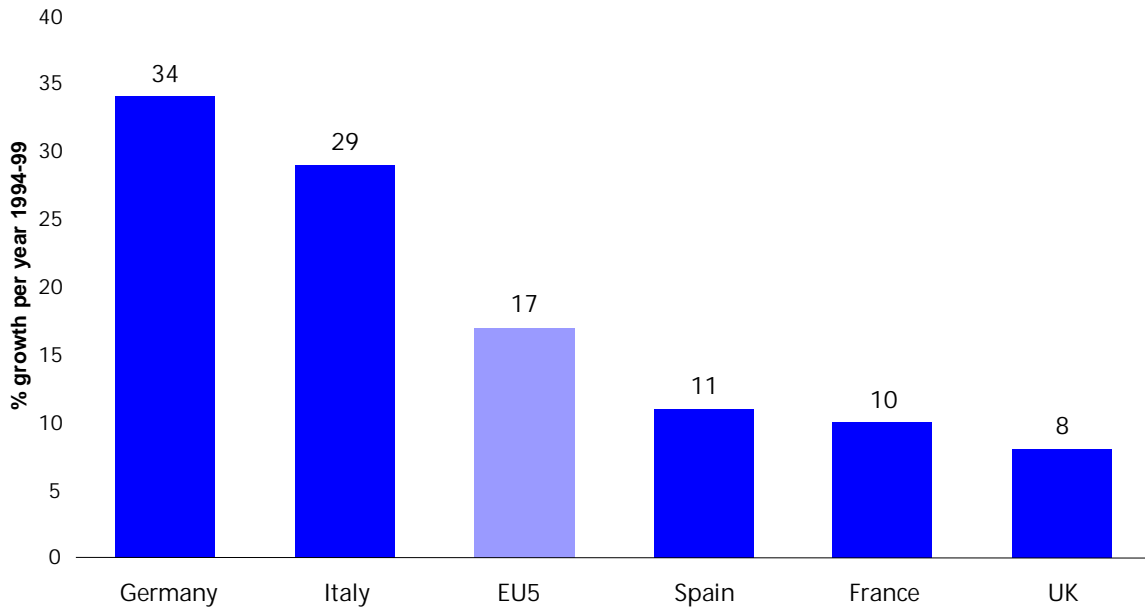


### 5.2.2 Number of Teleworkers in Europe 1999

*(absolute figures and percentage of labour force)*

This variation in penetration across Europe is the result of quite recent trends. ECaTT partners have access to comparable figures from 1994 and further back for 5 countries, and these show how the growth of teleworking has differed over that period, from a modest 8% in the UK - starting from a leading position in 1994 - to a boom in Germany with an average 34% annual rate of growth over the 5 year period. The average annual growth in the number of teleworkers from 1994 to 1999 has been 17%. France remains below this, with an increase of just 10%.

Annual increase of teleworking population 1994-99 in %



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### 5.2.3 Interest in and potential of telework

#### *2/3 of the jobs in Europe can be performed in teleworking*

The so-called teleworkability of jobs is very high. According to the survey results 65% of the jobs lend themselves to teleworking, i.e., their job owner either works a minimum of 6 hours per week in an office job or at least 6 hours per week they perform tasks carried out at a desk or perform at least 6 hours per week using a computer. In France teleworkability almost reaches 63%.

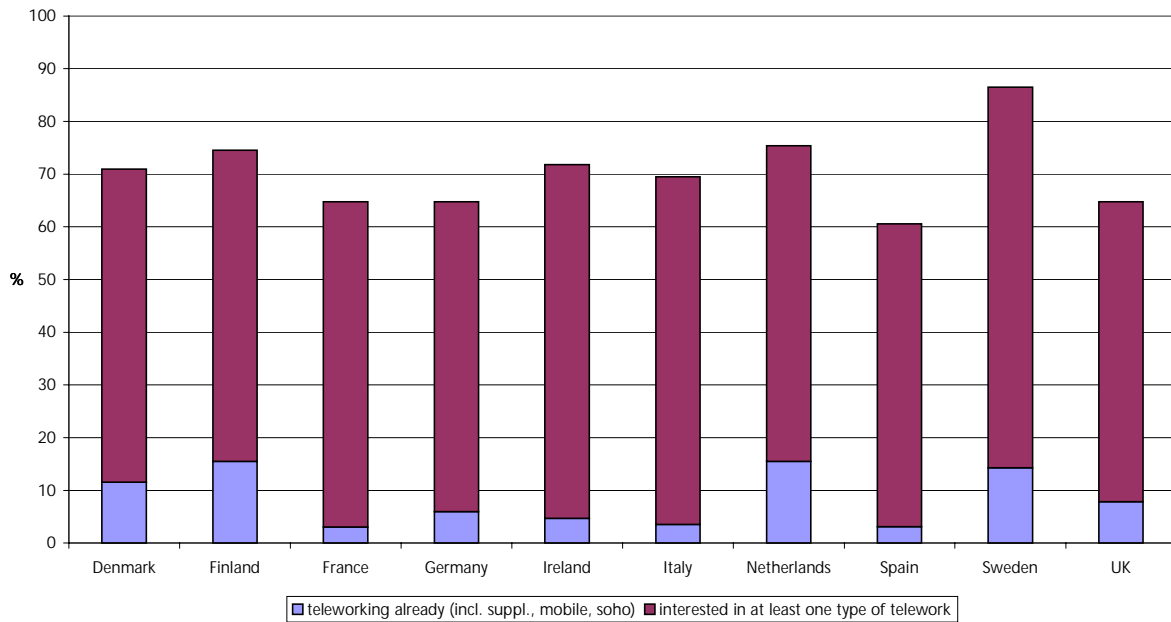
*A large number of individuals are interested in telework; the figures have even increased over the past five years. Interest on the part of executives in companies is at a lower level. However, the potential for further rapid growth of telework remains.*

Interest in telework is generally at a high level. 65% of the workforce not only in France but also throughout the whole of Europe indicate an interest in practising this new form of work organisation. Compared to figures from 1994, interest in telework in France has increased by 12%. With the exception of Spain where there has been no change his evolution in public opinion is extremely noticeable in other countries as well, such as Italy.

Practice and Interest in Telework overall in % of workforce			
	Teleworking already (incl. suppl.)	Interest in at least one type of Telework	Total (teleworking already or interested)
Denmark	11,58	59,35	70,93
Finland	15,52	58,97	74,48
France	3,04	61,74	64,78
Germany	5,99	58,76	64,74
Ireland	4,70	67,10	71,80
Italy	3,56	65,92	69,49
Netherlands	15,49	59,86	75,35
Spain	3,10	57,46	60,56
Sweden	14,29	72,18	86,48
UK	7,81	56,94	64,75
<b>Total Sample</b>	<b>7,76</b>	<b>61,26</b>	<b>69,02</b>

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Interest and Practice in Telework overall:  
In % of Workforce



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### 5.2.4 Characteristics of telework and teleworkers

Telework is a male phenomenon and mainly practised by qualified and highly qualified professionals. There are more self-employed among teleworkers than among "normal" workers.

Telework has developed into a form of work organisation for qualified and highly qualified professions.

As already seen by the results from the General Population Survey, teleworkers are mainly professionals and even managers. Qualified tasks clearly dominate. The old prejudice of the 80s that telework is a form of work organisation mainly for low qualified females could be disproved.

***Telework is an urban phenomenon.***

Despite a large number of activities and support programmes to bring teleworking to rural regions it is still an urban phenomenon. It is mainly practised in urban and suburban regions.

***In those countries with recent support and stimulation programmes for telework a more rapid increase in telework diffusion and penetration can be observed.***

The highest dynamics can be found in those countries with recent support and stimulation programmes on telework. Countries such as the UK and France which terminated their support programmes a while ago show the lowest growth rates. In France we can see that the progression is very constant and follows an even pattern. Along with Denmark, France is the country where the percentage of businesses involved in telework was highest ten years ago and more. This contrasts sharply with Germany; where, 54% of the teleworking schemes have been set up during the past two years.

Years since beginning telework in % of establishments practising telework 1999								
	less than 1 year	1-2 years	3-4 years	5-10 years	>10 years	don't know	n.a.	total
Denmark	7,50	38,63	16,28	24,99	10,31	1,77	0,52	100,0
Finland	8,82	17,66	17,38	43,08	8,99		4,07	100,0
France	15,00	28,15	19,45	23,04	10,33	0,98	3,04	100,0
Germany	5,10	48,88	17,54	13,93	7,80	3,59	3,16	100,0
Ireland	4,83	35,54	20,41	26,32	8,74	3,88	0,28	100,0
Italy	39,07	35,77	13,15	3,03		8,98		100,0
Netherlands	10,94	42,97	21,09	19,53	1,56	2,34	1,56	100,0
Spain	14,07	50,94	11,51	13,24	1,45	6,20	2,59	100,0
Sweden	3,76	28,71	23,26	30,59	5,65	8,04		100,0
UK	4,79	37,28	20,36	21,36	7,22	8,99		100,0
Total	8,99	35,34	18,75	24,10	6,98	4,43	1,42	100,0
EU10	9,50	38,50	18,70	19,70	6,70	5,40	1,50	100,0

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**5.2.5 Telework practice by establishments**

***Already one third of European organisations practise one form of telework or another. France has an average score for this with 32% of organisations practising regular teleworking. The highest ranking countries are Finland (48%) and Denmark (47%), whereas Italy and Spain are a long way behind (15% and 18% respectively).***

Establishments with telework in % of establishments in Europe 1999				
	Supplementary excluded		supplementary included	
	%	Ranking	%	ranking
Denmark	47,16	2	57,88	3
Finland	48,16	1	59,33	2
France	31,69	7	35,00	7
Germany	25,45	8	29,90	8
Ireland	32,60	6	39,09	6
Italy	15,25	10	17,21	10
Netherlands	35,67	5	46,00	5
Spain	17,59	9	20,02	9
Sweden	43,25	4	61,65	1
UK	43,47	3	54,98	4
<b>Total</b>	<b>32,45</b>		<b>39,74</b>	
<b>EU 10</b>	<b>29,70</b>		<b>35,80</b>	

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***Almost all European establishments with more than 1,000 employees practise telework***

Of the very large establishments almost all practise telework, whereas the smaller ones tend to be more cautious. Only 15% of those with up to 10 employees and 25% with 10-50 employees practise telework. The corresponding figures for Germany are even lower – 8% and 14% respectively. Only Spain and Italy show lower figures in this category.

***Supplementary telework, i.e. working from home for less than a full day per week using ICT, has become widespread in Europe.***

Supplementary telework has become very popular and widespread in Europe as a new way of working with already 39,74% of all establishments practising it. In France this form of telework remains marginal. Only 14,51% of French organisations had developed this type of telework. If we consider the proportion of supplementary teleworkers in comparison with regular teleworkers, we can confirm this tendency : regular telework 80%, supplementary telework 20%.

As has been already described in this text, in France we can see a convergence between the socio-cultural barriers of the personnel management in business who expect to see the salaried employee and , also workers who prefer to feel part of the workforce . If we consider separately the self-employed teleworkers in SOHOs, we can see that this form of work organisation represents only a small minority in France (contrasting with Germany) compared with the total figure for regular teleworkers. The increase in mobile telework which is very important in France should be noted. This situation corresponds in part to customer service and IT and programming.

Establishments with supplementary telework in % of establishments in Europe 1999	
Denmark	46,12
Finland	43,51
France	14,51
Germany	15,79
Ireland	26,99
Italy	6,18
Netherlands	33,00
Spain	9,71
Sweden	48,56
UK	39,83
<b>Total</b>	<b>25,98</b>
<b>EU10</b>	<b>21,40</b>

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***Telework projects are still rather small in size.***

The size of teleworking projects is mostly between 1 and 9 teleworkers per organisation. . Only the frontrunner countries show a more considerable share of companies employing larger number of teleworkers. For instance, 6% of Danish organisations employ more than 100 teleworkers each, in Sweden, Finland and the UK the figure is already beyond 4%. The figure for Germany is rather low at 0.4% and for France at 0,8%, well below the average. We know that companies who have a positive opinion about the development of telework (excluding those situated very close to a country border) are very often enterpriss with large commercial productivity . Employees involved in this work are mobile and have more and more tools to assist their work in mobile situations and at home.

Number of teleworkers (incl. Supplementary teleworkers) in % of establishments 1999									
	0	1-9	10-19	20-49	50-99	100+	don't know	n.a.	total
Denmark	50,55	21,69	8,89	5,91	5,82	5,80	1,34		100,0
Finland	54,62	25,62	4,38	5,31	2,00	3,47	4,61		100,0
France	78,51	11,61	3,93	1,82	1,81	0,80	1,26	0,27	100,0
Germany	79,03	11,62	2,82	2,88	0,99	0,40	1,79	0,48	100,0
Ireland	69,75	22,16	2,27	1,71	1,48	0,14	2,48		100,0
Italy	91,57	5,97	0,46	0,83		0,07	0,81	0,28	100,0
Netherlands	62,33	20,33	5,00	6,00	3,00	1,67	1,33	0,33	100,0
Spain	86,60	6,83	1,38	1,37	1,08	1,17	1,36	0,20	100,0
Sweden	43,91	32,52	6,27	5,17	3,35	4,28	4,51		100,0
UK	56,27	19,14	7,28	5,82	2,95	4,05	4,43	0,06	100,0
Total	69,75	16,29	4,04	3,41	2,07	1,99	2,27	0,18	100,0
EU10	74,00	13,40	3,80	3,20	1,70	1,50	2,10	0,30	100,0

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***More than half of the establishments practising telework are interested in and plan an extension of their teleworking schemes.***

European organisations seem to be very satisfied with their teleworking schemes, otherwise these high figures would not have emerged. Unique to France is that only 16,84 % of organisations practising telework are interested in permanent teleworking. The arrangement which is the most popular is “alternative telework”, which seems to tie in with the general attitude of French companies towards telework.

Interest in extending telework in % of establishments practicing telework 1999					
	permanent	Alternating	supplementary	exclusive self employed	non-exclusive self employed
Denmark	66,87	65,87	66,24	62,76	45,83
Finland	60,48	41,44	51,18	65,93	57,94
France	16,84	47,15	36,77	23,78	33,67
Germany	83,07	63,13	64,37	58,15	54,73
Ireland	31,76	57,40	45,48	52,86	82,44
Italy	59,71	34,70	39,95	63,63	38,72
Netherlands	40,00	58,33	49,49	33,33	34,78
Spain		56,15	48,90	24,68	59,87
Sweden	54,97	55,68	47,11	22,83	46,85
UK	59,05	44,74	43,71	34,79	40,27
<b>Total</b>	<b>54,78</b>	<b>53,93</b>	<b>50,45</b>	<b>44,30</b>	<b>48,44</b>
<b>EU10</b>	<b>58,70</b>	<b>52,70</b>	<b>49,00</b>	<b>40,20</b>	<b>44,20</b>

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### 5.2.6 3.2.5 Barriers to Telework

***Data security and lack of management skills pre-dominate the barriers to telework. However, many establishment have identified telework as a means to increase competitiveness.***

Data security problems rank top of constraining factors to telework implementation, followed by the problems of managing teleworkers by their superiors. In addition quite a few organisations still have doubts as to the productivity of teleworkers and the quality of their work.. Problems with trade unions and an expected resistance from the workforce are negligible. Results for France show (except for the data security problem) that the major problem is linked to management difficulties. . In France most managers consider that good management implies the need to see workers. This approach is related to the feeling that teleworking must lead to a loss of power for supervisory personnel. Particularly relevant to France is the “resistance of trade unions” to telework, because this “new” form of work may re-open the discussion about laws relating to work practices. . If we compare barriers to telework mentioned in 1999 with those from 1994 we can see that for France the most pressing arguments are the same for both years.

Problems of the past such as those in the area of access of teleworkers to central computers, telecommunications and the related cost have become almost negligible and only rank seventh in the list of barriers. The rapid developments in the area of e-mail, internet and intranet in the past five years since the last survey was carried out will have contributed to this.

Barriers for telework in % of establishments 1999										
	Insuffi- cient know- ledge mana- gers	expen- ses	produc- tivity/ work quality	Difficul- ties mana- ging telewo- rkers	pro- blems organi- zing comm- u-nica- tion	health, safety, insu- rance, legal pro- blems	data securi- ty pro- blems	Lack of pres- sure for change	emplo- yees would not want	resis- tance from trade unions
Denmark	45,61	46,33	38,22	36,01	36,59	30,34	51,47	31,76	33,46	15,53
Finland	44,45	38,25	39,01	40,73	34,60	22,48	52,96	45,18	23,14	12,34
France	60,69	55,81	66,94	66,92	62,92	52,96	77,12	60,97	50,37	47,44
Germany	37,93	42,26	42,00	41,83	34,72	27,83	52,53	50,11	40,35	13,68
Ireland	68,11	58,26	66,94	66,18	54,63	49,97	63,99	52,55	33,65	25,28
Italy	62,77	39,93	51,94	48,97	41,42	35,10	58,35	42,30	26,18	31,07
Netherlands	51,00	32,67	59,33	50,00	42,33	38,33	54,33	41,00	23,00	18,67
Spain	74,43	65,02	69,70	65,58	59,46	54,18	73,38	57,53	45,70	39,50
Sweden	55,28	47,01	52,75	49,60	37,48	44,64	67,65	39,61	37,15	26,65
UK	55,16	52,38	58,58	58,93	45,78	45,26	61,16	49,19	31,01	15,40
Total	56,24	48,72	55,28	53,40	45,93	40,82	61,96	48,08	35,39	25,59
EU 10	54,1	48,1	54,9	53,5	45,7	40,3	61,8	50,0	37,1	25,4

### 5.2.7 Telework potential, trends, prognosis

*Telework will continue to take off and step-by-step become a "normal" way of working for many office workers.*

Given the fact that on average 60% of the workforce and more than 30% of executives in establishments in Europe express an interest in telework or already practise telework it can be assumed that there is a large potential for a further (and even more) rapid uptake of telework in the coming years. These figures do not include mobile teleworkers and supplementary teleworkers. Bearing this in mind the potential will be even higher. There is no doubt that the objective of 10 million teleworkers by the year 2000 will be achievable. France's position generally remains below the average, which confirms the cautious position of this country (as in Spain).

Interest (praticte included) in telework in Europe 1999 (excluding mobile telework and supplementary telework)		
	in % of establishments DMS	in % of workforce GPS
Denmark	48,65	64,7
Finland	55,11	70,4
France	24,86	58,9
Germany	30,59	56,5
Ireland	24,99	62,7
Italy	14,25	62,2
Netherlands	41,00	64,4
Spain	18,98	50,7
Sweden	41,96	74,8
UK	34,98	58,7
<b>Total</b>	<b>31,52</b>	<b>61,4</b>

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### 5.2.8 Resume

Telework is not taking off in France at the same rate as in other European countries. With a current rate of 2.9% of the total workforce and a 10% increase rate between 94 and 99, France remains behind most of the rest of Europe.

The comparison between telework practice and interest is particularly significant in France. A lot of executives agree on the interest of telework but very few launch telework initiatives within their establishments.

In fact there exists a significant gap between the number of organisations practising telework, 32% of French establishments claim to practise regular telework, and the number of teleworkers, 2,9%of the French workforce.

The French are alone in that executives are not interested in permanent teleworking but greatly prefer the idea of alternative telework. Barriers in implementing telework remain high in France and are the same as those expressed in 1994.

So in summary , it is proving difficult for telework to be accepted in France but at the same time the widespread availability of the Internet is providing the opportunity for more and more people to work occasionally at home without being considered teleworkers. It seems as if there is confusion in executives' and people's minds as to what constitutes telework. Therefore the results presented in ECaTT need to be counter-balanced to somehow better reflect reality, especially in terms of unofficial telework practice.

## 6. Conclusions

### 6.1 Electronic commerce

The development of e-commerce is recognised as a priority for economic development by the French government. The Lorentz mission on e-commerce is participating in the establishing of a positive environment.

Many indicators show that France is lagging behind the European level of implementation of e-commerce. The level of PC use and accessibility is still low. The usage of Internet is also low as compared to EUR10. By contrast, the turnover of Minitel services is still high and generates e-commerce usage. So, the France's flagging position on e-commerce is mainly due to a late adoption of the Internet.

There is a need to clarify the regulatory framework of e-commerce in order to ensure a safe and secure development for both suppliers and customers.

B-to-B commerce, characterised by data exchange with suppliers/customers and joint business transactions, is particularly developed among French organisations connected to the Internet.

The state government and other public bodies have been invited to lead the way by adopting e-commerce themselves

Many indicators show that France is now taking off in implementing ICTs and e-commerce (volume of PC sales, increase of Internet subscription/connection, creation of web sites, etc) but at the same time, the other European countries are maintaining their progress. In the short term at least it seems that the position of France among Europe will remain more or less the same.

### 6.2 Telework

Telework is not developing in France at the same pace as in other European countries. Telework appears to still be marginal in France (2,9% of the workforce) when compared to other European countries (16,8% in Finland or even 6% in Germany).

There is an interest from both executives and the general public in telework but in practice telework remains limited to few people.

Telework is no longer supported as such by public bodies.

However, despite the poor figures for telework in France, teleworking practices, even if not recognised as such, are taking off (for example, mobile telephony and laptop PC use).

## 7. Recommendations

### 7.1 Government policy

The French Government has launched the national programme for the implementation of the information society (called PAGSI). Along with this framework, initiatives and action have been taken to establish the Government policy. Current regulatory work in France includes :

- ✓ the adaptation of the legal framework for the information society
- ✓ the adaptation of the legal framework for electronic signature
- ✓ the protection of privacy
- ✓ the adaptation of the legal framework for copyright .

The effort at the government level is sustained at regional and local levels by public authorities.

### 7.2 Pilot projects and call for projects

The information society is still based on the implementation of technical and organisational innovation. It is agreed that integration of innovation is a slow process in the majority of organisations. In that context it is very important to provide supporting initiatives that allow specific players to test innovation.

At the national and regional levels, several calls for tender have been launched. Some of them are still open . There is substantial interest for public authorities to continue such initiatives in order to boost adoption of ICTs and thus usage, such as e-commerce. .

These kind of initiatives go hand in hand with other activities aiming to raise more basic awareness which are organised at many levels for the promotion of e-commerce.

### 7.3 Telecoms policy and pricing

As mentioned in the first section of the document, deregulation in France has led after 2 years to the emergence of new players. More than 70 licences have been awarded to operators. Some questions about 'fair' competition have still not been answered, although it is possible to compete for a licence throughout the whole country.

However, the challenge is now for the provision of broadband networks and services in medium and small cities and rural areas. For many areas, the current development of broadband services (ADSL, LMDS, etc) will not be effective because they do not correspond to profitable areas.

There is a need for public authorities to ensure an equal distribution of broadband services throughout France . Development of e-commerce and telework can not be solely concentrated in large urban areas.