AUTORITÉ DE RÉGULATION DES TÉLÉCOMMUNICATIONS

RÉPUBLIQUE FRANÇAISE

Annual Report

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Volume 2

ART Autorité de Régulation des Télécommunications

www.art-telecom.fr

Contents

Calendar of the year's highlights

January

9 January – ART fined France Telecom 5 million euros for failing to implement a decision taken in November 2000 on a dispute between France Telecom and Sonera France. The dispute related to Sonera France's access to France Telecom's network for the provision of directory enquiry services.

24 January – The Nièvre local authorities and ART signed a partnership agreement to carry out a mobile coverage survey for the département.

February

12 February – ART reduced France Telecom tariffs for leased lines provided to other operators and added medium-capacity lines (64kbps to 2 mbps) to France Telecom's standard interconnection offer.

15 February – ART published the results of the quality-of-service survey on French mobile telephone networks carried out in 2001.

March

8 March - ART initiated penalty procedures against the following companies following the audit carried out on 31 December 2001 to check roll-out compliance with wireless local loop licence commitments: Landtel France SAS, Broadnet France SAS and XTS Network (Caraïbes et Océan Indien).

12 March – ART launched a public consultation on introduction of third-generation mobile-telephony systems in the overseas départements of Saint-Pierre-et-Miquelon and Mayotte.

22 March – The Radiocommunications Consultative Committee (CCR) published a report on mobile-virtual-network operators (MVNO).

28 March – ART ruled on a dispute between LD Com and France Telecom regarding certain technical conditions and tariffs related to unbundling. France Telecom was ordered to supply its competitors with a guaranteed unbundled line restore time of 4 hours, 24 hours a day and 7 days a week.

April

4 April – ART published a summary of the public consultation on WLAN technology launched in December 2001 and closed in February 2002.

11 April – From now on, the Mobile Observatory, which ART publishes each quarter, will take into account the Radiocommunications Consultative Committee recommendation which requires definition of the active prepaid installed base to be harmonised at European level.

16 April – ART improved the tariff and operating conditions (particularly for co-location) of France Telecom's reference offer for unbundling. Tariffs were reduced by 28% for fully unbundled access and from 6.1 to 2.86 euros (including splitter) for shared access.

30 April – ART issued an unfavourable recommendation on the France Telecom IP/ADSL offer (option 5) to ISPs and established a repayment level corresponding to a 25% reduction in France Telecom's rates. Option 3 tariffs were reduced at the same time to allow competition on the alternative operator collection offer.

May

3 May – ART published the summary of the call for comments on jamming devices and announced establishment of a working group to study the problems raised with respect to the use of these devices, which prevent mobile telephones from transmitting as well as receiving.

16 May – ART published the list of candidates for the second call for applications (launched on 29 December 2000) for the two remaining UMTS licences. One application was submitted by Bouygues Telecom, a subsidiary of the Bouygues group. The assessment procedure for this application was initiated with the results, along with reasons for the decision, to be provided by 30 September at the latest.

23/24 May – The Independent Regulators Group (IRG) comprising the heads of the national regulatory authorities from 19 European countries held its 10th plenary session in Paris chaired by Jean-Michel Hubert, Chairman of ART. The IRG created a Secretarys Office to improve coordination between regulators and adopted several measures designed to harmonise the work of the various NRAs.

June

6 June – ART announced its decision to relax requirements by end 2002 for frequency utilisation in the 2.5GHz and 5 GHz bands for WiFi networks. ART again noted that WLAN use is only authorised inside buildings.

11 June – ART published the results of the annual statistical survey of the national telecommunications services market for 2001.

14 June – France Telecom modified its new local loop access reference offer. The functional and tariff aspects of the new offer comply with the ART decision dated 16 April 2002.

25/26 June – The first international Symposium (Syderf 2002) on the development of telecommunications in the French-speaking countries was held at UNESCO headquarters. It was attended by over 80 participants from 29 countries and several international organisations (International Telecommunications Union-ITU, World Bank, European Commission).

27 June – ART imposed penalties on Broadnet and Landtel for not respecting their wireless local loop network roll-out commitments in the 26 GHz band. Their regional licences were withdrawn, leaving Broadnet with the Paris metropolitan area and Landtel with the Paris metropolitan area and Aquitaine. XTS Network Caraïbes and XTS Network Océan Indien were not penalised because equipment in the 3.5 GHz band was not in a sufficient state of readiness to allow compliance with roll-out requirements as of 31 December 2001.

27 June – ART detailed the conditions for assessing turnover for so-called free Internet access. France Telecom must determine the value of switched access Internet traffic on the basis of the local Internet tariff for each operator, by applying a calculation method distin-

guishing between residential and business traffic and taking into account the specific nature of each.

July

5 July – Publication of ART's 5th Annual Report for the year 2001

18 July – France Telecom lowered its IP-ADSL tariffs as a result of the ART decision of 30 April. Option 5 (for ISPs) was reduced by 25% on average and option 3 (reserved for operators) was reduced by 40%.

31 July – ART published the summary of the public consultation on the introduction of third-generation mobile-telephony systems in the overseas départements of Saint-Pierre-et-Miquelon and Mayotte. The operator licensing procedures and timetable were also announced.

September

26 September – ART accepted Bouygues Telecom's application to establish and operate a third-generation mobile network. This application was lodged on 15 May 2002 in response to the call for applications for two UMTS licences launched on 29 December 2001.

October

4 October – ART published the joint agreement reached by the three GSM operators on 24 September regarding service in areas without coverage and continues working to ensure that these commitments are effectively and rapidly implemented.

9 October – ART published its response to the Government's public consultation on transposition of recently adopted European Community directives into French law.

22 October – ART launched a call for comments on modification of the Dolphin Telecom licence to establish and operate a public professional mobile radiocommunications network (RPN) using the TETRA standard.

24 October – ART noted that the two operators, Orange and SFR, which have significant market power in the interconnection market, had undertaken to lower their call termination charges by an average of 15% from 1 January 2003. This complied with the ART decision of 16 November 2001 concerning the reduction in fixed-to-mobile tariffs.

28 October – ART published the summary of the competition surveys carried out at the beginning of the year for the following three telecommunications markets: the switched network Internet-collection market, the market for optical fibre infrastructure services and the interconnection market.

29 October – ART established the conditions for use of radio systems in the 2400-2483.5 MHz band.

31 October – ART launched a public consultation on conditions of use and allocation of microwave frequencies in the 3.5, 26, 28 and 32 GHz bands.

November

28 November – ART approved the technical and tariff conditions of France Telecom's standard interconnection offer for 2003.

December

17 December – ART ruled on a dispute between Tele2 France and Orange France concerning finalisation of an MVNO agreement. The Tele2 request was not admissible given the current state of French legislation and Community law on interconnection or access rights.

31 December – Madame Gabrielle GAUTHEY, a telecommunications engineer, was appointed member of ART by M. Jean-Louis DEBRE, President of the National Assembly. Gabrielle GAUTHEY was appointed for a term of six years and replaced Christian BECLE whose term had expired.

January 2003

3 January – M. Paul CHAMPSAUR, Inspector General of the INSEE, was appointed Chairman of ART by decree of the President of the French Republic. He replaced Jean-Michel Hubert whose six-year term expired on 3 January.

Recommendations and decisions issued by ART in 2002

In 2002, ART issued a total of 1200 recommendations and decisions of which 1098 were decisions and 92 recommendations.

	1997	1998	1999	2000	2001	2002
ART recommendations and decisions	458	1047	1159	1365	1299	1200

These recommendations and decisions can be categorised according to their legal significance and scope.

Guidelines:

ART adopted:

- 2 decisions concerning guidelines.

Recommendations:

ART issued 92 recommendations, of which:

- 11 concerned draft statutes and regulations
- 78 related to France Telecom tariff decisions (three were cancelled)
- 2 were addressed to the Competition Authority
- 1 concerned operators' social tariffs.

Decisions taken on the basis of ART's shared jurisdiction:

ART took 62 decisions on matters falling under its shared jurisdiction with the Minister responsible for Telecommunications. They fell into three categories, described below in ascending order of legal significance:

- 52 decisions pertaining to review of applications for licences to establish a public network or provide a telephone service
- 2 decisions concerning calculation of the cost of universal service
- 8 decisions submitted to the Minister for approval.

Decisions taken on the basis of ART's own authority:

ART took 1034 decisions on matters falling under its own authority:

- 28 decisions with general consequences, classified according to their scope:
  - 6 decisions on numbering
  - 18 decisions on frequency resources
  - 3 decisions on ART's organisation and operation
  - 1 decision on network licences.

- 1006 individual decisions, classified according to their scope:
  - 15 decisions on interconnection and network access
  - 2 decisions establishing the list of operators with significant power in a telecommunications market
  - 10 decisions settling disputes
  - 182 decisions on numbering resources
  - 459 decisions on frequency resources
  - 5 decisions on penalties
  - 333 decisions on licences for independent networks (not including frequency allocations).

11 recommendations and decisions were cancelled in 2002.

part one

Review of general regulatory action in 2002

Chapter 1

Licences and operators

I. Summary of licences

ART assesses licence applications, which are then presented for approval to the Minister responsible for Telecommunications. On 31 December 2002 there were 91 licences (L33-1, L34-1 or L 33-1 and L34-1) for fixed services of which nine were for satellite services. In addition, 19 mobile-service licences were in force of which six were for satellite mobile services. The total number of licences at end 2002 came to 110.

A. Licences issued as of 31 December 2002:

summary of applications assessed for current licences

Licensed company	Type of licence	Comments	Date of order	Published in Official Journal
21st Century	2		04/05/00	08/06/00
3U Telecom	1		09/06/00	11/07/00
9 Telecom Réseau	1	Under the name of Netco	18/12/97	30/12/97
	1	Change of name from Netco	29/06/98	10/07/98
ADP Telecom (*)	1	Takeover of the Lex1 business of Aéroports de Paris	03/07/01	26/07/01
AFRIPA Telecom France	1	Satellite	10/03/99	08/04/99
Altitude	1	Wireless local loop 2 regions	04/08/00	03/09/00
Atos Multimédia	3		26/05/99	07/07/99
AUCS Communications Service VOF	1		07/12/99	29/12/99
Belgacom France	1	LEX6 under the name of Belgacom Teleport	07/02/97	06/03/97
	1	LEX6 revoked – full licence	29/04/98	29/05/98
	1	Change of name from Belgacom Teleport	20/10/98	28/10/98
	1	Geographical extension	18/08/99	10/09/99
	1	Change for WLL in 7 regions (1st call)	04/08/00	03/09/00
	1	Change for WLL in 2 regions (2nd call)	19/01/01	20/02/01
	2	First licence	27/06/02	13/07/02

Licensed company	Type of licence	Comments	Date of order	Published in Official Journal
Bouygues Télécom	mobile	DCS F3	08/12/94	04/01/95
	mobile	Amendment to DCS F3 licence	17/11/98	18/12/98
	mobile	Amendment	17/08/00	13/09/00
	mobile	Amendment incoming calls	13/09/00	11/10/00
	mobile	Amendment	22/12/00	03/01/01
	mobile	UMTS	03/12/02	12/12/02
Bouygues Télécom Caraïbes	mobile	GSM DOM5	19/07/01	19/08/01
Broadband Optical Access France	2	Infrared network	15/06/01	11/07/01
Broadnet France SAS	1	Wireless local loop 14 regions (1st call)	04/09/00	03/09/00
	1	Amendment for WLL in 1 region (2nd call)	19/01/01	20/02/01
		Coverage amendment	29/08/02	19/09/02
	2	ALT5 satellite licence	06/10/97	24/10/97
	2	Extension to French overseas *départements*	22/11/99	19/12/99
Cable & Wireless France	3		26/08/98	25/09/98
	1	L33-1extension to 10 regions	22/12/99	18/01/00
	1	L33-1extension to 21 regions	17/08/01	25/08/01
Carrier 1 France	1	6 regions	11/05/99	04/06/99
	1	18 regions	18/05/01	21/05/01
Cegetel (*)	2	ALT8 under the name of Cegetel Entreprises	14/10/97	11/11/97
	1	ALT8 compliance	11/03/98	19/03/98
	1	Extension to French overseas *départements* under the name of Cegetel Entreprises	02/12/99	18/01/00
	1	Change of name from Cegetel Entreprises to Cegetel	17/09/01	28/09/01
Cegetel La Réunion	1	Wireless local loop 1 overseas *département*	04/08/00	03/09/00
Cignal Global Communications France	3	Voice over IP	28/07/99	24/08/99
COLT Télécommunications France	2	ALT3	12/12/96	17/12/96
	1	L34-1extension	12/03/98	19/03/98
	1	Second extension	13/01/99	07/02/99
	1	ALT3 compliance-extension	02/12/99	21/12/99
	1	Correction following compliance	05/01/00	26/01/00
Completel SAS	1	(formerly D2PC)	17/11/98	13/12/98
	1	Geographical extension	07/11/00	28/11/00
	1	Metropolitan France extension	29/08/02	14/09/02
Connexion by Boeing Ireland Limited	mobile	Satellite mobile –2 year experimental licence	09/10/02	06/11/02
Danup	2	Internet service provider	20/10/99	16/11/99
DAUPHIN Télécom	mobile	Under the name of Saint-Martin Téléphone	19/10/98	17/11/98
	mobile	Change of name from Saint-Martin Téléphone	10/03/99	02/04/99
	1	Complete amendment (including fixed)	10/02/00	11/03/00
		Geographical extension	31/07/02	27/08/02
	mobile	GSM DOM 8	12/12/02	26/12/02
DOLPHIN Telecom	mobile		30/03/00	10/05/00
Dynegy France Communications SARL	2	Under the name of Titan Communications	M29/07/99	26/08/99
	2	Change of name from Titan Communications to Iaxis France	29/08/00	07/09/00
	2	Change of name from Iaxis France	14/09/01	26/09/01
Easynet (*)	1		06/08/99	27/08/99

Licensed company	Type of licence	Comments	Date of order	Published in Official Journal
Equant Télécommunications SA	1	L33-1 Paris metropolitan area and L34-1 for metropolitan France	20/06/00	13/07/00
E-qual	2	Satellite	09/12/01	04/01/02
Estel	1		05/11/98	25/11/98
Est Vidéocommunications	CPL 2	"powerline carrier system" trial licence expires 15/08/03	18/07/01	15/08/01
Eutelsat SA	2	Satellite	16/08/01	18/08/01
Farland Services France	2		20/01/99	09/02/99
	2	Geographical extension	19/07/00	29/07/00
Fibernet SAS	2	14 regions	21/08/00	12/09/00
First Mark Communications France (*)	1	Wireless local loop in metropolitan France	04/08/00	03/09/00
FLAG Atlantic France	2		04/05/00	07/06/00
FLAG Telecom France	2		03/12/01	08/01/02
France CitéVision	2	Part of cable network	25/09/00	14/10/00
	2	Extension to 5 regions	20/08/01	29/08/01
	1	L. 34-1 extension	15/07/02	27/08/02
France Telecom (*)	mobile	Inmarsat C	01/07/91	02/08/91
	mobile	Satellite		
Aircom			21/02/92	18/03/92
	1	Fixed service licence – nationwide coverage	12/03/98	19/03/98
Free Telecom	1	Mainly Internet service provider	09/11/99	05/12/99
		under the name of Linx		
	1	L.33-1 extension and change of name	14/12/00	23/12/00
		from Linx		
GC Pan European Crossing France	2		10/03/99	04/04/99
	1		11/05/00	11/06/00
Gensat France	2	Satellite	06/07/99	03/08/99
	2	Satellite	30/08/01	18/09/01
Globalstar Europe	1	Satellite	14/11/02	13/12/02
GTS Network (Ireland) (*)	2	18 regions	12/03/01	31/03/01
HOT Telecommunications (Deutschland) GmbH	2	Satellite	28/08/01	21/09/01
Dynegy France Communications SARL	2	Under the name of Titan Communications	29/07/99	26/08/99
	2	Change of name from Titan Communications to Iaxis France	29/08/00	07/09/00
	2	Change of name from Iaxis France	14/09/01	26/09/01
Infomobile	mobile	Ermes E3	26/11/93	17/12/93
	mobile		25/09/98	18/10/98
Interoute Communications France	3		28/07/98	14/08/98
Iridium Italia S.p.A	mobile		28/10/98	10/11/98
Kaptech (*)	1		19/09/00	08/10/00
	3	L.33-1 revoked	27/08/02	17/09/02
Kast telecom	3		02/02/99	19/02/99
	1	L33-1extension	02/03/00	01/04/00
KDD	3		23/09/98	22/10/98
KPN Eurovoice BV	3		19/04/00	31/05/00
LambdaNet Communications France SAS	1	Metropolitan area network	09/06/00	06/07/00

Licensed company	Type of licence	Comments	Date of order	Published in Official Journal
Landtel France SAS (**)	1	Wireless local loop 7 regions	04/08/00	03/09/00
	1	Reduced to 2 regions	10/09/02	19/09/02
LCR Telecom	3	Under the name of Golden Line Technology	07/07/98	31/07/98
	3	Change of name from Golden Line Technology	18/03/99	
Level 3 Communications	1		23/12/98	20/01/99
	1	Geographical extension	07/06/01	16/06/01
Louis Dreyfus Communications (*)	2	Licence for Louis Dreyfus Communications	06/03/00	17/03/00
	1	L. 34-1 extension	11/07/01	24/07/01
Marconi France Télécommunications SAS	3		17/02/99	12/03/99
	3	Coverage extension	26/07/00	03/08/00
Metromedia Fiber Network France	2	Pan-European network	07/10/99	05/11/99
MFS Communications SA	2	ALT4	12/12/96	17/12/96
	1	ALT4 amendment	16/04/98	10/05/98
	1	Extension to the whole of France	16/12/98	12/01/99
	1	Geographical extension	07/08/02	03/09/02
Multicoms	2	Satellite under the name of MCN SAT Services	16/12/98	09/01/99
	2	Change of name from MCN SAT Services	10/10/00	24/10/00
Naxos	2	ALT6 for Telcité	16/04/98	10/05/98
	2	Licence for Naxos	24/11/99	21/12/99
NTL France SAS	1	Cable operator	07/08/00	05/09/00
One Tel	3		17/11/98	13/12/98
	1	L33-1 for 7 regions	24/10/00	21/11/00
	3	L.33-1 revoked	26/07/02	01/09/02
Orange Caraïbe (*)	mobile	GSM DOM 2 under the name of France Telecom mobiles SA	14/06/96	16/07/96
	mobile	Extensions to Guyana	22/09/98	20/10/98
	mobile	Amendment to GSM DOM2 licence	03/09/99	06/10/99
	mobile	Amendment	22/12/00	03/01/01
	mobile	Change of name to Orange Caraïbe	23/01/02	07/02/02
Orange France (*)	mobile	GSM F1 under the name of France Telecom mobiles SA	17/08/00	10/09/00
	mobile	Amendment under the name of France Telecom mobiles SA	22/12/00	03/01/01
	mobile	Harmonisation with FTM La Réunion	24/04/01	04/05/01
	mobile	Change of name GSM F1 + 26 3G roaming	18/07/01	21/08/01
	mobile	UMTS licence	18/07/01	21/08/01
	mobile	Amendment to UMTS licence	03/12/02	12/12/02
Orange Réunion	mobile	GSM DOM 4 under the name of France Telecom mobiles La Réunion SA	24/04/01	15/05/01
	mobile	Change of name	14/03/02	13/04/02
Outremer Telecom (*)	1	Under the name of Infotel	29/04/98	29/05/98
	1	Change of name from Infotel to Informatique Télématique	21/04/99	16/05/99
	1	Change of name from Informatique Télématique (formerly Infotel)	15/01/01	25/01/01
	1	Extension to Mayotte	30/08/02	21/09/02
Outremer Telecom (*)	mobile	GSM DOM 3	30/11/00	25/02/01
	mobile	GSM DOM3	18/11/02	31/01/02

Licensed company	Type of licence	Comments	Date of order	Published in Official Journal
Phone Systems	3		17/06/98	12/07/98
	1	L33-1extension	10/03/99	09/04/99
Primus Télécommunications France SA (*)	1	Under the name of Télécontinent	16/09/98	06/10/98
	1	Change of name from Télécontinent	15/03/01	27/03/01
Prosodie (*)	3	Awarded to the new company	29/10/99	24/11/99
Saint Martin & Saint Barthélémy Tel Cell SARL	mobile	GSM DOM6 in Guadeloupe	23/07/01	22/08/01
Saint Martin Mobiles SA	mobile		04/07/91	26/07/91
	mobile	Extension to 30 September 2001	26/07/01	03/08/01
	mobile	Licence renewed until 30 September 2006	30/09/01	21/10/01
SAS SPM Telecom	mobile	St Pierre et Miquelon	21/06/00	08/07/00
Skybridge Communications	2	Satellite	09/02/00	11/03/00
Société Française du Radiotéléphone (SFR) (*)	mobile	GSM F2	25/03/91	26/03/91
	mobile	Amendment to GSM F2 licence	17/11/98	18/12/98
	mobile	Amendment incoming calls GSM F2	13/09/00	04/10/00
	mobile	Amendment GSM F2, 2G 3G roaming	18/07/01	21/08/01
Société Française du Radiotéléphone (SFR)	mobile	UMTS licence	18/07/01	21/08/01
		Amendment to UMTS licence	03/12/02	12/12/02
Société Réunionnaise de Radiotéléphone (SRR)	mobile	GSM DOM 1	23/02/95	30/03/95
	mobile	Amendment GSM DOM1	29/01/01	21/02/01
Squadran	1	Wireless local loop in metropolitan France under the name of Fortel	04/08/00	03/09/00
	1	Change of name from Fortel to Squadran	20/09/01	02/10/01
Star Telecommunications (France)	1	Pan-European network	26/10/99	23/11/99
Storm Telecommunications Ltd	1	Licences for Paris metropolitan area	27/04/99	18/05/99
	1	L.33-1extension	30/10/00	28/11/00
Suez Lyonnaise Télécom	1	LEX4 (AUXIPAR SA)	27/12/96	10/01/97
	1	LEX4 revoked – full licence	02/10/98	23/10/98
	1	Extension to some cable networks	23/08/01	01/09/01
Swisscom France	1		15/10/99	07/11/99
Tachyon Netherlands BV	2	Satellite	14/03/01	06/04/01
TDF	mobile	Operator	03/07/87	05/07/87
Télé 2 France	1	Allocation of prefix "4"	16/04/98	10/05/98
Télécom Developpement	2	ALT2	28/11/96	01/12/96
	1	L34-1extension	18/12/97	30/12/97
Teleglobe	3		30/06/98	02/08/98
	1	L.33-1extension	02/02/99	19/02/99
	1	L33-1/L34-1extension	15/11/01	07/12/01
Telenor	3		02/08/01	01/09/01
Télévision Française 1 SA (TF1)	1	Satellite data transmission	11/07/01	08/08/01
Telia	1		20/07/99	21/08/99
	1	Geographical extension	05/06/00	30/06/00

Licensed company	Type of licence	Comments	Date of order	Published in Official Journal
TGN Euro Link SA	2	ALT1 under the name of Eurotunnel Développement SA	21/11/96	23/11/96
	2	Change of name from Eurotunnel Développement SA to Eurotunnel Telecom SA	29/04/98	12/05/98
	2	Change of name from Eurotunnel Telecom SA	25/06/01	06/07/01
TI France	2	French section of the pan-European network	24/10/00	17/11/00
Tiscali International Network SA	2	Under the name of Nets SA	06/10/98	27/10/98
	2	Geographical extension	05/01/01	27/01/01
	2	Change of name to Tiscali International Network SA	26/06/02	05/07/02
Tiscali Telecom	3	Under the name of AXS Telecom	17/06/98	09/07/98
	1	L.33-1 extension under the name of AXS Telecom	24/03/99	21/04/99
	1	Change of name from AXS Telecom to Liberty Surf Telecom	28/11/00	12/12/00
		Change of name to Tiscali Telecom	03/06/02	06/06/02
Tradingcom Europe	3	Telephone minutes brokerage –licence under the name of trading.com	21/03/00	28/04/00
	3	Change of name to Tradingcom Europe	10/10/02	23/10/02
T-Systems Siris SAS	1	Under the name of Siris	18/12/97	30/12/97
		Change of name to T-Systems Siris SAS	25/01/02	08/02/02
TyCom Networks (France)	2	7 regions	13/04/01	13/05/01
	1	Under the name of Mediaréseaux	17/06/98	04/07/98
	1	Geographical extension	07/03/00	01/04/00
	1	Change of name from Médiaréseaux	10/10/00	24/10/00
Ventelo France	1	Under the name of Omnicom	18/12/97	30/12/97
	1	Change of name from Omnicom to GTS Omnicom	17/03/00	26/03/00
	1	Change of name from GTS Omnicom to Ventelo France	07/12/01	18/12/01
Verizon Global Solution France SAS	2		05/07/01	03/08/01
Versatel Telecom Europe BV (*)	2	Pan-European network	10/05/00	08/06/00
Viatel Opérations SA	1	12 regions	05/06/98	02/07/98
	1	National L.33-1 extension	22/11/99	11/12/99
Vine Telecom Network Limited	1	Pan-European network	05/01/00	25/01/00
Western Telecom	3		17/06/98	09/07/98
XTS Network	3	Voice over IP for overseas départements and metropolitan France	10/04/00	16/05/00
XTS Network Caraïbes	1	Wireless local loop 1 overseas département	04/08/00	03/09/00
XTS Network Océan Indien	1	Wireless local loop 3 overseas départements	04/08/00	03/09/00

(*) Company belonging to a group that previously held other licences, now revoked or not renewed, under the same name or under the name of other subsidiary companies.
(**)Company in receivership on 31/12/2002

Types of licence
1: public network+telephone service (L.33-1 + L.34-1)
2: public network (L.33-1)
3: telephone service (L.34-1)

WLL: experimental licence for the wireless local loop (before calls for applications launched in 2000)
LLU: experimental licence for local loop unbundling (before January 2002)
PCS: trial in powerline carrier system technology
ALTx: licences awarded before 1 January 1998 that may be subject to amendment to ensure compliance with administrative texts resulting from the Telecommunications Regulation Act dated 26 July 1996 1996

B. Licences revoked or not renewed (end 2002)

Company	Type of licence	Comments	Date of order	Published in Official Journal
360 networks (France)	2	Pan-European network licence	08/01/01	27/01/01
	2	Revoked Company wound up by court order	08/11/01	20/11/01
	1	LEX1-licence expired 31/07/01 Licence not renewed	31/07/96	01/08/96
Atlantic Télécom (First Telecom)	3		17/06/98	09/07/98
	1	L.33-1extension	14/12/99	18/01/00
	LLU 2	Trial unbundling –ends 15/01/01	24/10/00	22/11/00
	LLU 2	Extended until 15/06/01	29/12/00	12/01/01
	1	Revoked. Company put into liquidation	08/11/01	20/11/01
Atout	LLU 2	Trial unbundling – revoked 15/01/2001	08/11/00	28/11/00
	LLU 2	Extended until 15/06/01	29/12/00	12/01/01
	LLU 2	Extended until 31/12/01 – not renewed	15/06/01	29/06/01
	3	Reduced to L.34-1	27/09/02	18/10/02
	1	LEX4 trial licence	27/12/96	10/01/97
	1	LEX4 revoked	02/10/98	23/10/98
Belgacom Teleport	1	LEX6 trial licence	07/02/97	06/03/97
06/03/97	1	Revoked	29/04/98	29/05/98
BLR Services	1	Wireless local loop 8 regions (1st call)	04/08/00	03/09/00
	1	Change for WLL in 3 regions (2nd call)	19/01/01	20/02/01
	1	Revoked	20/12/01	23/12/01
Cegetel Caraïbes	1	Wireless local loop 2 overseas départements	04/08/00	03/09/00
	1	Revoked	20/12/01	23/12/01
CGRP (groupe Cegetel)	1	LEX3	27/12/96	07/01/97
	1	LEX7	09/05/97	23/05/97
	1	LEX3 and LEX7 revoked	11/03/98	19/03/98
Covad Communications Group Inc	LLU 2	Trial unbundling –ends 15/01/2001	07/07/00	29/07/00
	LLU 2	Extended until 15/06/01Licence not renewed	29/12/00	12/01/01
Easynet (*)	LLU 2	Trial unbundling –ends 15/01/2001	24/10/00	21/11/00
	LLU 2	Extended until 15/06/01 – licence not renewed	29/12/00	12/01/01
EGN BV	WLL	Licence not renewed	02/06/99	30/06/99
Energis (Switzerland) AG	1	Under the name of Unisource Carrier Services	17/11/98	13/12/98
	1	Change of name from Unisource Carrier Services	17/05/00	26/05/00
	3	L.33-1 revoked	19/04/02	05/05/02
		Revoked	31/12/02	09/01/02

Company	Type of licence	Comments	Date of order	Published in Official Journal
Enron Broadband	2	Paris metropolitan area	30/03/01	26/04/01
	2	Revoked	20/12/01	23/12/01
E*Messages Wireless Informations Services France	mobile	Ermes E1 under the name of France Telecom Mobiles Radiomessagerie (FTMR)	26/11/93	17/12/93
	mobile	Alphapage under the name of FTMR	13/11/87	14/11/87
	mobile	Change of Ermes E1 licence name from FTMR	26/09/00	04/10/00
	mobile	Change of alphapage licence name from FTMR	26/09/00	04/10/00
	mobile	Licence renewed for 15 years	27/03/01	26/04/01
	mobile	Revoked	24/12/01	29/12/01
Esprit Telecom	1	National licence	12/03/98	19/03/98
	1	Amendment	07/07/98	25/07/98
		Revoked as of 31/07/00	17/03/00	26/03/00
	1	Under the name of FCI Carrier Services	17/11/98	11/12/98
	1	Change of name from FCI Carrier Services	22/02/99	04/03/99
	1	Revoked. Company put into liquidation	08/11/01	20/11/01
Fibernet SAS	2	14 regions	21/08/00	12/09/00
	2	Geographical extension	18/06/02	03/07/02
		Revoked	28/10/02	12/11/02
FirstMark Communications France	LLU2	Unbundling trial extended until 15/01/01 – licence not renewed	07/07/00	29/07/00
Formus Communications France	WLL	Trial	10/03/99	07/04/99
	WLL	Extended until 15/01/00 – licence not renewed	26/11/99	23/12/99
Formus Communications France	LLU 2	Unbundling trial extended until 15/01/01 – licence not renewed	10/03/99	07/04/99
	mobile	TFTS	23/02/95	21/03/95
	mobile	TFTS revoked	24/12/01	29/12/01
France Caraïbe Mobiles *	mobile	AMPS marine radiotelephony (FAB)	12/03/91	27/03/91
	mobile	from FAB to France Caraïbe Mobile – Licence not renewed	01/08/96	09/08/96
France Telecom *	mobile	GSM F1	25/03/91	26/03/91
	mobile	Amendment to GSM F1	17/11/98	18/12/98
	mobile	GSM F1 revoked	17/08/00	10/09/00
		Marine radio service	12/09/96	29/09/96
		Marine radio revoked	28/12/01	09/01/02
	mobile	Bi Bop (Pointel)	27/11/91	30/11/91
		Bi Bop (Pointel) revoked	20/01/99	30/01/99
France Telecom mobile		DCS R1	08/12/94	04/01/95
	mobile	DCS R1 revoked	26/08/99	07/09/99
Geolink	1	Satellite	29/06/98	19/07/98
	1	Revoked	20/09/00	28/09/00
	2	ALT7 under the name of Hermes Europe Railtel	22/10/97	19/11/97
	2	Geographical extension	26/08/98	25/09/98
	2	Change of name from Hermes Europe Railtel	11/02/00	17/03/00
	2	Revoked	12/03/01	31/03/01
Global Metro Networks France SAS	2	Metropolitan network for Paris metropolitan area	06/10/00	28/10/00
	2	Revoked	20/12/01	23/12/01
Graphtel	3		16/09/98	07/10/98
		Revoked	27/09/02	09/10/02

Company	Type of licence	Comments	Date of order	Published in Official Journal
HighwayOne AG	LLU 2	Trial unbundling –ends 15/01/01	07/07/00	29/07/00
	LLU 2	Extension trial unbundling –ends 15/01/01	01/12/00	15/12/00
	LLU 2	Extended until 15/06/01 – trial licence not renewed	29/12/00	12/01/01
	3		11/02/99	28/02/99
	3	Revoked	01/06/01	13/06/01
IDT Europe B.V.	3		16/04/99	11/05/99
	1	Revoked	25/01/00	18/02/00
IS Production	LLU 2	Trial unbundling –ends 15/01/01	31/10/00	25/11/00
	LLU 2	Extended until 15/06/01	29/12/00	12/01/01
	LLU 2	Extended until 31/12/01	15/06/01	29/06/01
		Extended until 30/06/02 – not renewed	14/03/02	19/03/02
Kapt' Aquitaine SA (groupe Kaptech)	1	LEX5 (Kapt' Aquitaine SA)	31/12/96	16/01/97
	1	LEX 5 compliance	20/10/98	11/11/98
Kapt (groupe Kaptech)	mobile	CT2 CAI (PROLOGOS)	27/04/95	11/05/95
	mobile	Revoked	25/01/00	18/02/00
Kapt' Holding (groupe Kaptech)	3	Under the name of Kapt'	20/10/98	11/11/98
	1	L.33-1 extension for nationwide coverage – Licence lost following merger	30/07/99	25/08/99
Kertel	1	Under the name of Rhodium	15/04/98	10/05/98
	1	Change of name from Rhodium	29/06/98	09/07/98
	1	Geographical extension + satellite	25/05/99	16/06/99
	1	Extension to French overseas départements	09/02/00	03/03/00
	1	Revoked	27/03/2002	09/04/02
	1	Amendment to decree revoking licence	06/06/02	15/06/02
KPN Qwest Assets France				
	2	Under the name of Eurorings Assets France	30/06/99	27/07/99
	2	Change of name from Eurorings Assets France and geographical extension	10/01/00	04/02/00
	2	Extension to 19 regions	19/01/01	20/02/01
	2	Company put into liquidation in June 2002 – Revoked early 2003		
Intercall	3		22/03/99	17/04/99
	3	Revoked	24/12/01	29/12/01
LDI (Net-Net)	3	(Netnet business name)	17/06/98	09/07/98
	2	Revoked after company put into liquidation	08/11/01	20/11/01
Mangoosta	LLU 2	Unbundling under the name 15/01/01 of Speedcom –ends	28/06/00	26/07/00
	LLU 2	Change of name from Speedcom – extension – ends 15/01/01	08/11/00	28/11/00
	LLU 2	Extended until 15/06/01	29/12/00	12/01/01
	1	18 regions	03/01/01	08/02/01
	1	Revoked after company put into liquidation	08/11/01	20/11/01
Mannesmann Ipulsys France	3	Under the name of OTelO Communication	03/06/99	30/06/99
	3	Change of name from OTelO Communication	11/07/00	21/07/00
	3	Revoked after company was wound up	03/08/01	14/08/01
Media Overseas	1	Wireless local loop -Guyana	16/02/01	11/03/01
	1	Revoked	20/12/01	23/12/01
Mobicom	3		19/10/98	17/11/98
	3	Revoked after company put into liquidation	08/11/01	20/11/01

Company	Type of licence	Comments	Date of order	Published in Official Journal
NETESI SpA	LLU 2	Unbundling under the name of MTLcom – ends 15/01/01	07/07/00	29/07/00
	LLU 2	Change of name from MTLcom and extension – ends 15/01/01	31/10/00	25/11/00
	LLU 2	Extended until 15/06/01 – trial licence not renewed	29/12/00	12/01/01
Novaxess SAS	LLU 2	Trial unbundling – ends 15/01/01	15/11/00	14/12/00
	LLU 2	Extended until 15/06/01 – trial licence not renewed	29/12/00	12/01/01
Objectif BL	LLU 2	Trial unbundling – ends 15/01/01	06/07/00	29/07/00
	LLU 2	Extension trial unbundling – ends 15/01/01	24/10/00	22/11/00
	LLU 2	Extended until 15/06/01	29/12/00	12/01/01
	1	Unbundling	10/05/01	01/06/01
	1	Revoked	06/08/01	17/08/01
Primus Telecommunications SA	3		29/04/98	29/05/98
	3	Revoked after takeover by Telecontinent	19/03/01	27/03/01
	1	Cable operator in 13 regions	28/08/01	28/09/01
		Revoked	12/12/02	20/12/02
Prosodie * (former company - Prosodie group)	3		26/05/98	21/06/98
	3	Revoked for former company	15/02/00	25/02/00
QS Communications AG	LLU 2	Unbundling trial extended until 15/01/01 – trial licence not renewed	08/11/00	29/11/00
riodata NV	LLU 2	Unbundling trial ends 15/01/01 – trial licence not renewed	24/10/00	24/11/00
RSL Com	1		12/05/98	30/05/98
	1	Revoked	24/12/01	29/12/01
	1	LEX8	26/05/97	01/06/97
	1	LEX8 revoked	13/07/00	20/07/00
SES Multimedia SA	2	Satellite	19/04/02	03/05/02
		Revoked	12/12/02	20/12/02
SETMP Téléport de Marseille Provence	1	LEX2	27/12/96	07/01/97
	1	LEX2 revoked	27/04/99	06/05/99
Société Française du Radiotéléphone* (SFR)	mobile	NMT	22/2/88	21/04/88
	mobile	DCS R2	08/12/94	04/01/95
	mobile	DCS R2 revoked	26/08/99	07/09/99
	mobile	NMT revoked	07/08/00	12/08/00
Skyline				
	WLL		28/07/99	21/08/99
	WLL	WLL + telephony service	27/09/99	13/10/99
	WLL	WLL trial extended – trial licence not renewed	26/11/99	23/12/99
	LLU 2	Trial unbundling – ends 15/01/01	07/07/00	28/07/00
	LLU 2	Extension trial unbundling – ends 15/01/01	24/10/00	21/11/00
	LLU 2	Extended until 15/06/01	29/12/00	12/01/01
	LLU 2	Extended until 31/12/01	15/06/01	29/06/01
		liquidated on 17/10/01		
Société Française de Transmission de Données par Radio TDR	mobile	Ermes E2	26/11/93	17/12/93
	mobile	Ermes E2 revoked	27/01/00	18/02/00

Company	Type of licence	Comments	Date of order	Published in Official Journal
Subitéo (Fast Point Networks)	LLU 2	Trial unbundling under the name of Fast Point Networks – ends 15/01/01	31/10/00	25/11/00
	LLU 2	Extended until 15/06/01 – trial licence not renewed	29/12/00	12/01/01
TESAM (Globalstar)	mobile		17/11/98	11/12/98
		Revoked	14/11/02	13/12/02
Teleglobe				
	3		30/06/98	02/08/98
	1	L.33-1extension	02/02/99	19/02/99
	1	L33-1/L34-1extension	15/11/01	07/12/01
	1	Company put into liquidation on 22/08/02 – Revoked early 2003		
Tiscali France SA	1	Under the name of A Telecom	17/06/98	17/07/98
	1	Change of name from A Telecom	17/01/01	27/01/01
	1	Revoked	07/08/02	23/08/02
Uniglobe	1		08/07/98	25/07/98
	1	Revoked	24/12/01	29/12/01
VersaPoint (Versatel group)	LLU 2	Trial unbundling –ends 15/01/2001	24/10/00	18/11/00
	LLU 2	Extended until 15/06/01	29/12/00	12/01/01
	LLU 2	Revoked	15/03/01	29/03/01
Viatel France	3	Under the name of Econophone (Destia)	28/07/98	14/08/98
	3	Change of name from Econophone (Destia)	24/04/01	04/05/01
		Revoked	28/12/01	09/01/02
WinStar Communications SA	2		15/06/99	09/07/99
	2	Revoked after company put into liquidation	08/11/01	20/11/01
WorldXChange	3		17/06/98	07/07/98
	3	Revoked after company put into liquidation	08/11/01	20/11/01

** : companies that hold another valid licence under the same name*

Types of licence

1: public network+telephone service (L.33-1 + L.34-1)
2: public network (L.33-1)
3: telephone service (L.34-1)

WLL: experimental licence for the wireless local loop (before calls for applications launched in 2000)
LLU: experimental licence for local loop unbundling (before January 2001)
PCS: Trial in powerline carrier system technology)

II. ART actions

A. Licences issued or revoked

1. New licences

In 2002, ART assessed several licence applications for public telecommunications networks and/or public telephony services. Nine authorisations (excluding trial licences) were published in the Official Journal.

The nine companies awarded the new licences in 2002 had all requested authorisation to establish and operate a public telecommunications network[1], with the exception of France Citévison, which already held such a licence, and Kertel, which requested a public telephony licence[2] only.

Globalstar Europe	FLAG Telecom Networks
Bouygues Telecom (UMTS licence)	E-Qual
Belgacom Présence	Kertel
SES Multimedia SA	Dauphin Télécom
France Citévision	

2. Licences revoked

Twelve orders were published in the 2002 Official Journal revoking telecommunications operator licences. Two concerned service providers and two satellite operators.

	Revoked licences L. 33-1 & L. 34-1	Revoked licences L. 33-1	Revoked licences L. 34-1
Total	4	6	2
Satellite	1	1	

They concerned the following companies:

Priority Telecom	Tiscali France
SES Multimédia SA	Kertel(*)
TESAM	Graphtel
Fibernet SAS	Viatel
Energis AG(**)	AUCS Communications Services (**)
Kaptech (**)	One.Tel (**)

(*) L.33-1/L.34-1 licences revoked following the takeover of the company (owned by Pinault Printemps la Redoute -PPR) by LDCom. PPR set up a new company called Kertel and obtained an L.34-1 licence in 2002.
(**) These operators had their L.33-1 licence revoked but still possessed an L.34-1 licence on 31/12/02.

1 Licences under article L.33-1 of the Posts and Telecommunications Code.

2 Licences under article L.34-1 of the Posts and Telecommunications Code.

Of the nine operators which requested cancellation of their public network or public telephony licences, one made the request in the same year that it entered the market. This was SES Multimedia SA, which held a licence for the establishment and operation of a satellite telecommunications network. However the cancellation was not due to any difficulties internal to the company. In fact, Satlynx had already requested a licence end 2002 to enable it to take over the SES Multimedia licensed activity. Hence, SAS Multimedia no longer required a licence.

3. Licence amendments

Fifteen orders were made for licence amendments in 2001: six operators requested extensions to their authorised coverage areas to continue rollout, while two wireless local loop operators (WLL) had their coverage areas reduced. Four licence amendments were the result of registered company name changes for the licence holders concerned. Finally the SFR and Orange France UMTS licences were also amended (twice in the case of SFR).

Extension of authorised coverage area	Reduction in authorised coverage area	Registered company name change	
		Former name	New name
MFS Communications SA	Landtel France SAS	Nets SA	Tiscali international Network SA
Outremer Telecom	Broadnet France SAS	Liberty Surf Telecom	Tiscali Telecom
Gensat France		Siris	T-Systems Siris
Completel SAS		Trading.com	Tradingcom Europe
Dauphin Télécom			
Fibernet SAS(*)			

(*) Licence finally revoked in the same year

Chapter 2

Resources

I. Frequencies

Under the Act of 26 July 1996, ART is responsible for allocating frequency resources to operators and users of civil radiocommunications and, pursuant to Article 16, for managing and allocating audio and television transmission frequencies.

A. Forward frequency planning

Frequency planning in France, for the frequencies for which ART is responsible for allocating, is carried out within a national and international framework. The global rules (worldwide) are established by the ITU-R, transposed to Europe by the CEPT and to France by the ANFr[1] (National Frequencies Agency). ART is involved in working groups and conferences dealing with the subjects concerning it at all three levels, enabling it to contribute to the rules to which it will be working and ensure that it has the competence required to establish the conditions of application of these same rules.

1. World Radiocommunications Conferences (WCR)

Notable events in 2002 included implementation of the results of WCR 2000 (Istanbul) and preparation for the 2003 conference (Geneva). The World Radiocommunications Conferences are extremely important because they produce the fundamental technical and regulatory recommendations applicable to all types of radiocommunications. The final decisions of these conferences have the same weight as a covenant.

The 2000 conference earmarked the 1.8 GHz and 2.5 – 2.7 GHz bands for IMT 2000 along with the 900 MHz band. This allows the different regions of the world to adopt new frequency bands for IMT 2000[2], in addition to the core bands identified at the 1992 conference. IMT 2000: generic name for the family of worldwide standards usable for 3G networks

Under the guidance of the ANFr[3] (National Frequencies Agency), ART took part in the work

1 See glossary

2 IMT 2000: generic name for the family of worldwide standards usable for 3G networks

3 See glossary

carried out by the CEPT and the ITU-R Commission no. 8 on the extended 2.5 – 2.7 GHz band. It recommended open organisation of the 2.5 –2.7 GHz frequency band between the terrestrial and satellite parts until the additional frequency needs for UMTS networks have been assessed. ART also contributed to drafting the preliminary CEPT report in response to the European Commission mandate concerning, notably, national procedures for reworking this frequency band.

Regarding the use of the 1.8 GHz band for IMT 2000 systems, ART's contributions to the CEPT and ITU-R working groups on the above conference decision took into account the short and medium term concerns of the GSM operators currently using the band.

During 2002, ART continued to make contributions to the various national and international working groups on agenda items relating to telecommunications issues for the 2003 conference. Particular emphasis was placed on the Frequency Management (WGFM) and Spectrum Engineering (WGSE) groups and certain sub-groups and also on the Conference Preparatory Group (CPG). These groups have the responsibility of ensuring a consensus at European level prior to the world conference. The following topics were of particular interest to ART: the introduction of mobile services in the 5470 to 5725 MHz bands for new generation WLAN applications, the development of future IMT 2000 systems, the positioning of terrestrial wireless interactive multimedia applications (T-WIMs) – a concept which sets the boundaries for future mobile services, from WLL to audiovisual applications, changes in use of the 13.75 to 14 GHz bands, and harmonisation of worldwide frequency allocations for radio amateur services in the 7 MHz band.

2. European standardisation (excl. WRC)

At the same time as it was participating in WRC-related standardisation work, ART continued contributing, in collaboration with the ANFr, to the work on frequency harmonisation led by the CEPT Electronic Communications Committee (ECC). It was involved notably with the principles of operational management of frequencies and spectrum planning. The decisions adopted by the ECC in 2002 concerned: short-range radio equipment for road transport applications, narrow band PMR in the 400MHz band, shared use of the 40.5 – 42.5 GHz band between fixed services and fixed-satellite services, GSM-R in the 900 MHz band, harmonised use of the freed TFTS spectrum, and designation of the 2.5 GHz band for UMTS.

ART was actively involved in the CEPT Frequency Management working group as well as the various sub-groups on PMR, fixed service, fixed-satellite service, outside broadcast links and ERMES. The main issues addressed by this group related not only to preparations for the ECC decisions mentioned above but also to ECC reports on ancillary broadcast equipment, current and future use of the fixed service, the strategic plan for use of short-range equipment in the 800MHz and 2.4 GHz bands, and the response to the Commission mandate on UMTS.

In conjunction with AFNr, ART also participated in the work of the CEPT working group on engineering the radio spectrum. This work resulted, in particular, in adoption of recommendations for fixed-service frequency plans in the 7, 8 and 31 GHz bands, definition of methods allowing the coexistence of point-to multipoint and fixed systems as well as preparation of a report on fixed-service requirements for UMTS infrastructure networks. New reports on the compatibility of various radiocommunications systems were published by the CEPT based on the work carried out by this group particularly in the area of introducing short-range systems. ART also followed with interest the work related to frequency band identifica-

tion and uses for new technology ultra wide-band applications such as vehicle anti-collision radar.

3. Frequency coordination in border regions

ART actively participated in various meetings on frequency coordination in border regions, led by the ANFr[1] (National Frequencies Agency) and aimed in particular at finalising several multilateral agreements. As a rule, these agreements are intended to facilitate and optimise the use of frequencies allocated to ART in French border regions. The main agreements signed in 2002 for mobile service covered:

- UMTS with Spain, Belgium and Germany
- the 410 –430 MHz frequency bands and coordination of GSM frequencies in the 1800 MHz band with Spain
- the VHF and UHF frequency bands with Belgium, Luxembourg, Germany and Switzerland.

Finally, ART worked on implementation of the Berlin agreement (previously the Vienna agreement). This agreement, on coordination procedures for mobile and fixed services in border areas and signed in 2001, is not covered by the activities of the member administrations of the CEPT. It is of interest to the CEPT, however, as it is designed to harmonise and hence facilitate frequency coordination in the border areas between France and most of its neighbours. Pursuant to this general agreement, ART closely monitors progress on electronic exchange of coordination data and the associated software application "Harmonised Calculation Method" (HCM).

4. Standardisation actions at international level

The first version of the master plan covering the use of frequencies for fixed services is now available on ART's website. Work now in progress aims to add the descriptions of the regulated radio interfaces in compliance with Article 4.1 of the R&TTE Directive no. 1999/5/EC. The information in this database is intended for the telecommunications industry and users and can be accessed via a multi-criteria search engine whereby information searches can be carried out, notably on the basis of frequency, use or type of system. As part of its work on managing audio and television outside broadcast frequencies, ART set up and managed a working group involving most of the players in the audiovisual sector concerned by the use of radio links for outside broadcasting. The work of this group should allow identification of the available frequency resources and their conditions of use.

B. Operational frequency management

As well as participating in forward frequency planning as described above, ART also has responsibility for the operational management of frequency allocation decisions and declarations in its own and ANFr's databases. The following figures for 2002 indicate the scale of this task.

- 6 010 requests for microwave links
- 12 548 creations, cancellations or amendments of frequency assignments for terrestrial and satellite services were presented to the AFNr Frequency Assignment Commission
- 173 ANFr documents for coordination of international incoming fixed and fixed-satellite services
- 173 studies carried out for studio-transmitter links.

Contrary to 2001, which saw a significant number of regularisations, 2002 was more representative of real operator requirements and corresponds more closely to the "normal" workload. However, it is still carrying out some

1 See glossary

significant auditing work on the large number of files concerning studio-transmitter links.

In 2002, ART also participated in the spectrum reorganisation work led by ANFr with the support of the FRS (Fund for Reorganising the Spectrum). ART contributed notably to the release of the UMTS core frequency bands occupied by France Telecom and defence microwave links as well as preparation of the necessary agreements for the release of microwave frequencies for deployment of UMTS and WiFi in the French overseas départements and territories.

C. Radio frequencies and health

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1. Electromagnetic fields and health issues

ART asked INERIS (National Environment Institute) to prepare an up-to-date and comprehensive review of medical and scientific data on the possible effects of exposure to electromagnetic fields generated by mobile radio antennas and terminals.

The paper study (which can be downloaded from ART's website) had two objectives:

- to assemble the results of scientific studies carried out in 2001 and 2002 subsequent to the report published by the group of independent experts and chaired by Dr Zmirou

- to analyse the scientific data in the light of concerns raised at various times by the public with respect to mobile terminals and antennas.

Given that the domestic debate is largely focused on mobile radio antennas, ART naturally wished to focus on this aspect as well as on mobile phone handsets.

The level of public exposure to electromagnetic fields generated by the antennas is low and, in any case, is below the thresholds currently in force.

Studies carried out to date on mobile phones have not shown any health risk. However, according to the conclusions of the INERIS study: "some recent experimental work has shown that there are potentially harmful effects at levels above those produced by the terminals. These effects have to be quantified in terms of thresholds, whether they are serious in the short or long term, and the likelihood of them occurring during actual use" .

Moreover, the current epidemiological results are limited, first, because we do not have data over a sufficiently long period with respect to the latency of certain effects; secondly, the statistical sample sizes are limited and it is difficult to determine the degree of exposure after the event. Other exposure parameters will need to be studied to take into account the changes in technology (different frequencies).

2. Legal aspects of repeater station antenna installations

ART commissioned a study on local body requirements for mobile telephone network deployment from the law firm Rambaud-Martel. The idea was to draw up an inventory of:

- precautionary steps taken by certain local authorities to prevent installation of relay antennas

- claims lodged by the operators against these measures.

This study, which analysed national, European Community, and international texts as well as the jurisprudence concerning the installation of relay antennas, clarifies the particular decisions taken by the various local authorities.

D. R&TTE Directive

ART provided input to DIGITIP[1] for preparation of the decree and the two application orders relating to the European R&TTE directive. This directive seeks to facilitate the marketing and free movement of telecommunications equipment (radiocommunications included). These texts should be published in 2003.

II. Management of the national numbering plan

In 2002, ART made 164 decisions concerning numbering. These decisions can be broken down as follows:

- 6 decisions with general consequences
- 185 decisions concerning the general management of numbering resources; these decisions can be further broken down into 85 allocation decisions, 28 reservation decisions, 12 decisions regarding transfers from one operator to another and 33 decisions to revoke licences or modify conditions of use.

Definitions

- "E" or 16XY format prefixes: Prefix with one or four numbers which replaces the zero at the beginning of the called party's number. Used to select the preferred local or long distance operator.
- 10XY special numbers: numbers reserved by an operator to provide services to customers (e.g. fault service)
- 3BPQ short numbers: numbers reserved for card services, carrier selection using two-step dialling, kiosk services, etc.
- Mobile numbers: numbers beginning with 06 and reserved for mobile operator customers
- Non-geographical numbers: 0800 type numbers allowing access to so-called special services (freephone, shared-cost calls, shared-revenue calls).
- Geographical numbers: numbers reserved for fixed lines (allocated to operators in blocks of 10 000 numbers)

1 See glossary

Situation of numbering resources end 2002

	N° of numbers
"E" prefixes allocated	6
16XY prefixes allocated	28
16XY prefixes reserved	0
10XY special numbers allocated	16
10XY special numbers reserved	0
Short numbers (3BPQ) allocated	128
Short numbers (3BPQ) reserved	20
Mobile numbers allocated	66 150 000
Mobile numbers reserved	2 000 000
Fixed non-geographical numbers allocated	13 151 000
Fixed non-geographical numbers reserved	270 000
Fixed geographical numbers allocated	141 840 000
Fixed geographical numbers reserved	130 000

Distribution of short numbers allocated or reserved by service category

Short numbers (3BPQ) for card services or similar	30
Short numbers (3BPQ) for two-step dialling carrier network selection	7
Short numbers (3BPQ) for other uses	111
Total	148

A. Operational management of geographical numbers

ART continues to make G'NUM available to industry specialists. G'NUM is a computer application that offers a detailed description of the use of blocks of geographical numbers. At the end of 2002, there were 17 customers. ART updates the application on the basis of information exchanged between the operators in accordance with the guidelines on operational management of numbering resources. Since June 2002, the application has been available via an Extranet which can be accessed from ART's web site.

B. Number Portability[1]

ART set an objective of completing the programme, which would offer portability for all number segments, in 2002. The opening of portability offers essentially requires preparation, in collaboration with the operators, of the technical, legal and commercial conditions necessary for implementation. Once these conditions have been met, the market (i.e. business or private users) will then implement portability and act as the driving force for its development, depending on its requirements and aspirations.

As a result, number portability for fixed non-geographical numbers (see table) was finalised for all freephone number segments (opened in

1 A comprehensive file on mobile number portability is available online on ART's web site

July 2001), shared-cost numbers (opened in January 2002) and shared-revenue numbers (open in December 2002).

These numbers are exploited by companies or local authorities, but the end-user, i.e. the consumer, will benefit from the increase in the offer of new services resulting from competition in this area.

Mobile number portability also took a big step forward in 2002. The guidelines adopted in July will allow opening of mobile portability on 30 June 2003. Under the aegis of ART, mobile operators in metropolitan France and the consumer associations were involved in setting the conditions for implementing this ambitious and complex project, which will allow all mobile customers to change operator without changing their number.

Mobile number portability will be offered to all customers of mobile operators, whether subscribers or users of prepaid cards. Customers wishing to take advantage of this possibility will have to cancel the contract with their existing operator and request a "number transfer" document allowing them to choose their new operator.

The customer will change over to the new operator on a date defined and communicated prior to changeover. Details of the complete process can be found on ART's web site.

The objectives for 2003 are ambitious. Number portability will have to be extended to the overseas *départements*[1] and ART has initiated the work required in collaboration with local mobile operators. Each *département*[1] has its own network and country code and separate number portability will therefore have to be set up in each case i.e. Guadeloupe, Martinique, Guyana and La Réunion.

The second phase of mobile number portability, which concerns so-called direct routing of fixed to portable mobile numbers, will be investigated in 2003 with the aim of finding a solution as quickly as possible.

Fixed non-geographical number portability will need to be fully operational and allow as much freedom as possible in the market. Geographical number portability could increase as local loop unbundling develops.

1 See glossary

Fixed non-geographical number

Numbers	Use	Tariff (maximum)	Open to competition
0800	Freephone numbers	Free	Yes
0805	Freephone numbers	Free	Yes
0809	Operator services	Free	Yes
0810	Shared-cost numbers	<Approx. local tariff	Yes
0811	Shared-cost numbers	<Approx. local tariff	Yes
0819	Operator services	Free	Yes
0820	Shared-cost numbers	< €0.12/min	Yes
0821	Shared-cost numbers	< €0.12/min	Yes
0825	Shared-cost numbers	< €0.15/min	Yes
0826	Shared-cost numbers	< €0.15/min	Yes
0836	Other services	ⓘ	Yes
0840	Portability prefixes for non-geographical numbers	Numbers for technical use	Yes
0841	Numbers for technical routing purposes for ETNS (European Telecommunication Numbering Space)	Numbers for technical use	Yes
0842	Portability prefixes for shared-revenue numbers	Numbers for technical use	Yes
085	Prefixes for accessing private virtual network services	Numbers for technical use	Yes
0860	Switched network Internet access	<Approx. local tariff	Yes
0868	Switched network Internet access	>Approx. local tariff	Yes
0890	Shared-revenue numbers	< €0.15 /min	Yes
0891	Shared-revenue numbers	< €0.30 /min	Yes
0892	Shared-revenue numbers	< € 0.45/min	Yes
0893	Shared-revenue numbers	< €0.75 /min	No
0897	Shared-revenue numbers	< €0.60 /call	Yes
0898	Shared-revenue numbers	< €1.20 /call	No
0899	Shared-revenue numbers	Other tariffs, operator free to choose ⓘ	No

ⓘ: - 0899 numbers: for example 089970 is the only number in service and is billed by France Telecom at €1.35 on connection plus €0.34/min
- 0836 numbers have been approved for 089B numbers. Hence, their tariffs vary, between €0.15 and the 089970 tariff (i.e. €1.35 per-call + €0.34 per-minute)

Chapter 3

Taxes and fees

I. Mobile frequency spectrum taxes and fees

There are several types of mobile licence: terrestrial (UMTS, GSM, AMPS, DECT); satellite (Iridium, Globalstar, Inmarsat), onboard telephony and Internet for aircraft, radio display paging (POCSAG, ERMES, RDS)

Total taxes and fees payable for these licences in 2002 (for the 2001 financial year and excluding UMTS) were approximately 52 million euros. This can be broken down into: 1 284 594 euros in taxes for licence application and processing costs and 50 530 668 Euros in fees for frequency management and use. Total taxes and fees due for the 2002 financial year should be the same.

The amount payable for the UMTS licences awarded to the two operators in 2001 -- 619 million euros per licence -- was paid directly to the Ministry for the Economy, Finance and Industry in 2002.

II. Fixed frequency spectrum fees

A. Wireless local loop

The fees payable by wireless-local-loop operators for allocation and management of frequencies were modified by decree on 21 February 2002. The decree stipulates that the fees will be calculated prorata temporis in the first and last years of the licence period. Another modification to the calculation method (particularly important for regional operators) is derived from this decree i.e. the amount of the licence fee is proportional to the surface area served by the frequencies allocated.

B. Satellite

ART issued a favourable recommendation[1] on the draft legislation covering licence fees for allocation and management of frequency spectrum paid by operators holding L.33-1 and L.33-2 CPT (Posts and Telecommunications code) licences. Hence, in accordance with

1 Recommendation 03-234 dated 6 February 2003

decree 2003-392 published in the Official Journal on 26 April 2003, the licence fee for allocation of frequencies in reserved bands for fixed-service access to Internet and broadband applications by satellite, is calculated independently of the number of sites, the number of ground stations in service and the position(s) of the satellite(s) concerned. Operators must pay an annual management fee of 6 710 euros. Previously, the annual management fee was 305 euros per site and therefore per customer, which slowed down development of this technology.

C. Total fees

Total fees for allocation and management of frequencies for fixed services (PMR in particular), fixed-satellite services (VSAT) and trials, amounted to approximately 16 million euros in 2002.

III. Numbering fees

Numbering resources are allocated to operators by ART in return for an annual licence fee payable each calendar year. A fee is also charged for reservation of numbering resources. Total fees for managing the national numbering plan and monitoring its use amounted to 14.5 million euros.

Fees

Type of numbering resource	Reservation fees (1)	Annual usage fees (2)
Standard, 10 digit, number blocks	Quantity of numbers available in block multiplied by €0,01	Quantity of numbers available in block multiplied by €0,02
4 digit short numbers (3BPQ format)	€20.000	€40.000
4 digit prefix (16 XY format)	€20.000	€40.000
1 digit prefix	€200.000	€400.000

(1) If an operator cancels a reservation, the fee, which is on a flat-fee basis, remains payable.(Article 3, decree 96-1224 dated 27 December 1996)
(2) An annual fee is payable each calendar year for numbering resources allocated by ART (article 1, decree 96-1224 dated 27 December 1996)

IV. Total taxes and fees

The total amount of taxes and fees actually received by ART in 2002 amounted to 95.8 million euros compared to 125,7 million euros.

Chapter 4

Universal service

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

Universal service, as defined in Article L.35-1, is designed to make quality telephone service available to everyone at an affordable price, ensure the availability of public payphones nationwide, provide a directory and directory service as well as social tariffs. Universal service funding is shared between the operators. ART is responsible for evaluating the net cost each year and determining the share each operator has to pay.

I. The cost of universal service

A. Principles

The cost of universal service is defined as the net cost incurred by the designated operator as a result of its obligation to provide universal service. It is evaluated by taking into account the difference between the following two situations based on the operator's accounts.

- the situation where the operator is not obliged to provide universal service, in which case its approach is purely commercial
- the situation where the operator meets its universal service obligations.

The cost of universal service is broken down as follows:

- the C1 component represents the costs linked to the imbalance in the current France Telecom pricing structure. This was a transitional component covering only the period during which France Telecom rebalanced its prices, and was discontinued on 1 January 2000. Mobile operators are exempt from this cost component in return for their commitment to provide nationwide coverage.
- the C2 component relates to uniform geographical pricing, i.e. having to serve the whole country in such a way that all subscribers can access telephone service at the same price irrespective of their location
- the C3 component which includes social tariffs i.e. the cost of having to provide a specific tariff offer for certain social categories (in particular, people with low incomes or handicapped people, and including the cost of telephone-related debts), the cost

of providing public payphones as well as a universal directory and associated directory service.

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

The methods used to evaluate each universal cost component, and the definition of traffic volumes used to determine the proportionate amounts owed by the various operators, were set out in the decree on universal service funding[1].

ART provides detailed information about these evaluation methods, applies them and then submits its evaluation of the net costs generated by the universal service obligations, and the corresponding amounts payable from the operators to the Minister responsible for Telecommunications. The amount is then officially recorded by the Minister[2].

C. Universal service funding

The Act requires that the cost of providing universal service, as entrusted to France Telecom, should be shared fairly between all telecommunications operators. Up until 31 December 1999, the cost of providing universal service was funded in two ways:

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

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

The legislative and regulatory framework for the universal service fund is set forth in article L.35-3 of the Posts and Telecommunications Code. It has been supplemented by articles R. 20-39 and R. 20-41 of decree n° 97-475 dated 13 May 1997 concerning fund management procedures.

As of 2003, operators pay their provisional universal service fund contributions in two instalments, on 15 January and 15 September each year, in accordance with article R. 20-39 of decree n° 03-338 dated 10 April 2003. The amount of the provisional contribution is equal to the last known final contribution. The final cost is evaluated in the second year following the year in question and contributions are adjusted accordingly by 20 September at the latest.

II. Assessment of the cost of providing universal service from 1997 to 2002

A. Calculation method contested

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

1 Decree n° 97-475 dated 13 May 1997 concerning funding of universal service in application of article L 35-3 of the Posts and Telecommunications Code, published in the OJ of 14 May 1997, p. 7248.

2 Articles L 35-5 and L 36-7 (4°) of the Posts and Telecommunications Code.

titors, thereby strengthening the dominant position of France Telecom.

In its ruling on 6 December 2001, the European Court of Justice did not contest the principle of universal service nor that of specific funding mechanisms. However, it did find that the French Republic had failed to comply with its obligations pursuant to the said directives and ordered it to pay costs. The main points of non-compliance for the period between 1997 and 1999 were: the cost assessment method, the failure to publish operators' contributions and the establishment of funding as of 1997.

B. Measures imposed to remedy objections raised by the Court of Justice of the European Communities

On 11 July and 2 August 2002, the Minister responsible for Industry issued two orders relating to the universal service cost assessment based on ART recommendations and taking into account the objections of the Court of Justice of the European Communities:

- revised assessments of the cost of universal service and operators' contributions for 1997, 1998 and 1999, and modification of the provisional universal service cost assessment and operators' contributions for 2002 (order n° 02-329 dated 23 April 2002)
- final universal service cost assessment and operators' contributions for 2000 (order n° 02-417 dated 11 June 2002).

Some objections were no longer valid, particularly those concerning flat-rate assessments for certain cost components. i.e. uniform geographical pricing for 1997, charges related to unprofitable subscribers in profitable areas and social tariffs for 1998.

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

As regards reassessment of the C1 component concerning tariff imbalance, ART has modified the definition and value of the number N (average number of subscribers for the universal service operator) mentioned in article R.20-32 of the Posts and Telecommunications Code. It has also modified the value of Pe to ensure that the value of the fair subscription price is consistent with the current subscription price P. Hence, the cost of component C1 for tariff imbalance fell from 278.1 million euros to zero for 1997, from 309.2 to 34.8 million euros for 1998 and from 51.7 to 6.7 million euros for 1999.

C. Intangible benefits

ART also took intangible benefits into account and reclassified costs and revenues for unlisted numbers in the uniform geographical pricing component rather than in the C3 component for directory and directory enquiry services. Savings generated by inclusion of intangible benefits came to 54.5 million euros for 1998, 67.8 million euros for 1999, 104.1 million euros for 2000 and 112.7 million euros for 2002.

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

1. Brand recognition

This benefit stems from the fact that France Telecom provides universal service. The incumbent operator establishes public payphones in every village and provides telephone service to anyone requesting it, even in sparsely populated areas. As a result, France Telecom has a better public image and can build on this.

ART has developed and implemented methods based on an IFOP survey carried out in 2001 which allow calculation of the "price supplement" that a subscriber is prepared to pay before switching from France Telecom to a competitor. The methodology also allows the price supplement to be broken down into two categories: i.e. with and without brand image advantages arising from universal service.

The provisional assessment for 2002 is 86.4 million euros.

2. Universal coverage in the area of ubiquitous operation

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

ART considers that this benefit was implicitly taken into account in the uniform geographical pricing calculation model through the modelling of avoidable costs. Using this method ensures that "transition" of an operator working under market conditions to the real situation faced by France Telecom is on an incremental cost basis. In other words, the assessment is based on the costs that France Telecom would avoid if it did not have to provide service to customers in unprofitable areas. Under these conditions, economies of scale (which, from a chronological point of view benefit the last subscribers to be connected) are transferred by the model to unprofitable areas and subscribers.

3. Value of certain customers (linked to life cycle)

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

In principle, the global or "macro economic" effect concerns unprofitable areas and public payphones. Public payphone revenues have declined continuously since 1998 largely because of the development of mobile-telephony and will no doubt continue to fall. A unprofitable public payphone today will no doubt still be unprofitable in the future. In addition, any advantage from changes over time in the "value" of public payphones is zero whether it be for 1998, 1999 or 2002. A quantified assessment must be made for unprofitable areas.

To make this estimate, we must take into account total costs and revenues over the period in question. Only those areas that are unprofitable over the entire period are taken into consideration. In other words, the benefit due to life cycle is equal to the net cost of unprofitable areas and customers for the year in question who will become profitable over the period under consideration (5 years).

ART's provisional assessment for 2002 is 26.3 million euros.

4. Marketing advantages derived from access to telephone usage data.

According to the European Commission, "the marketing benefit derived from having access to all data related to telephone usage" is an

intangible benefit for a universal service operator. Indeed, the universal service operator has access to information that can be used for marketing or network planning purposes (e.g. usage levels, traffic profiles).

However, only data related to customers that would not be connected by an operator operating under market conditions, i.e. unprofitable customers, is relevant. Given that these customers are unprofitable, their usage profiles probably have a low value.

In the absence of information related to telephone usage data in unprofitable areas, ART considers that this advantage was zero in 2002. This does not prejudge any future assessment.

To conclude, ART's provisional assessment for intangible benefits for 2002 amounts to 112.7 million euros, which is perfectly in line with the European benchmark and is based on a reasonable assessment of each of the intangible benefits listed by the Commission. In addition, this assessment meets the transparency requirements defined by the Commission i.e. it is not flat-rate and it is based on objective and comparable factors.

5. Intangible benefit allocation methods for individual items

Life cycle effects (unprofitable areas and subscribers) are booked entirely to the cost of uniform geographical pricing (C_2). The impact of brand image is booked by default to each component on a pro rata basis.

Intangible benefit assessment

Euros (million)	1998	1999	2000	2002
Brand image	54.7	67.8	94.5	86.4
Ubiquity	Already taken into account			
Life cycle	0	0	9.5	26.3
Usage data	0	0	0	0
Total	54.7	67.8	104	112.7

D. Summary Tables

The following tables show the assessments carried out before and after the decision of the Court of Justice of the European Communities on 6 December 2001. The figures shown include adjustments for previous years.

Universal service cost estimates prior to the CoJEC decision

	1997	1998	1999	2000		2001
Euros (million)	Final	Final	Final	Provisional	Final	Provisional.
ART decision number	n° 98-952	n° 00-1	n° 01-418	n° 99-779		n° 00-1271
Tariff imbalance C1	278.1	309.2	51.7			
Uniform geographical pricing C2	417.1	329.1	175.9	220.4		229.3
Unprofitable areas		197.4	114.9	196.4	NA	192.4
Unprofitable subscribers in profitable areas		131.7	61.0	24.1		36.9
Public payphones C3		28.6	23.3	25.2	NA	28.2
Social tariffs	69.5	0.0	0.0	184.6	NA	158.2
Directories and directory enquiry services		0.0	0.0	0.0	NA	0.0
Total	764.7	666.9	250.9	430.2	NA	415.7

Universal service cost estimates after the CoJEC decision

	1997	1998	1999	2000		2001	2002
Euros (million)	Final	Final	Final	Prov.	Final	Prov.	Prov.
ART decision number	n° 02 329	n° 02 329	n° 02 329		n° 02 417	Final	n° 02 329
Tariff imbalance C1	0.0	34.8	6.7			Assessment in 2003	
Uniform geographical pricing C2	0.0	217.2	89.6		105.0		175.2
Unprofitable areas		153.3	60.3	NA	102.2		136.3
Unprofitable subscribers in profitable areas		63.9	29.3		2.8		38.9
Public payphones C3	0.0	23.3	14.2	NA	14.3		18.6
Social tariffs		0.0	0.1	NA	9.4		102.8
Directories and directory enquiry services		0.0	0.0	NA	0.0		0.0
Total	0.0	275.3	110.6	NA	128.7		296.6

The following tables show the universal service cost breakdown before and after inclusion of intangible benefits.

Universal service cost before inclusion of intangible benefits.

Euros (million)	1997 Final	1998 Final	1999 Final	2000 Final	2002 Prov.
Tariff imbalance (C1)	No universal service assessment	34.8	6.7		
Uniform geographical pricing (C2)		266.5	148	191.6	252.5
Public payphones		28.5	23.3	24.9	24.1
Social tariffs		0	0	16.3	132.8
Directories and directory enquiry services		0	0		
Total		329.7	178.5	232.8	409.3

Universal service cost after inclusion of intangible benefits.

Euros (million)	**1997** Final	**1998** Final	**1999** Final	**2000** Final	**2002** Prov.
Tariff imbalance (C1)	No universal service assessment	34.7	6.7		
Uniform geographical pricing (C2)		217.5	89.7	105	175.2
Public payphones		23.3	14.2	14.3	18.6
Social tariffs		0		9.4	102.8
Directories and directory enquiry services		0			
Total		275.3	110.5	128.7	296.6

III. Modifications to legal and regulatory framework

A. Decree on universal service funding

Decree no. 2003-338 dated 10 April 2003 was published in the Official Journal on 13 April 2002 following the Court of Justice of the European Communities (CoJEC) decision of 6 December 2001. Its purpose was to ensure compliance of the Posts and Telecommunications Code with Community law. Obsolete provisions such as those relating to additional payments (temporary financing in force until 31/12/1999) were removed by taking into account the benefit that an operator or operators may derive from universal service and by reallocating income from unlisted numbers to the uniform geographical pricing component (instead of to the directory and directory enquiries component).

Moreover, it introduces a calculation method for provisional contributions, the amount being equal to the contribution for the last known financial year.

In addition, and in order to enhance the efficacy of the mechanism for covering telephone-related debts, the calculation basis was enlarged to include calls to mobile services. The deadlines allowed for indebted people to refer their case to the committee in their département and for the Prefect to respond have been extended.

As far as "social tariff reductions" are concerned, the changes are intended to bring the provisions of the decree into line with existing practice. The organisation managing tariff reductions on behalf of the operators will now be entitled to compensation for the costs incurred.

Moreover, the decree takes into account the universal nature of the directory and directory enquiries and includes the cost of purchasing customer lists in the net universal service cost.

Finally, it changes a number of timetable dates as indicated in the table below:

	Former measures Posts et Telecommunications Code	New measures Decree dated 10 april 2003
Provisional year N		
ART proposal date	Before 1 September, year N-1	
Ministerial order date	Before 1 October, year N-1	
ART notification date	Before 15 October, year N-1	Before 15 December, year N-1
Payment date	3 instalments: 20/01/N ; 20/04/N et 20/09/N	2 instalments: 15/01/N et 15/09/N
Final, year N-2		
ART proposal date	Before 15 October, year N-1	Before 30 April, year N
Ministerial order date	Before 15 October, year N-1	Before 31 May, year N
ART notification date	Before 30 November, year N-1	Before 30 June, year N
Regularisation payment date	20/12/N -1	20/9/N

B. Universal service provisions in the draft legislation to ensure confidence in the digital economy (LEN)

The draft legislation "to ensure confidence in the digital economy" (LEN) was passed by Parliament on first reading on 26 February 2003. It contains provisions to change the calculation method for universal service contributions. For the purposes of the calculation, traffic volumes will be replaced by turnover (excl. interconnection).

In its recommendation (n° 01-475) on the Government report to Parliament dated 18 May 2001, ART had already noted that the calculation method for determining the proportionate amounts owed by the various operators could be based on more relevant indicators than outgoing or incoming traffic volumes. Retail telecommunications services market turnover (i.e. excluding interconnection and more generally any resale of services between contributing operators) is clearly defined and recognised and recorded in the operators' accounts and could therefore be used instead of traffic volumes.

The current calculation method based on traffic volumes results in disproportionate weighting for activities generating low revenues per minute. Establishing proportionate contributions on the basis of volume means that each minute contributes 0.066 euro cents to the universal service fund (based on the latest final figures to date, which amount to 128.7 million euros for year 2000). According to the 2000 Mobile Observatory figures, an Internet minute billed by an operator at an average of 2.07 euro cents contributes 3.2% of billed turnover. A minute originating from a fixed line (excluding special services) contributes 0.9% and a minute originating from a mobile (excluding special services) contributes 0.3%. Hence, the new calculation method will reduce the burden carried by narrowband Internet service providers.

As an example, on the basis of the calls currently used to calculate contributions, a calculation method based on turnover (excluding interconnection and access) would have given a combined contribution for fixed, mobile and Internet activities of approximately 0.7% of turnover in 2000. Without anticipating the

rules that will be imposed by the legislator, we can note that extending the calculation to include other telecommunications services (access and fixed subscriptions, broadband Internet, leased lines and data transport) would have lowered the rate to approximately 0.5% in 2000.

IV. Disputes related to universal service before the Conseil d'État[1]

A. The Tiscali claims

Tiscali addressed several claims to the *Conseil d'État*.

- urgent application for an order to suspend the effect of the ART letter dated 26 July 2002 notifying the contribution amounts
- urgent application for an order to challenge the contents of the ART letter dated 26 July 2002 notifying the contribution amounts
- urgent application for an order to suspend the effect of the ministerial order dated 11 July 2002,
- urgent application for an order to challenge the contents of the ministerial order dated 11 July 2002.

Tiscali claimed that the evaluation methods for compensating and sharing costs related to universal service obligations had not been made public within the time stipulated in article L.35-3 III of the Posts and Telecommunications Code and that they had not been specified in a *Conseil d'État* decree as required by article L.35-3 IV and that this gave rise to a serious doubt about the legality of the ministerial order and the ART notification letter on the one hand, and that on the other hand, the intangible benefits had not been completely taken into account.

The *Conseil d'État* order dated 8 November 2002 partially suspended the ART decision in so far as concerns payment of the first instalment by 20 August. However, the *Conseil d'État* did not suspend either the ministerial order or the decision requiring Tiscali to pay the second instalment for the same amount by 20 September 2002.

- On the condition relating to the existence of circumstances liable to create a serious doubt: the *Conseil d'État* urgent applications judge ruled that at the time of the order dated 11 July 2002, the national authorities had not modified by *Conseil d'État* decree the national regulatory measures relative to universal service funding which had been judged contrary to European Community law by decision of the Court of Justice of the European Communities on 6 December 2001. Whereas the *Conseil d'État* considers that the national authorities were obliged to ensure continuity of the universal service mechanism, it noted however that "in the absence of such a decree and whereas the time reasonably required for it to be issued had not expired, the authorities had not published the decisions related to the methods and criteria to be used for universal service cost calculations and the apportionment between operators themselves in the interests of ensuring sufficient clarity and consistency."

- On the condition of urgency: The *Conseil d'État* judged that this condition was allowable. Tiscali was in a difficult financial situation and the ART decision had caused serious and immediate loss. In addition, Tiscali's 2002 contribution exceeded the amount that could have been foreseen in a normal management context, as a function of its activity, the amount charged in 2001 and the consequences of the CoJEC decision. Also, in the absence of clarification on the calculation methods applicable for the provisional contribution in 2002 following the CoJEC decision and taking into account the ana-

1 See glossary

lyses of the assessment of intangible benefits carried out for AFORS (French network and services operators association), Tiscali could reasonably have assumed that the 2002 provisional contribution would be significantly lower than the amount actually charged.

As of early May 2003, the *Conseil d'État* had not ruled on the merits of the applications.

B. Other claims

Various claims have been made with respect to the ART notification letters concerning the contribution amounts or the orders issued by the Minister responsible for Telecommunications, concerning in particular provisional contributions in 2002 and final contributions for 2000.

The following table shows the various applications to set aside filed against ART for 2000 and 2002. The outcome of these claims was not known as of May 2003.

Requested by	Claim date	Object of applications to set aside
Bouygues Telecom	26/09/2002	ART notification letter dated 26/07/02 on universal service contribution for 2002.
LDCOM	27/09/2002	ART notification letter dated 26/07/02 on universal service contribution for 2002.
Tiscali	27/09/2002	ART notification letter dated 26/07/02 on universal service contribution for 2002.
KAPTECH	27/10/2002	ART notification letter dated 26/07/02 on universal service contribution for 2002.
9 TELECOM	27/10/2002	ART notification letter dated 26/07/02 on universal service contribution for 2002.
Belgacom France	27/01/2003	ART notification letter dated 26/07/02 on universal service contribution for 2002.
Ventelo France	27/01/2003	ART notification letter dated 26/07/02 on universal service contribution for 2002.
CEGETEL	30/01/2003	ART notification letter dated 26/07/02 on universal service contribution for 2002.
SFR	30/01/2003	ART notification letter dated 26/07/02 on universal service contribution for 2002.
SRR	30/01/2003	ART notification letter dated 26/07/02 on universal service contribution for 2002.
SFR	28/02/2003	ART notification letter dated 26/08/02 on universal service contribution for 2000.
SRR	28/02/2003	ART notification letter dated 26/08/02 on universal service contribution for 2000.
CEGETEL	28/02/2003	ART notification letter dated 26/08/02 on universal service contribution for 2000.

Chapter 5

Designation of operators with significant market power (SMP)

I. Markets examined and methods used

ART carried out its annual examination of the four markets mentioned in article L.36-7 of the Posts and Telecommunications Code (fixed telephony, leased lines, mobile-telephony, interconnection) and in compliance with directive no. 97/33/EC dated 30 June 1997, taking into account the geographical factors corresponding to the authorised coverage areas in the operators' licences. The directive states that an organisation can only be considered to have significant market power for a given telecommunications market in a geographical area of a member State for which it is authorised to exercise its activities.

For the mobile-telephony market, the licences issued to operators indicate the geographical area and are broken down for metropolitan France as well as the various overseas départements and territories. This breakdown creates geographical areas that are independent with respect to the services offered. Operators active in these markets are separate companies as a function of these respective geographical areas. In addition, operators who provide public mobile-telephony service also provide call termination services and hence operate in both the mobile-telephony and the interconnection markets (where call-termination is considered to be interconnection). ART therefore considers it necessary to examine the position of operators on the mobile-telephony and the interconnection markets using identical geographical criteria.

The geographical segmentation based on the licence award system comprises 5 zones.

- Metropolitan France,
- The area comprising Guadeloupe, Martinique and Guyana,
- La Réunion,
- Mayotte,
- St Pierre and Miquelon

The position of the operator SAS SPM Télécom in Saint Pierre and Miquelon would appear to be that of a virtual monopoly for all the markets mentioned in article L. 36-7 of the Code. According to the regulatory framework concerning the procedure implemented in 2002, registration of an operator in all the lists correspon-

ding to these markets, implies that this operator is responsible for all the obligations contained in article L.38-4 of the Code. In its decision no. 02-1191, ART considered that registration of SAS SPM Télécom in each of these lists would make this operator subject to certain provisions which might be considered disproportionate given its size and the market situation in Saint Pierre and Miquelon as it existed in 2002. On the other hand, it noted that the new European regulatory framework for electronic communications networks and services (which must be transposed into French law in 2003), would allow provisions adapted to the operator's specific situation to be established in the future.

II. The different markets

In compliance with article L 36-7 of the Posts and Telecommunications Code (see inset), ART made two decisions[1] in 2002 to establish lists of operators considered to have significant market power in the four telecommunications markets in 2003, i.e. fixed telephony, leased lines, mobile-telephony and interconnection.

The operators in these lists have increased obligations for interconnection and access that are defined notably in article L.34-8 of the Posts and Telecommunications Code.

It should be noted that this procedure is currently being completely overhauled. This process will be carried out within the framework of the transposition of "telecom package" directives into French law and the draft legislation on electronic communications (see volume 1, chapter 4 of this Annual Report).

1 See decision no. 02-593 dated 18 July 2002, which notes for 2003 the lists of operators with significant influence in the fixed-telephony service market and the leased lines market, and decision no. 02-1191 dated 19 December 2002, supplementing decision no. 02-593, which notes for 2003 the lists of operators with significant influence in the telecommunications market.

The legal framework for SMP decisions

Paragraph 7 of article L. 36-7 of the Posts and Telecommunications Code, modified by order no. 2001-670 dated 25 July 2001, requires ART to "establish a list of operators considered to have significant power following advice from the Competition Authority for:
- a) relevant markets for public telephony service between fixed points,
- b) relevant markets for leased lines,
- c) relevant markets for public mobile-telephony service,
- d) the national interconnection market

Any operator with more than 25% market share is considered to have significant market power. ART can decide that an operator with less than 25% market share has significant market power or that an operator with more than 25% market share does not have significant market power. ART takes into account the operator's capacity to influence market conditions, turnover compared to market size, control over access to the end-user, access to financial resources and experience in providing products and services in the market.

A. Fixed-telephony and leased-line markets

ART examined the fixed-telephony and leased-line markets at national level and concluded that France Telecom was the only operator with significant market power. The incumbent operator is therefore the only operator recorded in the 2003 lists in accordance with L.36-7, para. 7 "a" and "b" of the Posts and Telecommunications Code.

B. The mobile-telephony market

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

The operators recorded in the 2003 list in accordance with L.36-7, para. 7 "c" of the Code have more than 25% market share for the geographical area in which they operate, i.e.

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

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

C. The interconnection market

In accordance with the European Commission recommendations ONPCOM 99-03 dated 13 January 1999, the measure retained for the interconnection market is based on both the value and volumes of calls terminating on the fixed or mobile operator's network, irrespective of whether the minutes come from the ope-

rator's own network (internal interconnection) or from a third-party network.

France Telecom is the only fixed local-loop operator providing call termination in the majority of the areas defined in the geographical breakdown. In metropolitan France, France Telecom's market share for terminated calls is more than 70% in volume. However, it is less than 20% in value. This is due to traffic growth in mobile and fixed-to-mobile calls and the fact that the average France Telecom interconnection price is considerably lower than the average mobile interconnection price.

Conversely, the market share of mobile operators Orange France and SFR is in the range of 5% to 10% in volume (less than 5% for Bouygues Télécom) and greater than 30% in value (less than 20% for Bouygues Télécom).

The interconnection market share for the other fixed operators is less than 1% in both volume and value.

Hence, Orange France and SFR have been designated as having significant market power in the interconnection market.

By the same token, Orange Caraïbes is considered to be the only operator with significant market power in Guadeloupe, Martinique and Guyana with SRR in La Réunion. In Mayotte, France Telecom is the operator with significant market power. However this does not impose any obligations additional to those already applicable in respect of its position as an operator with significant market power in the fixed and leased line market.

III. Operators' obligations

Operators that have been designated as having significant market power in application of L.36-7 para. 7, have increased obligations for interconnection and access.

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

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

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

Moreover, under section V of article L.34-8, operators included in the list established in application of "a" of para. 7 of article L.36.7 are required to:

- set up a mechanism allowing access to switched services to any operator interconnected using pre-selection and to separate any pre-selection option using short prefixes, on a call-by-call basis.

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

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

In application of section IV of article L.34-8, mobile operators who are considered as having significant market power are required to:

- provide an objective, impartial and transparent interconnection offer
- ensure access to the network and respond to justified requests for special access.

C. Obligations of interconnection service operators with significant market power

These operators must base their interconnection tariffs on the cost of the service provided, as required by section III of article L.34-8,

D. Obligations of all operators with significant market power

In accordance with section V, article L.34-8, ART can require any operator with significant influence in a relevant market to set up a system allowing access to switched services to any operator interconnected using pre-selection and to separate, any pre-selection option using short prefixes, on a call-by-call basis.

Chapter 6

France Telecom tariff approvals in 2002

The 1996 Telecommunications Act[1] makes provision for tariff regulation which is one of the main tools of asymmetrical regulation in the telecommunications sector. There are two reasons for this: first, it is carried out ex ante and secondly, it applies only to France Telecom tariffs (the incumbent operator). Asymmetrical regulation is one of the specific features of sector regulation when compared to common law regulation which is based on competition law. It is justified by the specific situation of the dominant operator, which calls for tighter obligations.

This control ensures that the incumbent operator's tariffs are compatible with entry of competitors into the market, and that universal service tariffs are reasonable and therefore favourable to consumers.

Article 17.2 of France Telecom's contractual operating conditions requires that justified tariff proposals "are to be submitted to the Ministers responsible for Telecommunications and the Economy and to ART". These proposals must include information for evaluating them along with information on the corresponding pricing offer. ART will make a public recommendation on these tariffs within three weeks of them being submitted. Providing that neither Minister issues an objection or suspension within one month of transmission of the tariff proposals and supporting documents (as mentioned above), the tariffs may come into force at the end of the required notice period, i.e. one week.

ART recommendations may, in certain cases, group several tariff decisions together.

I. Recommendations on individual tariff decisions

In 2002, France Telecom sent ART 154 tariff decisions: 108 requesting a recommendation and 46 for information[2]. Hence, ART received 108 requests for a recommendation on tariff decisions relating to the creation, trial or generalisation of new services and changes in prices, especially relating to the commercial launch of new tariff options.

1 Article L36-7 (para. 5) of the Posts and Telecommunications Code.

2 Decisions forwarded for information concern, for example, tariffs for international calls.

In addition, 6 tariff decisions, submitted in 2001, were still being evaluated at the beginning of 2002. As of 31 December 2002, 101 of the 114 requests had been evaluated by ART and 13 were still under evaluation, with a recommendation expected in 2003.

Some 20 requests were grouped together in the same recommendation, thus reducing the total number of recommendations issued. Hence, as of 31 December 2002, ART had issued 81 recommendations out of the 101 France Telecom tariff decisions evaluated.

II. Analysis of recommendations

Bearing in mind that several of the 101 tariff decisions evaluated in 2002 were grouped together in the same recommendation, ART finally issued:

- 64 favourable recommendations on 79 France Telecom tariff decisions
- 17 unfavourable recommendations on 22 France Telecom tariff decisions.

Of the 22 unfavourable recommendations on France Telecom's initial tariff decisions:

- 2 decisions were not approved by the Minister who refused France Telecom's proposals on the basis of ART's recommendation
- the approval time-frame for 10 of the decisions was suspended by the Minister
- 1 decision was withdrawn by France Telecom
- 9 decisions were adjusted by France Telecom to comply with ART's recommendation and subsequently approved by the Minister.

The breakdown by category of ART's recommendations shows that nearly half (46%) of all tariff decisions submitted to ART for recommendations are related to changes in tariff options for fixed telephony, of which half correspond to flat-rate call offers.

All in all, nearly two-thirds of ART's recommendations in 2002 are related to tariff options, the Internet and leased lines.

III. Results for 1997 - 2002

The following figures give an idea of the amount of work accomplished in 6 years.

	1997	1998	1999	2000	2001	2002
Submitted by France Telecom.	138	147	170	192	135	154
- for information	45	42	60	61	40	46
- for approval	93	105	110	131	95	108
ART recommendations	61	80	74	88	72	81

Chapter 7

Regulation and consumers

I. Informing consumers

Informing consumers is one of ART's responsibilities. Indeed, the Telecommunications Act states that ART must ensure that consumers benefit from fair and effective competition between operators. In a sector that is constantly changing and is now fully competitive, the consumer must have rapid access to relevant information about market players and the commercial offers which are constantly becoming available. ART has placed the list of licensed operators and service providers on its website (www.art-telecom.fr) along with information on the registered company name, address, contact details for sales and customer service, type of offer and coverage area. This information is also available in a booklet published in September 2002. The "operator booklet" is distributed at trade fairs, routinely sent to consumer associations and to individual consumers on request.

There is also information on the website covering topical subjects such as unfair conditions for mobile-telephony or Internet-access contracts. In addition, there are links to organisations such as the DGCCRF (French organisation for competition, consumers and the repression of fraud) or the French committee on unfair clauses. The consumer can also find addresses for the associations belonging to the French Consumer Council. There is also an online FAQ section (frequently asked questions).

This year, ART again published its annual survey on the quality of network and mobile-telephony services (see part 2, chapter 3).

II. Statistical results

In 2002 the activity of ART's "consumer" section increased significantly in terms of the number of submissions received, compared to the previous year. ART received and dealt with 1 300 letters (compared to 987 in 2001), received 1 250 telephone queries (compared to 1 070 the previous year) and handled 740 emails[1].

1 ART has dealt with 550 e-mails since opening of the "consumers" mailbox on 20 March 2002 (address: consommateurs @art-telecom.fr.) i.e. over 9 months. This figure does not include e-mails sent directly to the personal mailboxes of the different members of the "consumer" section, whose addresses are available on ART's website.

This increase took place mostly during the first quarter -- the number of cases dealt with in the 2nd quarter was virtually the same as the previous year. The increase in complaints and requests for information at the beginning of the year is due primarily to the bankruptcy of an operator, the abolition of local sorting zones and the arrival of the first invoices for third-party billing.

III. Market results

In 2002 it was noted that the number of cases concerning fixed telephony increased considerably more than mobile-telephony-related cases despite continued growth in the number of mobile lines. Fixed telephony now represents 47% of all cases compared to 33% in 2001.

Hence, pre-selection was a major topic with 250 cases being processed. A number of practices contributed to the significant increase in complaints in 2002 (28% of all cases compared to 20% in 2001) i.e. unfair or fraudulent pre-selection practices, commercial practices including "win back" campaigns to recover lost customers, aggressive selling, ignorance of the France Telecom "8" prefix, misunderstandings or false information regarding abolition of the local sorting zone, ability to keep pre-selection options when moving house and problems related to contract cancellation.

Third-party billing, which users often find difficult to understand, gave rise to a number of requests for information. The problem was compounded by strong dissatisfaction with the tariff levels for special numbers, particularly for operator or ISP hotline services.

Billing accuracy has become a common complaint as well as, to a lesser extent, the difficulty in obtaining detailed billing despite the obligations contained in the order dated 1 February 2002 applicable from 1 September 2002.

As in previous years, there were complaints about contractual problems in the mobile area (37% of all cases) such as terminal renewals, cancellation times, difficulty in obtaining service, and billing disputes (31%). Number portability planned for 1 July 2003 also gave raise to requests for information. The questions came both from companies (with bulk subscriptions) and individuals. The question of tariff levels for this service has been raised by consumer associations who would like it to be free.

Other concerns or information requests included non-uniform ADSL coverage nationally, ADSL tariffs, differences between metropolitan France and the overseas départements

- particularly concerning availability of a universal directory, free-of-charge unlisted numbers, mailing campaigns using fax (theoretically not allowed) and e-mail and SMS[1] spamming.

Internet site. Moreover, we note that since the beginning of October, in agreement with the communication task force, a much stricter sorting process has been implemented for incoming e-mails so as to reduce the number for which use of the traditional mail service is required (contractual problems particularly), the aim being to cut down processing deadlines, which had become too lengthy for users.

1 This matter has been referred to the CNIL (committee for computer freedom and privacy), and the section refers consumers to the address spam@cnil.fr.

IV. Other actions

ART organised a briefing in March 2002 with all consumer associations to inform them about and get feedback on number portability which is planned for 30 June. The guidelines for this facility were published in July.

Finally, a new survey was launched on relations between fixed operators and consumers, using the same format as previous surveys carried out between 1998 and 2000 with the assistance of SOFRES. The fieldwork for this survey began in February 2003 with the consultant, Planistat, selected at the end of last year.

Chapter 8

ART actions internationally

I. International relations

In 2002, ART pursued and strengthened its exchanges and cooperation with many countries throughout the world and with the relevant international telecommunications organisations.

The highlight of the year was completion of negotiations for the new European Union regulatory framework in March 2002.
This event illustrated the sharing of responsibilities between the Government, which is responsible for stating France's position at the EU Council of Ministers and ART, which contributes its experience to elaborating this position.

A. European Union

European Community activities are a central part of ART's international activities since the entire legal framework for competitive regulation of the telecommunications market originates in European law. ART therefore has to explain or even justify its actions to the European Commission, guardian of the treaty and the resulting Community law.

1. Adoption of a new regulatory framework and initial administrative texts

On 7 March 2002, the European Parliament Council of Ministers adopted 4 directives and the radio spectrum decision, instituting a new regulatory framework following review of the previous directives for which negotiations began in September 2000.

The details of this reform, which introduces major changes to the regulatory task, are explained in volume 1, chapter 4. The importance of the issues at stake is such that ART has devoted a large part of its international activity to this major reform, based on the adoption of a pragmatic approach. Progress was followed on a daily basis and ART's position was developed by exchanging viewpoints with its European Union counterparts. ART also participated in the technical negotiations. It was routinely represented in the Council of Ministers telecommunications group meetings and in preparation of these meetings within the SGCI (general secretariat of the interministerial committee). ART was also an active member of the working group reviewing the Independent Regulators Group (see below) Frequent contact

with the European Commission has resulted in a better understanding of its intentions and allowed ART to present its point of view. An internal inter-departmental organisation was set up to prepare ART's position.

The frame directive, which establishes the rules and basic principles of the new system, stipulates that the Commission must adopt two frame texts to ensure consistent application of the new concepts derived from common competition law. (see volume 1, chapter 4) i.e. a recommendation establishing the list of markets subject to ex ante regulation and guidelines concerning the designation of operators with significant market power.

Drafting the first text proved more difficult than expected. In fact, the guidelines were published on 8 July 2002, but market definitions caused heated debate, demonstrating the complexity of an approach which seeks to align the principles of common competition law with ex ante regulatory systems. The recommendation was finally adopted by the Commission on 11 February 2003.

ART was heavily involved in the debate. It replied to the public consultation issued by the Commission, organised and took part in expert hearings and contributed to the work of the Independent Regulators group on this subject.

2. Establishment of committees and groups reporting to the European Commission.

The European Commission can refer to several bodies made up of representatives of member States to assist it with the task of developing and implementing the various measures for harmonising application of the new regulatory framework. Two such bodies were set up through texts adopted in March i.e. the Communications Committee (COCOM) charged with making recommendations on regulatory matters to the Commission and the Radio Spectrum Committee (RSCOM), which has a similar role for frequencies. Both committees are standard community law committees which have a dual consultative and regulatory role. Two others were set up by the Commission in order to consult qualified experts. The high level Radio Spectrum Policy Group for frequency policy (RSPG) looks at spectrum planning and future frequency allocation from a strategic viewpoint. The European Regulators Group (ERG) for electronic communication was charged with discussing practical application of the new regulatory framework. The Commission organises meetings with the management of the relevant independent regulatory bodies through the ERG. This primarily concerns the telecommunications regulators, although audiovisual regulators will also attend as required by the agenda.

The European Regulators Group (ERG) was set up on 25 October 2002 and is expected to meet 6 times a year.

In 2002, the four committees and groups mentioned above replaced the bodies that had been set up for the first regulatory package (ONP Committee, Licence Committee, Informal Committee of Regulators and National Administrations). ART consistently played an active role in the meetings of these former bodies.

3. The Independent Regulators Group (IRG)

The Independent Regulators Group is an informal group set up on ART's initiative in 1997 (see previous ART Annual Reports). Its activities increased sharply in 2002, during which ART held the chair for the first 6 months.

The plenary meetings with regulation authority managers were extremely useful in dealing with problems that tend to be globally the same from one national market to another. These meetings were supported by the work of

the expert groups (around 10) covering all regulatory aspects. The Commission's European Regulators Group mentioned above and the IRG work closely together. In fact, the IRG expert groups act as specialised working groups for the ERG. The principle of consensus for adopting common positions leads to solutions that combine the objectives of harmonisation while at the same time taking specific national features into account.

The IRG devoted significant resources to analysis of draft directives in 2002 and helped ensure that the reality of the market and the requirements of regulation were taken into account in the new regulatory framework. This was achieved through public statements, direct contacts with the Commission and dialogue between each of its members and national governments.

The IRG made a particular contribution to definition of markets that would be subject to ex ante regulation and the principles for determining operators with significant market power by applying new dominant-position rules. Both of these subjects are unquestionably strategic in nature. The IRG also worked on the common principles for accounting separation and unbundling (the 2000 guidelines for applying EU rules to unbundling were updated and completed in 2002). It established European comparisons based on a common data-gathering methodology for deployment of broadband networks and other markets, thereby providing its members and the Commission with efficient tools for carrying out analyses.

The IRG decided end 2002 to admit the regulators of the 10 countries due to join the European Union in May 2004 as full members. This brings the total to 29 members i.e. the 15 member countries, the 10 candidate countries and the four AELE[1] countries including Switzerland. To cope with this change, the IRG reinforced the representation of the Chairman's Office in the European Commission, in the other European institutions and with market players. From now on, a permanent secretariat will assist the Chairman's Office with these tasks.

An agreement on information exchange, designed to facilitate exchange of confidential data, was signed in March and May 2002 by 10 regulatory authorities, including ART, in the context of the cooperation between them. This administrative arrangement provides maximum guarantees for protecting confidentiality while at the same time continuing to comply with the corresponding national legislation.

4. 8th Commission report on transposition of directives

As in previous years, the Commission submitted its Annual Report on implementation of the Community telecommunications regulatory framework to the European Parliament and the Council of Ministers in December 2002. Numerous exchanges took place with the national regulator in preparing this report. ART supplied most of the information in response to Community requests to the French authorities. These contributions were followed by a hearing involving all the relevant French Government departments, the key market players and consumer organisations. During this hearing, ART was able to provide a detailed explanation of the measures taken during the past year regarding the application of competition rules in France.

1 European Free Trade Association: three of its member countries, Iceland, Norway and Liechtenstein, but not Switzerland, are members of the European Economic Area, which implies very close links with the E.U. and in particular, application of community law, such as the telecommunications regulatory framework. Switzerland applies this framework on a voluntary basis.

The final version of the 8th report[1] gives a relatively positive picture of European market evolution in 2002 in terms of growth (with particular emphasis on mobiles and Internet access), diversity of offers and the progress of competition. This progress was attributed to relatively comprehensive implementation of rules at European level. The report also gives a favourable view on the work carried out by ART in France. In particular, it recognises the positive effects resulting from decisions made on tariffs, call termination on mobile networks, leased lines, unbundling and broadband access, even though ART's proactive approach has not resolved all the problems associated with the last two questions. According to the report, the relatively large quantity of leased lines available should be looked at in connection with the fact that tariffs are higher than the European average.

B. Relations with international institutions.

1. The International Telecommunications Union (ITU)

France is represented in the ITU, which is the only worldwide organisation specialising in telecommunications, by Government representatives i.e. the Ministry for Foreign Affairs in the top policy-making bodies (Plenipotentiary Conference and Council) and the State Industry Secretary in other bodies. ART is however closely involved with the work being carried out and takes part in the major conferences. It may also represent France in certain events at the Minister's request, as was the case in 2002 at the Regional Telecommunications Colloquium in Hong Kong and the World Regulators Summit in Geneva. The ITU Secretary General wishes to strengthen the presence of independent regulators within the organisation and this last conference was therefore particularly devoted to them.

ART participates in the above meetings in an expert capacity and also in technical conferences (World Conference on Telecommunications Development, World Radiocommunications Conference and the World Telecommunications Standardisation Assembly). It plays an active role in the ITU-T study groups (see below), contributes to establishing the French position in ITU-R[2] and participates in international negotiations within the framework established by ANFr (French National Frequencies Agency). It also reports on certain regulatory and regulation questions in the ITU-D[3] study group 1. ART also participates in the preparatory work for the World

Summit on the Information Society (WSIS) being organised by the ITU on behalf of the UN for December 2003. In particular it is developing the topic of the crucial role of competitive regulation in the development of generalised access to information society services.

Two events stood out in 2002:

a. The World Conference on Telecommunications Development

ART's Chairman was a speaker at the third ITU World Telecommunications Development Conference in Istanbul (WTDC-02), which was held between 18 and 27 March 2002. This conference confirmed the regulators' role in economic and social development. It also served to strengthen cooperation at regional and world level as one of the means for achieving this aim.

1 COM(2002) 695 final, 3 December 2002.

2 ITU Radiocommunications Sector.

3 ITU Development Sector.

In its capacity as Chairman of the Independent Regulators Group (IRG), ART outlined in Istanbul the role "that regulators wish to take in developing the telecommunications sector allowing them to contribute, within the context of their activities, to emergence of an Information Society for all, not only in Europe but worldwide."

In this respect WTDC-02 confirmed the essential role of the regulator in making access to Information Society services available to all. This social objective not only implies network rollout but also an assurance of fair access to services. This is the area concerned by regulation of access conditions and interconnection and is in the regulators' domain.

ART considers that regulators also have a decisive role to play through the clarity and transparency of their actions, their speed of response and their arbitrating powers, and also by the way that they will reshape relations between Government agencies and the market.

b. The Plenipotentiary Conference

The Plenipotentiary Conference, held in Marrakech in Morocco from 23 September to 18 October 2002, is the ITU's top policy-making body and meets every four years to define general policies and decide on major issues. ART chaired the Editorial Committee, which had the responsibility of verifying compliance of the final Acts in the 6 working languages of the Union .

2. The European Conference of Postal and Telecommunications Administrations (CEPT)

CEPT is a pan-European body comprising 45 member countries. 2002 was the first full year of operation following the reorganisation, which simplified the structure by regrouping frequency and regulatory-related activities.

The CEPT is the key frequency-planning and coordination body in continental Europe, hence ART's active participation in the work carried out by a number of expert groups.

From the regulatory point of view, the pan-European harmonisation effort, which was the central role of the CEPT, is of less interest due to the European Union expansion planned for May 2004 and the new Community framework that will come into force at the same time. There is still a certain interest in CEPT activities in this area, however, because they do not cover exactly the same ground as the European Union committees and the Independent Regulators Group. Hence, it provides a forum for cooperation between numerous countries on important topics.

With the merger of the ERC (European Radiocommunications Committee) and ECTRA (European Committee for Telecommunications Regulatory Affairs) committees, within ECC (Electronic Communications Committee), questions linked to access and interconnection are being re-examined within the overall context of electronic communications.

Since then, ART has paid particular attention to ensuring that the balance between the different parts of ECC is maintained. ART was pleased with the outcome of the work by ECC Action Group 1 on reorganising working groups and project teams. The establishment of a working group responsible for access and interconnection allows telecommunications regulation questions, particularly the economic aspects, to be dealt with at a sufficiently high level.

ART is heavily involved, since two of its members chair the working groups devoted to numbering and economic aspects of regulation for questions related to access and interconnection. ART is prepared to maintain this level of

involvement in new ECC working group activities.

3. The Organisation for Economic Cooperation and Development (OECD)

ART participates in the Information, Computer and Communications Policy Committee (ICCP), the working group on competition and regulation, and the working group devoted to OECD telecommunications and information services policy.

ART was represented at various OECD seminars in 2002 and, in particular, the broadband access policy seminar in Seoul from 6 to 7 June.

4. The European Telecommunications Standards Institute (ETSI[1])

ART participate in ETSI activities on behalf of the French Government. ETSI is the main European standardisation body for electronic communication. (see below). A member of ART is also on the ETSI board.

C. International cooperation

Cooperation with emerging and developing countries continued in 2002.

ART has a wide range of cooperation activities with a number of partners and counterparts from countries outside the EU.

The following table shows the two transverse institutional and technical cooperation activities, which are carried out through bilateral and multilateral relations.

<table>
<tr><th></th><th colspan="4">ART's portfolio of cooperation activities</th></tr>
<tr><td rowspan="5">Cooperation actions</td><td rowspan="3">Institutional</td><td colspan="2">bilateral relations</td><td>Relations multilatérales</td></tr>
<tr><td colspan="2">Evaluation mission</td><td rowspan="3">UIT – T/D/R
CEPT – ECC
EU – IRG
(EU candidate countries)</td></tr>
<tr><td colspan="2">Training</td></tr>
<tr><td colspan="2">Cooperation agreements</td></tr>
<tr><td rowspan="3">Technical</td><td rowspan="3">Aspects of regulation</td><td>Technical</td><td>Information Society
World Summit on the Information Society</td></tr>
<tr><td>Economic</td><td rowspan="2">Network of French speaking countries for telecommunications regulation</td></tr>
<tr><td>legal</td></tr>
</table>

1 European Telecommunications Standards Institute.

These activities comply with the objectives pursued by European Union directives and ITU policy as defined by the World Telecommunication Development Conference in Istanbul and the Plenipotentiary Conference in Marrakech. ART also ensures that the relations established are in line with Government foreign policy. Certain relationships have been initiated at the request of the Government.

ART places particular importance on training, which regulators need to be able to carry out their activities. They need high-level training programs specifically adapted to their requirements for a number of reasons: first, these bodies have only recently been set up; secondly, they have to deal with very specific regulatory matters and need to master new analytical techniques for calculating costs and understanding the strategies of the different players, and lastly, they need training to understand the specific body of regulation law that has emerged and acquire the competence to deal with these questions.

1. Bilateral cooperation

In 2002 ART maintained relations with 20 countries either in the form of delegations visiting Paris for more or less detailed discussions on communications sector liberalisation or technical regulatory aspects, or in the form of overseas expert missions by members of the Board or the staff. Some of these involved advising partner Governments on the process of reforming the sector.

More extensive relations were maintained with a small number of counterparts with whom ART has cooperation agreements some of which are formalised in a signed protocol. These resulted in training sessions in Paris and more in-depth exchanges (Morocco, Ivory Coast)

2. Relations with OECD countries

While the European integration process and cooperation with emerging or developing countries are the two main areas of ART's international action, it has not neglected relations with countries that are more advanced in terms of economic and regulatory experience. For ART, this is a way of gaining a better understanding of where regulation is heading in the French market, hence enabling it to anticipate changes that will affect France at some point, given that it is part of a global environment characterised by fast-spreading technological change.

a. USA

ART's Chairman visited the USA twice in 2002, to take part in the Supercomm 2002 exhibition in Atlanta in June, and for a meeting in Washington in December as part of ongoing relations between regulation authorities. High-level talks were organised on each occasion.

There is a relationship of confidence between ART and the FCC (Federal Communications Commission) which is very important in gaining a better understanding of regulatory methods in the world's largest market. Some of these methods have been forerunners in areas such unbundling and broadband access. These relations also make it possible to explain differences in approach in certain areas and by so doing, to smooth over any misunderstandings that might arise in transatlantic relationships with regard to these subjects.

In addition, a specialist in European affairs from the International Bureau of the FCC office spent several months on a traineeship with ART. The person concerned had a grant to study the changes in European regulations and in particular, the process surrounding establishment of the European Regulators Group. This experience could serve as an example for a more permanent exchange scheme between employees from the two institutions.

b. Japan

Following the visit by ART's Chairman to Japan in 2001, regular contacts have been maintained with the Japanese Ministry of Public Management, Home Affairs, Posts and Telecommunications (MPHPT) and other bodies responsible for competition (Telecommunications Business Dispute Settlement Commission). During the course of four visits to ART, the Japanese managers were able to study European systems for telecommunications licence taxes and fees, the French system of frequency management and the mechanisms for resolving disputes. ART received regular information on regulatory progress in Japan, notably in the interconnection area, which is a concern for foreign operators in that country.

ART also attaches considerable importance to discussions with other players in the telecommunications sector, such as the research centres. Hence, ART enjoyed fruitful discussions with RITE (Research Institute for Telecommunications and Economics) and with Infocom Research in Japan.

3. Multilateral cooperation

Most countries in Central and Eastern Europe are preparing for full liberalisation of their markets. They have embarked on the process of transposing the European regulatory framework for electronic communication networks and services. ART took part in a series of workshops set up by the Independent Regulators Group (IRG) for countries joining the European Union in 2004.

ART also took part in a training workshop on interconnection principles and practices organised by the "ITU Centre of Excellence for the Maghreb and the Near and Middle East countries". The workshop was set up on the initiative of the Moroccan regulator under the auspices of the ITU Development section. The workshop took place in Rabat from 2 to 5 September 2002 and attracted 37 participants (executives from regulators, operators and ministries) in 14 countries.
ART also participated in another regional seminar in Nouakchott (Mauritania) in July on the subject of wireless access technologies.

4. The International Symposium on the Development of Regulation in the French-speaking countries

The first international Symposium (Syderf 2002) on development of regulation in the French-speaking countries was held at UNESCO headquarters on 25 and 26 June at the invitation of ART. It was attended by more than 80 participants from 29 countries along with representatives from several international organisations (International Telecommunications Union-ITU, Inter Governmental Agency for French-speaking countries, the World Bank and the European Commission). M. Pierre-André Wiltzer, the French Minister with special responsibility for Cooperation and French-speaking countries closed the session.

During this event, a telecommunications regulation network of French–speaking countries was set up. It will be responsible for implementing common projects and ongoing cooperation in 2003. In fact, the French-speaking countries share not only a common language but in many cases also have cultural traditions in common. Even more important, they have similar administrative and legal systems, which facilitates comparisons and cooperation.

The participants share the same values concerning development of an information society for all and acknowledge the role to be played by regulation and the French-speaking countries. Hence, they were able to exchange detailed information and experiences on sub-

jects covering the objectives and issues along with the methods and organisation of telecommunications regulation.

II. International interconnection

The accounting-rate system governing international interconnection, set up under the aegis of the ITU, could be challenged by technical (automatic call-back, traffic rerouting, internet protocol) and economic (strong downward price pressure) developments. Although still in force, this method of payment for use by alternative network operators for call termination has undergone changes that have led to an almost three-fold fall in average repayments over the last five years and now applies to only a very small percentage of international traffic.

A. Developments in remuneration systems

1. Downward price pressure

Accounting rates were derived from a monopoly-based model, with operators negotiating call termination rates on a bilateral basis. The high level of these accounting rates led to calls for reform and gave rise to strategies of evasion on the part of operators in liberalised countries. The two main strategies are to reverse the direction of a call (call-back) or to re-route calls from a country where accounting rates are lower.

But in most cases, international telecommunications are handled by the incumbent operators and the accounting rates system remains in use. Their infrastructures are used according to the half-circuit principle, with each operator routing a call up to the "virtual" halfway point of the call. Hence, even if these infrastructures are significantly more expensive to operate than more recent solutions, the operators concerned continue to use them, preferring to make them profitable rather than render them inactive.

In view of the amounts that these artificially high rates represent and the fact that they are holding back the development of international telecommunications, the FCC (American regulator) and the ITU have taken measures to match prices more closely with costs. However, delays have occurred in applying the models defined by the ITU, demonstrating the difficulty of reaching a consensus on a multilateral basis even when economic interests are taking on increasing importance.

2. The arrival of new payment systems linked to the Internet

Against this background, we are seeing the emergence of the Internet protocol, which is a driving force behind international telecommunications traffic, using two types of settlement: peering and transit.

Peering is an arrangement between similarly sized Internet service providers (ISPs). There is no monetary transaction between peers which have reciprocal use of each other's network. However, due to concentration in this sector, few ISPs can obtain the critical mass necessary to enter into peering agreements with the major providers. For this reason, an increasing volume of traffic is now covered by transit agreements. These agreements include payment of a monthly fee authorising the service provider concerned to connect to the network of another larger Internet service provider.

B. Impact of these developments

The impact of these technical and regulatory developments is being felt in a number of areas.

1. Payments

The USA, which pays the largest amounts to developing countries – has taken measures to reverse the trend whereby international traffic continues to grow while its share of settlement- rate payments falls just as steadily.

The emergence of new payment systems is also changing financial flows. The payment system for traffic using the Internet protocol (whether Voice over IP or Internet traffic) does not recoup investment costs in the same way as payments based on the accounting-rate system.

2. Developing countries

For developing countries, income from settlement rate payments can represent between 10% and 30% of foreign exchange earnings and a fall in this income would have immediate economic consequences. In countries where there has been little infrastructure development, a drop in international telecommunications income can often impede network development.

3. International negotiations

A contradiction has emerged in this question of reform of the international interconnection payment system. On the one hand, there is a need for international cooperation between private sector players and the regulatory authorities, as much in the developed as in the developing countries. On the other hand, the ever-increasing gap between the different players' interests raises the question of the real outlook for international cooperation.

Chapter 9

Standardisation

I. Regulation and standardisation

A. Standardisation – a modern regulatory "tool"

Standardisation is a key element in economic and commercial exchanges (opening new markets, establishing economies of scale etc) and is central to the preoccupations of the regulator. Looking beyond issues associated with management and regulation of the frequency spectrum, we might recall several recent examples that illustrate the interaction between and challenges shared by standardisation and regulation.

- The UMTS deployment timetable remains dependent on several regional standardisation organisations working together.

- Settlement of the dispute between Liberty Surf and France Telecom over the connection point to the local loop operator's network highlighted the inadequacies of standardisation at this level,

- The recommendations for development of mobile Internet services published by ART in November 2000 underlined the importance of standardisation where remote mobile terminal pre-programming is concerned. In this context, proprietary functions slow down the development of a competitive services market.

- The ENUM protocol, which originated with IETF[1], pinpoints the issues at stake when numbering, addressing and naming systems converge.

The standardisation phase, which sets the conditions for and structures development of the market, is upstream of the regulator's timetable, which focuses on short-term structural issues e.g. standard interconnection offer, settlement of disputes, and so on.

1 IETF : Internet Engineering Task Force, the Internet standardisation body. ENUM protocol is described in RFC 2916 of the IETF.

B. Mandatory consistency between standardisation and regulation

The regulator is involved periodically in the standardisation procedure through its participation in various institutional organisations, with the aim of ensuring that the products of standardisation comply with the principles associated with the establishment of new economic models, freedom of choice for the user, future management of the spectrum and numbering resources, interpretation and compliance with mandatory requirements etc. Its contribution, based on prior national consultations, is vital, given the need for consistency between standardisation and regulation.

Standardisation guarantees a multi-supplier choice (terminals, infrastructure equipment, network) through standardised interfaces, thereby contributing to lower costs, service and network interoperability etc. It also contributes to compliance with mandatory requirements (efficient spectrum use, absence of interference, security etc) and compatibility between competitors' systems as well as development of consistent numbering and addressing rules. On the contrary proprietary options would tend to intervene ahead of the standardization process, thereby hampering free market competition and even slowing development by introducing incompatible solutions. Standardisation relies on a variety of contributions to create the conditions for free competition; in the longer term it gives all the players (operators, equipment suppliers, service providers) a chance to contribute to fast market development.

Although standardisation is guided by the market, certain basic rules are essential to the success of the process. i.e. transparency, openness, impartiality, continuity, access to publications, rules for patents, efficiency, responsibility and consistency. A framework of co-regulation implies compliance with criteria such as transparency, openness, a guarantee of multiple contributions and consensus. This observation applies in full to standardisation, which, drawing on a universally recognised European foundation, must continue to be guided by the goals of competition between operators, service providers and also equipment manufacturers to encourage economic growth.

C. Standardisation – a long-term trend indicator.

The standardisation infrastructure is a myriad of "sensors" providing indications of market trends and rates of development, which could be difficult to detect otherwise. In the broad sense of the team, standardisation is an observatory (of players' actions, new technologies etc) in direct relationship with research and development strategies and activities, highlighting market developments and future relationships between players.

By monitoring the standardisation process, the regulator can establish guidelines and reference points for future discussion. These different "sensors" provide some visibility as to market trends, players' actions and occurrences of exaggerated promotional activity compared to the actual state of research and development. In a technological environment that is becoming increasingly complex and which covers all electronic communications networks, there is no question as to the continuing need for this type of activity. Indeed, we believe it should be reinforced and even supplemented by economic, legal and financial approaches.

II. ART's role in standardisation

A. ITU-T

The International Telecommunications Union (ITU) is an international organisation, part of the United Nations, and located in Geneva. Under its auspices, governments and the private sector coordinate telecommunications networks and services worldwide. It is divided into 3 sectors: ITU-R (radiocommunications), ITU-D (development) and ITU-T (standardisation).
Three organisations share standardisation work worldwide: ISO (International Standards Organisation), IEC (International Electrotechnical Commission) and the ITU. ITU's activity focuses more particularly on telecommunications, which explains ART's priority interest in this organisation.

ITU has 189 member states, over 650 sector members (operators and manufacturers) and over 60 associate members (small companies which, for a modest financial outlay, are able to participate in specific standardisation work). The number of sector and associate members continues to grow despite the sector crisis. One of the original aspects of the ITU has been to bring together players from both the private and the public sector in its standardisation work. ITU-T produces recommendations that albeit voluntary in terms of application, are recognised worldwide. More than 2800 recommendations have been produced to date.

1. Direct involvement in ITU-T activities

ART participates actively in the work of Study Group no. 2 which covers operational aspects of networks and services (in particular numbering) and in Study Group no. 3 which covers tariff principles and international compatibility. ART served as Vice-Chairman in Study Group no. 2 for two years and currently chairs this group. Besides the work on international numbering in 2002, ART also participated extensively in definition and expansion of ITU's role in the domain name and Internet addressing areas. ART also acted as rapporteur for one of the Study Group 3 topics. For the other more technical study groups, ART keeps up to date with the work being done through a network of relevant experts.

2. Participation in ITU-T decision-making bodies

ART also participates actively in the work of the Telecommunications Standards Advisory Group (TSAG), which manages the ITU standardisation sector in between the different World Telecommunications Standardisation Assemblies. These meetings are convened every four years to decide on standardisation strategy issues.

Within TSAG, ART has the role of deputy head of the French delegation alongside the Ministry of Industry and plays an active part in the work of this group i.e. definition of standardisation priorities, organisation of study groups to improve response to market requirements, improvement in working methods to reduce lead times for releasing new standards, etc.

ART participates in the top-level bodies of the ITU with the aim of gaining a better understanding of relevant topics and in particular those relating to standardisation. These include the Administrative Council, which meets once a year, and the Plenipotentiary Conferences, which meet every four years to decide on the organisation's strategy and budget. In

2002, the ITU Plenipotentiary Conference was held in Marrakech between 23 September and 18 October. ART chaired the Editorial Committee on behalf of the French Administration with responsibility for drafting tests of the texts adopted during this Conference, in the six EU working languages. This was the first conference to use six working languages instead of three previously. In the same year, ART also chaired the Editorial Committee for the World Telecommunications Development Conference held in Istanbul from 18 to 27 March 2002. This Conference defines the strategy of the Telecommunications Development Sector for the four years to come.

In 2001 and 2002, ART was also very active in preparations for the two ITU Conferences at CEPT (European Conference of Postal and Telecommunications Administrations) level. The different meetings held on various topics allowed definition of common European positions which were well received during the Conferences.

ART will continue participating in these different organisations in 2003 as well as in ITU-T workshops devoted to topics of current importance such as emergency telecommunications, next generation networks, domain names, Internet addresses etc.

3. Organisation of the French committee for the coordination of ITU standardisation (CFCT-UIT)

The CFCT-UIT was reactivated in 2001, replacing in another form a committee that existed prior to 2000. The objective of this committee is to coordinate the French position within the framework of the ITU-T's work. It is chaired by ART and includes representatives from both the Government and private sectors. It held three meetings in 2002, including a meeting to prepare for the Telecommunications Standardisation Advisory Group meeting, aimed at finalising several French "contributions". Four meetings will be held in 2003.

This committee should allow France to be a driving force in the ITU-T, whether by identifying new areas for study or helping to improve the ITU-T's structure and working methods.

B. ETSI

The European Telecommunications Standardisation Institute (ETSI) located in Sophia-Antipolis, is one of the three officially recognised EU standards organisations. The other two are the European Committee for Standardisation (CEN) and the European Committee for Electrotechnical Standardisation (CENELEC) (see Directive 98/34/CE). The "Framework" directive on electronic communications implicitly confirms the status of these three organisations.

CEN's remit is multi-sector, CENELEC covers the electrotechnical field and ETSI the telecommunications sector. For the regulator, this group constitutes a natural observation point for monitoring sector trends.

During the last General Assembly in November 2002, ETSI had 768 members from 55 countries.

- 580 full members from 35 European countries,
- 40 observers,
- 148 associate members from 20 other countries

1. Participation in strategic organisations

ART is on the ETSI Board and plays an active role in defining the Institute's policy in collaboration with the Ministry for Industry and other national administrative entities that are members of this organisation. From time to time, ART is also involved in promotional acti-

vities involving other regulators (participation in the ITU Centre of Excellence in Amman in February 2002, ETSI ANRT conference in April 2003). It is worth recalling the values that determine the success of the standardisation process i.e. open and transparent decision-making mechanisms, the search for consensus based on the broadest possible participation of players, early consideration of regulatory aspects, clear and structured product documentation etc.

In a number of areas (establishment of partnerships[1] for standardisation projects, involvement in Internet policymaking (ICANN[2]), interoperability[3] sessions, agreements and partnerships with forums and regional standardization structures etc.), ETSI policies are seen as being innovative, and are a reflection of the upheaval in standardisation that is taking place in the telecommunications sector.

a. Chairmanship of the OCG for Electronics Communications Networks & Services

Against today's backdrop and in the run-up to a new regulatory framework for the sector, particular attention is paid to supporting Community policy. ART chairs the structure for coordinating ETSI responses to issues raised by the new regulatory framework (Operational Coordination Group – OCG – for Electronics Communications Networks and Services).

b. Involvement and chairmanship of the Finance Committee

ART has been represented on the Finance Committee since November 2001 thereby reinforcing the position of Government organisations on this committee. Its presence here is becoming increasingly vital at a time when members of the various international organisations are paying particular attention to financial issues in a difficult economic climate. For this reason, ETSI strives to keep its budget at a constant level. One of the advantages of participating in the work of this committee is the possibility of being involved in the financial support aspects of standardisation programmes.
The ART representative will chair the Committee in 2003.

c. Support for ETSI promotional activities aimed at regulators

In addition, the ART representative on the Board assists in preparation of ETSI's promotional activities aimed at non-European regulators (Arab countries, Africa, South America) and may be called upon to participate in this work from time to time (Arab countries).

2. Case-by-case involvement in technical committees

At national level, ART participates actively in the work of the national ETSI coordination committee (CF ETSI). This committee is chaired by a representative of DIGITIP[4] (STSI-Ministry responsible for Industry and is one of the standardisation committees for information and communications technologies under the leadership of AFNOR. This committee is made up of all the French members of ETSI (76 end 2002) belonging to one of the categories represented in ETSI (administrations, operators, manufacturers, service providers and users).

Every month, CF ETSI reviews standards projects in the fields of interest to it. After a public enquiry, it holds a vote and issues a national

1 3 GPP, MESA.
2 Present at ICANN PSO.
3 IPV6 interoperability tests, Bluetooth, etc.
4 See glossary

position on these texts. It examines any matter of potential relevance to the members of ETSI and prepares ETSI's General Assemblies.

In the last few months, it has focused particularly in raising the interest level of SMEs and users in the work of the Institute.

As well as participating actively in discussions on ETSI's general policy in the national coordination committee (CF ETSI), ART monitors work related to its own mandate with particular attention, notably in the field of radiocommunications, numbering and service quality.

C. Other bodies : Interministerial Standards Group (GIN) and the Forum Observatory

1. Interministerial Standards Group (GIN)

ART participates in the Interministerial Standards Group (GIN) which regularly brings together standards representatives from each ministry to define national and international public policy guidelines in this field. Within GIN, a specialist working group on Information and Communication Technologies (ICT) was set up in 2002 under the aegis of the Ministry for Industry. It is responsible for ensuring that the various ministries adopt consistent positions. ART contributes its skills and experience with international telecommunications organisations to assist the Ministry for Industry in carrying out this task. During the three meetings held in 2002, the specialist working group looked at a number of topics, such as Internet, emergency telecommunications, definition of a European standardisation strategy between government bodies, etc.

2. AFNOR Forum Observatory

AFNOR[1] has set up a Forum Observatory financed during the development stage by Government aid. Its objective is to provide better visibility of the standardisation work carried out in the forums i.e. outside the institutional standardisation organisations. ART contributed significantly to the establishment of this Observatory (Standardmedia) in 2002 by acting as consultant to the project steering and editorial committees. In its operational phase, the Observatory will allow ART, which does not have very significant in-house investigation resources, to gain a better overview of the different official and unofficial standardisation activities in progress.

1 See glossary

part two

Regulatory actions in the different markets

Chapter 1

Fixed telephony

I. The market

Number of fixed lines

Units	1999	2000	2001	2002	Change
Fixed lines at year-end	33 887 995	34 080 828	34 083 938	33 994 409	-0.2 %
Analogue lines	30 253 256	29 596 781	29 248 261	29 036 138	-0.5 %
Digital lines	3 634 739	4 373 260	4 773 539	4 900 000	+2.7 %
WLL lines	n.a.	2	518	432	-16.6 %
Cable connections[1]		43 213	61 620	57 839	-6.1 %

The number of fixed-telephony lines is around 34 million and stable. However, there has been a decline in the number of cable connections following a sharp rise in 2001.

The tendency for digital line growth in the local loop market to increase in parallel with a decrease in analogue lines was confirmed in 2002. Hence, there was a drop of nearly 200,000 analogue lines and an increase of nearly the same amount in digital lines.

Number of carrier-selection subscriptions

	2000	2001	2002	Change
Number of carrier-selection subscriptions	5 953 396	8 165 786	8 916 988	+9.2 %
Call-by-call selection subscriptions	4 453 936	5 253 053	4 815 465	-8.3 %
Pre-selection subscription	1 499 460	2 912 733	3 979 179	+36.6 %

1 Aform figures.

Since 1 January 1998, telephone subscribers can choose an alternative long distance operator (national or international) to France Telecom by selecting their preferred carrier either on a call-by-call basis or via a special subscription. This possibility was extended to local calls on 1 January 2002. At the end of December 2002, there had been an increase of approximately one million pre-selection users compared to the previous year with call-by-call selection tending to decrease. It is worth noting that a subscriber is not necessarily obliged to use the pre-selected operator and can place a call at any time with another operator provided he/she has signed a sales contract with the operator concerned. i.e. call-by-call selection.

Revenues from access charges, subscriptions and additional services

Euros (million)	1999	2000	2001	2002	Change
Access charges, subscriptions and additional services	4 869	5 144	5 366	5 424	+1.1 %

The increase in access charges is due partly to the increase in France Telecom's monthly residential subscription price to 13 euros incl. VAT in summer 2002 (an increase of 3.6%).

• ***Calls from fixed lines***[1]

Call Revenues from fixed lines

Euros (million)	1999	2000	2001	2002	Change
Local calls	3 437	3 007	2 847	2 656	-6.7 %
National calls[2]	2 578	2 006	1 673	1 516	-9.4 %
International calls	961	897	871	844	-3.1 %
Calls to mobiles	2 253	2 729	2 895	2 880	-0.5 %
Total revenues for calls from fixed lines	**9 228**	**8 639**	**8 287**	**7 896**	**-4.7 %**

Call volumes from fixed lines

(in millions of minutes)	1999	2000	2001	2002	Change
Local calls	80 920	77 037	72,527	65 820	-9.3 %
National calls	28 219	27 801	28 097	27 367	-2.6 %
International calls	4 057	4 454	4 610	4 703	+2 %
Calls to mobiles	5 600	7 649	9 384	10 357	+10.4 %
Total calls volumes from fixed lines	**118 796**	**116 942**	**114 617**	**7 896**	**-5.6 %**

1 Internet calls are not included in local calls.

2 The "proportion" of traffic from all-inclusive (offers) and flat-rate (packages) is shown in the national call turnover.

• ***Public payphones***

Call revenue from public payphone

	1999	2000	2001	2002	Change
Call revenues (millions of euros)	651	516	469	426	-9.2 %
Call volumes (millions of minutes)	3 334	2 397	1 960	1 627	-17 %
Number of public payphone on 31 December 2002	241 721	229 620	213 993	202 459	-5.4 %

The tendency noted since 1999 for the public payphone market to decline in value and volume was confirmed in 2002. It is linked to the development of mobile telephony.

• ***Fixed-telephony card***

Fixed-telephony card revenues (subscription and prepaid)

Euros (million)	1999	2000	2001	2002	Change
Fixed-telephony cards revenues	315	332	251	240	-4.4 %

Volumes generated by subscription and prepaid cards (millions of minutes)

	1999	2000	2001	2002	Change
Millions of minutes generated by subscription and and prepaid cards	1 899	2 611	1 903	1 571	-17.5 %

• ***Fixed-telephony card totals (prepaid and subscription)***

There are two types of fixed-network card (excl. telephone cards that can only be used in a particular operator's public payphone).

- Calls from subscription cards are either billed to the current telephone account or to a bank or credit card with payment being made directly from the holder's bank account.
- Prepaid cards contain a fixed amount of money (paid in advance) that can be used for making telephone calls. Licensed operators sold approximately 28 million of these cards in 2002.

The increase in the number of prepaid cards sold could be due to customers buying cards with a lower unit value .

II. ART actions

A. Tariff recommendations

1. Telephone subscriptions and access to the telephony network

ART issued three recommendations on four France Telecom tariff decisions in 2002. They involved modification of the monthly residential and business subscription price and modification of telephone network access prices.

a. Changes to monthly telephone subscriptions

At the beginning of July 2002, France Telecom issued two tariff decisions proposing:

- a change in the basic telephone subscription price (the so-called main subscription and a reduced subscription tariff for certain categories of people in metropolitan France and the overseas départements
- a change in the Professionel, Professionel Présence and Professionel Numéris subscription prices.

These measures, mainly for metropolitan France, resulted in:

- an increase in the main subscription of 3.6% or €0.38 excl. VAT increasing the total from €10.49 excl. VAT (€12.55 incl. VAT) to €10.87 excl. VAT (€13 inc. VAT) per month,
- an increase of €0.45 excl. VAT (or 3.6%) in the subscription price for Professionel contracts which rose from €12.65 excl. VAT to €13.10 excl. VAT
- an increase of €0.50 excl. VAT (or 3,1%) in the subscription price for Professionel Présence and Professionel Numéris contracts which rose from €16.30 excl. VAT to €16.80 excl. VAT

When analysing these decisions, ART focused essentially on France Telecom's costs, the effect that this increase would have on consumers (by looking at changes in the telephony consumer basket set up by ART - cf. changes in fixed-telephony prices) and international comparisons. In the light of all of these factors, ART made a favourable recommendation[1] on these tariff decisions.

b. Changes to telephone network access charges

France Telecom submitted proposals for changes in the telephone network access price to ART for recommendation on two occasions at the beginning of July and in mid-November.

These tariff decisions were designed to establish a single tariff for installation or removal (for existing installations) of an analogue line.

ART issued an unfavourable recommendation[2] on the first France Telecom proposal, particularly with regard to the amount of the increase in telephone service access costs (excluding travel costs for the France Telecom technician) and the lack of sufficient justification.

In December, and after analysing telephone service access and travel cost increases (where the installation requires a France Telecom technician onsite), ART did not oppose[3] the changes in access cost, nor the elimination of free installation of a second telephone outlet.

1 Recommendation no. 02-551 dated 11 July 2002.

2 Recommendation n° 02-608 dated 25 July 2002.

3 Recommendation no. 02-1195 dated 23 December 2002.

2. Flat-rate offers and promotional tariffs

In 2002, ART issued recommendations on certain France Telecom tariff decisions concerning flat-rate calling packages and requests for promotional offers. This type of optional offer made up nearly a quarter of the tariff decisions submitted to ART for recommendation as part of the approval procedure. They are partly indicative of the changes that have occurred in the incumbent operator's tariffs in the local and long-distance calling markets.

Four types of flat-rate package are now available from France Telecom:

- the Heures Locales and Heures France flat-rate packages for residential customers

- the Forfait Local PRO/PME and the France PRO/PME packages for professional customers.

Flat-rate packages are tariff offers applying to market segments that are now open to competition i.e. since 1998 for long-distance calls and since 1 January 2002 for local calls. Since that date, any operator may route calls within the same *département*[1] if required by the customer. Nearly twenty alternative operators, including the main ones, have requested France Telecom to stop sorting local calls. Local call sorting was abolished for all areas in metropolitan France in May 2002.

France Telecom submitted two tariff decisions in March following full opening of the telecommunications market to competition on 1 January 2002. The purpose of these decisions was:

- to establish flat-rate telephony packages including local and long distance calls. These packages were called France Plus and were destined exclusively for customers with residential subscriptions

- changes in the Forfait Local PRO/PME range, which consisted of a series of flat-rate packages for a given number of hours of local calls per month and reserved for professional customers.

In view of the uncertainties surrounding abolition of local call sorting zones in certain parts of the country at this time and the difficulty of evaluating the disadvantage for alternative operators, ART issued an unfavourable recommendation[2] pending clarification.

Towards the end of April, France Telecom was keen to market the new France PRO/PME flat-rate packages. This offer provided a number of monthly flat-rate hours for local and long-distance calls.

ART noted that the uncertainties surrounding abolition of local call sorting zones in certain parts of the country, and in particular the timetable for removing older generation switches had already been mentioned in Recommendation no. 02-325, dated 18 April 2002. ART also noted that France Telecom had provided an estimated timetable for removing the switches. ART requested France Telecom to update this timetable monthly and communicate the information to competing operators. Under these circumstances, ART issued a favourable recommendation[3] and lifted the reservations of previous recommendations.

In May, France Telecom submitted two decisions for recommendation regarding a promotional offer for customers who make the

1 See glossary.

2 Recommendation no. 02-325 dated 18 April 2002 and recommendation no. 02-340 dated 25 April 2002.

3 Recommendation no. n° 02-368 dated 21 May 2002.

request when first signing up for an heures locales package (other than the three-hour flat-rate package) or when changing from one package to the next in the range. The promotional offer included 2 additional hours of local calls as well as a subscription to the Option Plus package at the same time, offering one of the following: two hours of local calls, one hour of national calls, or half an hour of fixed-to-mobile calls.

ART considered that the principle of bundling local and long distance in the same promotional package did not pose any particular problem provided that the local call market is open to competition. It considered that in view of the fact that these promotional offers were limited in time and that the cheapest heures locales offer was excluded, they did not contravene competition rules and did not constitute unfair conditions for consumers. Under these conditions, ART issued a favourable recommendation[1].

In July, ART issued a favourable recommendation[2] on a decision submitted in June regarding a promotional pricing offer for the Les Heures France package considering that in view of the time limit, it did not contravene competition rules and did not constitute unfair conditions for consumers.
The France Telecom offer increased the subscription call allowance by 50% for a period of four months following the sign-up date.

In July, France Telecom submitted five tariff decisions for recommendation concerning the Heures Locales and Heures France flat-rate packages.

The purpose of three of the decisions is described below:

- increasing the Heures Locales range by creating three new monthly flat-rate offers: a 10-hour offer as well as a 12 and 15 hour offer. At the same time, France Telecom wished to modify its existing flat-rate tariffs slightly.

- two promotional offers for students with their own accommodation signing up for a Heures Locales or a Heures France contract. For any student signing up for one of the above packages, the promotional offers increased the subscription time allowance by 50% for calls made from metropolitan France over a period of one year from the date of subscription .

- a promotional offer increasing the subscription package call time by 50% for a period of four months following the sign-up date on all Heures Locales subscriptions.

ART issued a favourable recommendation[3] on the extension of the Heures Locales range. However, it issued an unfavourable recommendation on the promotional tariffs on the grounds that when the price squeeze test was applied, it showed that there was indeed a price squeeze for each of the flat-rate packages in question.

The fourth tariff decision concerned creation of an 80-hour flat-rate local calling package as part of the Local PRO/PME tariff option. ART issued a favourable recommendation[4] considering that the offer was beneficial to consumers and did not compromise competition in this market segment.

1 Recommendation no. 02-487 dated 27 June 2002.
2 Recommendation no. 02-550 dated 11 July 2002.
3 Recommendation no. 02-613 dated 25 July 2002.
4 Recommendation no. 02-640 dated 30 July 2002.

In September, ART made a favourable recommendation[1] on the fifth tariff decision seeking to create two offers within the France Pro/PME flat-rate packages called Créateurs d'entreprises and Déménagement respectively. ART noted that these offers, designed to give additional call time to customers using the above flat-rate packages for a period of two to six months, were not liable to result in a price squeeze for alternative operators.

In August, ART was asked to give a recommendation on three tariff decisions in the context of the approval procedure.

The first decision concerned the creation of a Bonus offer designed to provide additional call time to customers who had subscribed to one of the flat-rate packages Les Heures Locales or Les Heures Guyane in the overseas *départements*[2]. This increase in the subscription offer call time depended on the length of time the contract had been in force.

ART made a point of checking that France Telecom was not using this decision to propose offers liable to limit effective competition or market entry possibilities. A favourable recommendation[3] was issued for Les Heures France but ART made an unfavourable recommendation for that part of the tariff decision concerning Les Heures Locales.

Two tariff decisions relating to:

- a bundled promotional offer exclusively for residential customers combining Les Heures Locales offers and La Ligne ADSL 512 (broadband Internet access via a telephone line but excluding the actual Internet service for which an ISP subscription is required).

  Any customer signing up for these two offers between 1 October 2002 and 31 March 2003 (or for one of them if already a subscriber to the other), will have the flat-rate time increased by 30% for a period of 6 months,

- the same type of promotional offer for a bundled subscription to the Les Heures Locales and La Ligne ADSL 512 flat-rate packages. The 30% extension to the flat-rate package times will be available for six months between 4 November 2002 and 31 March 2003 for combined or separate subscriptions to both of these offers

Both of these projects involved France Telecom bundling two different types of service (telephony and broadband Internet access), which led ART to look at the competitive situation.

ART pointed out that although the telephony market was competitive, this was not the case with the ADSL Internet access market and the bundling of these two offers would therefore be anti-competitive. The anti-competitive nature of this offer was exacerbated by the fact that the bundling included a tariff discount in the form of a 30% extension of the flat-rate package telephony call time. In addition, the fact that it was a promotional offer did nothing to reduce the anti-competitive nature of the offer. ART issued an unfavourable recommendation[4] considering that approval of these tariff decisions would seriously affect the equilibrium of conditions necessary for developing competition.

In September, France Telecom presented a tariff decision concerning promotional tariffs for the flat-rate packages France Pro/PME and

1 Recommendation no. 02-700 dated 3 September 2002.

2 See glossary.

3 Recommendation no. 02-781 dated 19 September 2002.

4 Recommendation no. 02-729 dated 5 September 2002.

Local Pro/PME, designed to offer free subscription for one month to all new customers signing up for either of the above packages between 1 November and 31 December 2002.

After analysis, ART considered that these flat-rate offers were only likely to generate a price squeeze for alternative operators when there was a high level of usage. Given that the promotional offer defined in this tariff decision was only available for a limited period, ART issued a favourable recommendation[1] for this specific case.

In October, three tariff decisions were submitted for recommendation in accordance with the approval procedure. They related to:

- modification of the flat-rate tariffs Les Heures France, Les Heures Antilles and Les Heures Guyane. The tariff changes resulted in price reductions for each of the flat-rate packages ranging from 7.3% (2 hours of calls per month) to 12.8% (20 hours of calls per month). ART gave a favourable recommendation[2] for this offer, on condition that France Telecom stops marketing the current promotional offers to students on the date on which the new Les Heures France tariffs take effect, if they are approved by the Minister,

- the commercial launch of a promotional tariff for the option Les Heures France. This offer provided additional time, which varied according to the type of flat-rate package, for a period of four months from the subscription date. In addition, this offer is also valid for any customer wishing to move up the range during the same period. ART issued a favourable recommendation[3] on this tariff decision given that the tariff levels in the promotional offer would not generate a price squeeze.

- ART issued a favourable recommendation[2] concerning the changes to the flat-rate package tariffs for France Pro/PME which lowered the tariff for existing flat-rate packages, increased the call time for flat-rate packages over 15 hours and created a new 185 hour package.

3. Business customer offers

France Telecom essentially markets two types of tariff option for business customers, which provide volume-based discounts as follows:

- options providing discounts on an individual business site basis. These offers are destined for single-site businesses or multi-site businesses where telephony service purchasing decisions are made by each individual site.

- tariff options designed for multi-site businesses that combine "network" discounts on the total traffic generated by the customer network along with additional discounts for sites connected to the network.

In 2002, ART was asked to make recommendations on the commercial launch of several options in the above categories, as required by the tariff approval procedure.

As a result, ART made a favourable recommendation (no. 02-639 dated 30 July 2002) on the France Telecom offers Avantage International Plus 2 and Avantage National Plus 4 providing discounts exclusively on a per site basis for international and national calls respectively (local calls excluded). However, the same recommendation did not recommend commercial launch of the Avantage Volume Longue Distance V3 tariff option in the France Telecom Avantage Volume range which is

1 Recommendation no. 02-825 dated 8 October 2002.
2 Recommendation no. 02-1086 dated 26 November 2002.
3 Recommendation no. 02-985 dates 5 November 2002.

aimed more particularly at multi-site businesses. ART considered that this offer allowed cumulative discounts likely to generate a price squeeze effect for alternative operators wishing to market similar tariff options using the incumbent's interconnect services. France Telecom changed the proposed discount levels for this option to comply with the allowable discount rates set by ART and the offer was approved.

ART recommendation no. 02-702 dated 3 September 2002 on the France Telecom tariff decision no. 2002071 was partially unfavourable. In this decision, France Telecom planned tariff changes for three existing options in the Atout RPV Tarifs range destined for multi-site businesses as follows : Atout RPV Tarifs VTGS (for very large sites), Atout RPV Tarifs VGME (for large and medium size companies) and Atout Tarifs VGC (for large accounts). ART also considered that there was a price squeeze risk for alternative operators resulting from the provisions of this tariff decision. France Telecom adapted the offer which was subsequently approved by the Telecommunications Minister.

Finally, ART made a favourable recommendation (no. 02-1112 dated 5 December 2002) on the creation of a France Telecom tariff option called Avantage Volume Equilibre Longue Distance. This option is part of the Avantage Volume range and concerns national and International calls (excluding local calls) made under the France Telecom Tarif Equilibre option established in 2002. ART considered that in the circumstances, the tariff levels resulting from the cumulated network and additional site-option reductions provided for in the offer were not likely to generate an anti-competitive situation.

4. Innovative offers

During the second half of 2002, there were several offers that departed from the usual time-credit and flat-rate tariff structure i.e.

- unlimited offers for certain numbers,
- a call-by-call invoicing offer,
- an offer with a call set-up charge.

a. "Unlimited" offers

At the end of the summer of 2001, an offer, which had been made public under the name Trois numéros illimités, was approved by the Telecommunications Minister on condition that it be limited to 100 000 subscribers[1]. It was a trial offer for residential customers and provided unlimited calls to 3 national telephone numbers (excluding local numbers) on Saturdays and Sundays.

After presenting the results of the Trois Numéros Illimités trial as promised, France Telecom submitted a request to generalise the offer with the following changes:

- increase in subscription price from €3 to €5 incl. VAT,
- offer extended to customers with lines in the overseas départements making calls between overseas *départements*[2] and between the isolated tariff zones of Maripasoula and Papaïchton in Guyana,
- offer extended to local calls,
- compatibility with call-by-call selection using the France Telecom "8" prefix,
- possibility of changing the three selected numbers every 12 months.

Based on reasonable usage assumptions derived from the trial data, ART considered that the revenues derived from the Trois Numéros Illimités offer would cover the corresponding

1 Recommendation no.01-827 dated 29 August 2002.

2 See glossary.

France Telecom costs in the future and, when combined with revenues derived from other calls, would cover the costs of alternative operators using its interconnection offer.

In addition, the offer is limited to off-peak periods which would significantly increase traffic volumes carried on the fixed-telephony network. There would therefore be a positive effect on call costs due to improved network loading.

ART issued an unfavourable recommendation on 20 March 2002 followed by a favourable recommendation on 23 December 2002 once France Telecom had satisfied the requested conditions[1].

b. Call-by-call invoicing

ART issued recommendations on 26 July and 23 December 2002[2] following requests from France Telecom concerning "call-by-call invoicing" offers. These offers allow customers with a special subscription to have a single price per call irrespective of the duration up to a limit of two hours. Beyond this limit, the tariff is time related and is based on the standard local per-minute call price.

The figures published by ART in its market observatory clearly show a slowdown in calls between fixed lines. A drop in volumes tends to cause unit costs[3] to rise given the low level of cost elasticity with respect to volumes. These offers, along with the "unlimited" offers, are designed to encourage customers to telephone without worrying about the cost. In these circumstances, the main purpose of these offers is to boost the use of France Telecom's fixed network and lower costs.

Beyond the long-term effects on volumes, these offers are a departure from the usual market practices and as such are something of a gamble as far as their financial equilibrium is concerned.

Based on information supplied by France Telecom, customers who already have a calling profile that makes call-by-call tariffs more attractive for local calls than the basic tariffs also have significantly higher average calling times. As a result, customers targeted by this offer already have a particularly attractive offer with the basic tariffs. ART also compared the per-call revenue with the corresponding costs. The comparison showed that for calls longer than three minutes, the costs were higher than the generated revenue. As a result there is a significant price squeeze risk. ART therefore issued an unfavourable recommendation for the local call part of the tariff decision.

The reverse is true however for the offer concerning long distance calls in France. Limiting the offer primarily to off-peak periods and the bleu nuit period in France Telecom's standard interconnection offer improves the economic situation for competitors using this offer. In addition, the amount per call is significantly higher than the single price local call and hence the potential price squeeze is less sensitive to the number of calls.

The advantages of boosting fixed network usage were well understood by ART. It therefore agreed to a trial for the Appel en France à prix unique offer on condition that the terms of the offer limited the risks - essentially by limiting the number of subscribers and by providing regular reports.

1 Recommendation no.02-237 dated 20 March 2002 and recommendation no.02-1200 dated 23 December 2002.

2 Recommendation no.02-526 dated 26 July 2002 et recommendation no. 02-1201 dated 23 December 2002.

3 In other words, a drop in volumes does not generate an equivalent drop in costs, which means that each minute becomes increasingly expensive.

The Telecommunications Minister approved only the appels en France trial.

c. Offers with a call set-up charge

On 26 September[1], ART made a favourable recommendation on a tariff decision designed to create a "tariff with call set-up charge" offer differing from the time-credit principle. Calls are billed on the basis of a call set-up price and a per-second price from the first second. There is no flat-rate calling. This offer is available to professional customers and businesses and covers local calls, national long distance calls in metropolitan France, calls between metropolitan France and the overseas *départements*[2] and Mayotte, and international calls.

The long list of options compatible with this offer justifies its being considered as a new basic tariff structure. ART therefore compared the average invoiced call price with either the basic tariffs or with the call set-up tariff based on the two standard user profiles i.e. professional users and businesses.

The outcome of this analysis showed that:
- for local calls, this offer generates an estimated discount of 1.4%,
- for national calls (combining adjacent area and national tariffs), this offer generates an estimated discount of 4.5%,

These discounts do not generate a price squeeze effect when combined with other compatible options.

B. Standard interconnection offer for telephony

1. Interconnection with France Telecom generates turnover of more than 1 billion euros.

The standard interconnection offer sets wholesale tariffs between the SMP operator France Telecom and other operators. For this reason, validating it is a major regulatory activity.

France Telecom has significant market power (SMP) in a given telecommunications market and as a result is obliged to publish an offer (the so-called catalogue) containing the technical and tariff conditions for competitors interconnecting with its network.

France Telecom interconnection turnover came to over one billion euros in 2002. The traffic volume (including both voice and Internet) was around 100 billion minutes and represented approximately 30% of the switched traffic carried on France Telecom local loops. This confirms that the market is truly open to competition.

2. Approval of the standard interconnection offer

Each year, the finalisation of the standard interconnection offer requires long and detailed consultation with all of the operators (notably during the Interconnection Committee meetings), as well as negotiations with France Telecom.

In its decision no. 02-1089, dated 28 November 2002, ART approved the technical and tariff conditions of France Telecom's standard interconnection offer for 2003.

The key points of the standard interconnection offer for telephony are:

- Reductions in voice services ranging from – 1% to – 4%

1 Recommendation no. 02-795 dated 26 September 2002.

2 See glossary.

The reductions in basic tariffs compared to 2002 are:
- 1% for local tariffs (within the same local exchange area)
- 4% for regional tariffs (single tandem).

After four years of continuous reductions averaging more than 10% per year for each of these two services, the reductions for the 2003 offer are more modest. They are consistent with the changes in France Telecom's costs between 2002 and 2003 and take into account the general economic situation, including lower switched traffic growth than last year and the increase in the rate of return on France Telecom capital for interconnect activities.

ART highlighted the fact that in addition to the lower intra-local-exchange tariff for 2003 there was a significant reduction in the average price of interconnection links to the local switch. These were estimated to be 11% for a typical 6 km link excluding service-access costs.

• Additional measures

Monthly leased line tariffs dropped between 8% and 10% depending on the bit rate and service access charges dropped 11% on average.

The Internet flat-rate interconnection (IFI) offer that appeared in the catalogue in 2002 continued in 2003 under the same technical and commercial conditions. It introduced significant price reductions for collection of narrowband Internet traffic estimated at over 30% compared to the prices paid by operators in 2001 with "per-minute" interconnection. The so-called "overflow" option has also been maintained in the 2003 catalogue. It is accessed at local exchange level and allows operators to transfer excess traffic to other circuits billed on a "per-minute" basis. Removal of this option would have caused a significant increase in the average cost of Internet collection.

In addition to the basic tariffs, several other changes in the standard interconnection offer for 2003 are worth noting:

- The pre-selection process was improved: minimum lead times for implementing pre-selection were introduced for the first time. This should allow the various transport operators to guarantee firmer lead times to customers. In addition, France Telecom confirmed that pre-selection customers who subscribe to its service allowing them to keep their telephone number when moving, could also keep their pre-selection service without modification.

- Other improvements concerned some the interconnection processes i.e. the 2003 standard interconnection offer included provisions for improving delivery lead times to other operators for transmission resources as well as improvements in the interconnect back-up conditions.

Chapter 2

Other services

I. The market

A. Advanced services

1. Definition

Advanced services include:

- so called "free" services for the calling party (the call, the access charges and the subscription are charged to the service provider),
- shared-cost services where only a part of the call cost is charged to the calling party,
- shared-revenue services (Audiotel, Télétel, kiosk services): the calling party pays the operator for the complete service and the operator in turn pays part of the amount received to the service provider.

All of these services are available via the telephony, fixed or mobile networks.

2. Change in turnover[1]

Euros (million)	1999	2000	2001	2002	Change
Fixed operators	n.a.	1 603	1 451	1 472	+1.5 %
Mobile operators	n.a.	239	359	410	+14.2 %
Total advanced services	1 648	1 842	1 810	1 882	+4 %

3. Change in volumes

(In millions of minutes)	1999	2000	2001	2002	Change
Fixed operators	n.a.	9 144	9 310	8 600	-7.6 %
Mobile operators	n.a.	1 224	1 005	1 148	+14.2 %
Total advanced services	8 407	10 368	10 315	9 748	-5.5 %

1 These figures include the share of payments made by the operators to the service providers.

B. Directory services

Change in turnover

Euros (million)	1999	2000	2001	2002	Change
Fixed operators[1]	n.a.	277	278	279	+0.4 %
Mobile operators[2]	n.a.	43	55	61	+10.9 %
Total directory services	n.a.	320	333	340	+2.1 %

C. Terminal sales, rental and repair

Change in turnover

Euros (million)	1999	2000	2001	2002	Change
Fixed operators	n.a.	673	809	636	-21.4 %
Mobile operators	n.a.	1 087	1 240	1 329	+7.2 %
Total terminal sales, rental and repair	n.a.	1 760	2 049	1 965	-4.1 %

II. ART actions

A. Tariff recommendations

1. France Telecom directory enquiry service

At the beginning of July, France Telecom submitted a tariff decision for recommendation concerning the trial of automatic directory enquiry services on the Bordeaux/Agen and Quimper/Rennes networks. ART considered that the directory service price in automatic mode was around 25% cheaper than the service currently provided by the operator. It considered that this offer was beneficial to consumers and made a favourable recommendation[3].

2. Shared-cost services (Accueil numbers)

In March, ART made two recommendations concerning Accueil number tariff decisions. The first favourable recommendation[4] concerned changes to the Vert and Azur numbers as well as associated services in the Accueil range. The second favourable recommendation[5] concerning calls to the new Indigo number blocks 0 820 20 and 0 820 22 contained certain specific conditions including those related to the billing and debt-collection services provided by France Telecom to alternative operators.

3. Shared revenue services (Audiotel, Télétel)

In April, France Telecom requested a recommendation on two tariff decisions concerning:

- changes to the Kiosque Micro offer, firstly to change the tariff for the so called K32 price band (accessed via the number 08 36 01 60 15) and secondly to create a new price band to be known as K 59 (accessible via the number 08 36 01 20 15). Both these modifications were designed to align the Kiosque Micro price bands with the corresponding Audiotel price bands.

1 For fixed operators, turnover includes directory enquiries, directories and associated revenues.

2 For mobile operators, turnover includes only directory enquiry revenues.

3 Recommendation no. 02-591 dated 18 July 2002.

4 Recommendation no. 02-211 dated 12 March 2002.

5 Recommendation no. 02-231 dated 14 March 2002.

• cancellation of the so-called K 60 price band accessible via the Télétel system or via 08 36 01 00 00 due to the ethical problems observed, which were denounced notably by the consumers associations.

After analysis, ART made a favourable recommendation[1] on these tariff decisions.

At the beginning of July, France Telecom submitted a tariff decision for recommendation concerning the establishment of pre-recorded messages to accompany the changeover of Audiotel 08 36 PQ MC DU numbers to 08 9B PQ MC DU numbers. It involved establishment of a tariff for calls using the old number format (08 36 PQ MC DU) that would terminate on a pre-recorded message indicating the new number (08 9B PQ MC DU).

Given the temporary nature of this tariff and the relatively low amount of traffic involved, ART issued a favourable recommendation[2].

B. Settlement of disputes

1. Following on from the 9 Telecom decision related to routing of traffic to shared-revenue services:

On 18 May 2001 ART adopted decision no. 01-474 concerning the dispute between 9 Télécom Réseau and France Telecom over the interconnection conditions for routing traffic to shared-revenue services.

ART decided that:

• France Telecom should agree to 9 Télécom Réseau's request for interconnection including billing for shared-revenue services. This service must be billed for price thresholds not exceeding 2.21 FF incl. VAT per minute for call routing. The amount of the France Telecom billing service includes in particular, a single payment order (TIP), bill collection and associated terms and conditions, customer service, bill archiving and supply of necessary information for collecting unpaid bills and was set at 1.5% of billed revenue.

• France Telecom should include its own shared-revenue services under the same conditions as those of alternative operators in the third section of the standard telephone bill.

France Telecom lodged an appeal against this decision in the Paris Appeal Court on 22 June 2001. In particular, France Telecom requested changes to the billing fee and tariff structure.

Following a hearing on 4 December 2001, the Paris Appeal Court issued an order on 26 February 2002 ordering the appointment of an expert whose tasks were to include, amongst other things, an evaluation of the average cost of bills issued by France Telecom for its own requirements and the cost attributable to the preparation and edition of "mini-bills" for alternative operators.

Several expert meetings were held in 2002 but the matter was still not finalised at the end of 2002.

At the same time, ART continued analysing the shared-revenue services market and in autumn 2002, undertook a review of entry conditions for alternative fixed-network operators.

2. Penalties for failure to respect a dispute decision.

On 15 November 2000, ART imposed a penal-

1 Recommendation no.02-398 dated 28 May 2002.

2 Recommendation no. 02-963 dated 24 October 2002.

ty of 5 million euros on France Telecom for failing to implement its decision no. 00-1194 concerning the dispute with Sonera France for the supply of directory enquiry services. In its recommendation[1], ART justified the amount of the penalty, in compliance with article L.36-11 para.2 of the Posts and Telecommunications code (CPT), by the seriousness of the infringement and the advantage that France Telecom had gained in 2001 from the directory services and call termination market by failing to comply.

C. Recommendations to the Competition Authority

The companies Fonecta France (formerly Sonera France) and Scoot France brought a claim before the Competition Authority in addition to various other procedures, some of which are still pending. The claim concerned the marketing practices of France Telecom and its subsidiaries for fixed-telephony subscriber lists.

The grounds of the application, which included a number of measures of conservation, were that subscriber lists should be sold at an equivalent price to that charged by France Telecom internally or to its subsidiaries.

In its recommendation no. 02-962 dated 24 October 2002, ART considered that for the downstream directory and directory-enquiries market, France Telecom applied more favourable terms and conditions to its own departments or subsidiaries than to its competitors. This constituted an abuse of dominant position for the purposes of maintaining a strong position in the upstream market for the supply of subscriber lists.

In addition, the fact that France Telecom charged much lower prices for sale of complete lists to marketing companies (whose business is to canvass customers) than to directory publishers and directory service providers (who are direct rivals), could also constitute a case of unfair practice, as prohibited by article L. 420-2 in the commercial code, if this price difference was not justified by a difference in costs.

Finally, in view of international comparisons in countries applying cost-based pricing, ART considered that there was a strong presumption that France Telecom did not comply with the obligation to use cost-based pricing for supply of subscriber lists to be used for directory and directory enquiry services.

Moreover, in view of the length of time these practices had been applied within the France Telecom group in this particular market, and its failure to comply with the injunction handed down by the Competition Authority in 1998 and its confirmation by the Court of Appeal in 1999, ART considered that application of measures of conservation could be justified.

Nevertheless, ART questioned the validity of the claims lodged by the two companies prior to publication of the decree announcing the application of the new article L.33-4 following the ruling dated 25 July 2001 of the Posts and Telecommunications Code (CPT). In this case, the new regulatory framework may not have been in force at the time of the claim and the injunction mentioned above still valid, making the claim unreasonable by virtue of the non bis in idem principle.

The Competition Authority came to the same conclusion and in its decision 02-D-75 dated 17 December 2002, declared that the grounds

1 Recommendation no.02-34 of 9 January 2002.

of the application made by the two companies Scoot and Fonecta were unreasonable given that the injunction handed down by the Court of Appeal was valid until the decree was published. Hence, the request for measures of conservation was also dismissed. The Competition Authority continues to investigate compliance with the injunction on which it had postponed its decision .

Chapter 3

Mobiles

I. Recent market trends

A. The total market (metropolitan France, overseas départements and Mayotte)

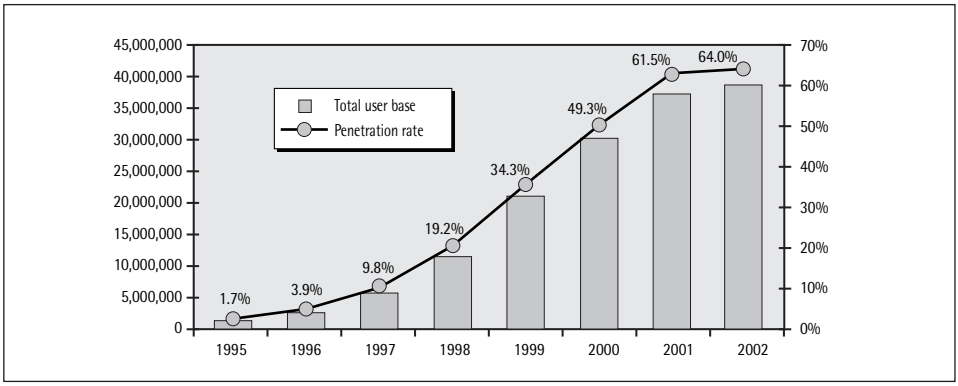
1. Change in the subscriber base

Units	31/12/99	31/12/00	31/12/01	31/12/02	Change
Mobile Telephony	20 619 563	29 644 771	36 997 400	38 585 200	4.29 %
Flat-rate packages	13 261 159	15 838 312	18 936 800	21 479 700	13.43 %
Prepaid cards	7 279 489	13 806 459	18 060 600	17 105 500	-5.29 %

On 31 December 2002, nearly 38.6 million people in France had a mobile telephone giving a penetration rate of 64%1. The annual growth rate for mobile users in 2002 was 4.3% (compared with 24.6% in 2001), which represents more than 1.6 million new customers.

1 The penetration rate is obtained by dividing the total number of mobile users (including mobile users in Mayotte) by the population figures used in the Mobile Observatory i.e. 60 317 100 people in 2002 (60 185 800 people according to the INSEE census in July 1999 and 131 300 people for Mayotte according to the 1997 INSEE census).

Changes in number of users and penetration rate



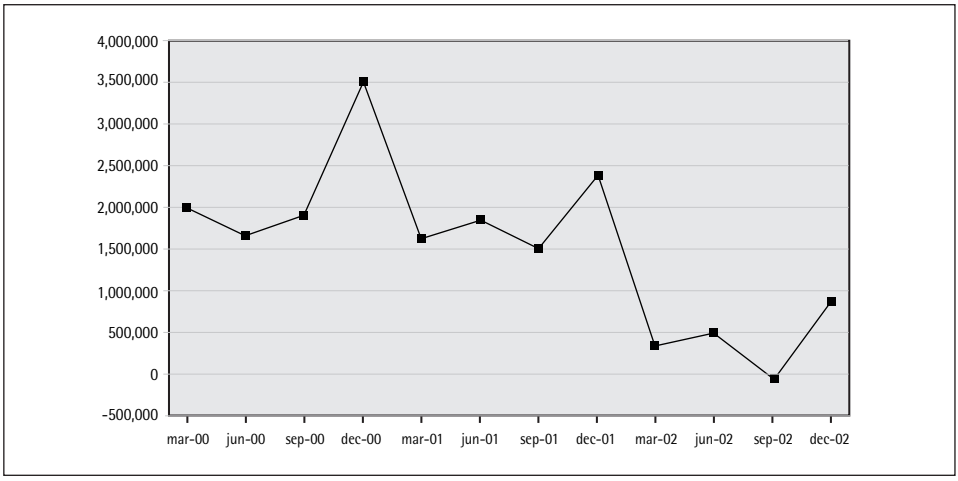
There was relatively low net growth in 2002 compared to previous years. In the first quarter, the net customer base increased by 0.3 million compared to more than 1.6 million in the previous year. The net change in second and third quarter 2002 customer base was +0.5 million (compared to 1.8 million a year ago) and -50 000 (compared to growth of 1.5 million in the third quarter 2001).

This relative slowdown in annual market growth was confirmed in the last quarter of the year, which showed net growth of 0.8 million customers compared with 2.4 million the year before.

The decrease in net sales can be partly explained by the change in the validity period of Bouygues Telecom prepaid cards, which went from 12 to 8 months. The reduction in the validity period gave rise to a "dual cancellation" effect that had an impact on growth of the total customer base compared to estimated trends without this change.

The change in net quarterly growth of the

Net quarterly sales in the French mobile market



mobile customer base over the last three years. As of 31 December 2002, Orange France, SFR and Bouygues Telecom had 19.2 million, 13.5 million and 5.8 million customers respectively.

Orange France attracted 1.4 million new customers in 2002 compared to 3.5 million in 2001. Its market share increased over the entire year to 49.8% of the total mobile customer base.

SFR's market share grew over the entire year reversing the negative trend of the previous year. Its customer base increased by 1 million customers in 2002 to give a market share of 35.1% at year-end.

Bouygues Telecom recorded a drop in its customer base of 0.8 million customers in 2002 compared to growth of 19.3% in 2001. Its market share in 2002 dropped over the year to 15.1% in December. This is partly due to the "dual cancellation" effect mentioned above.

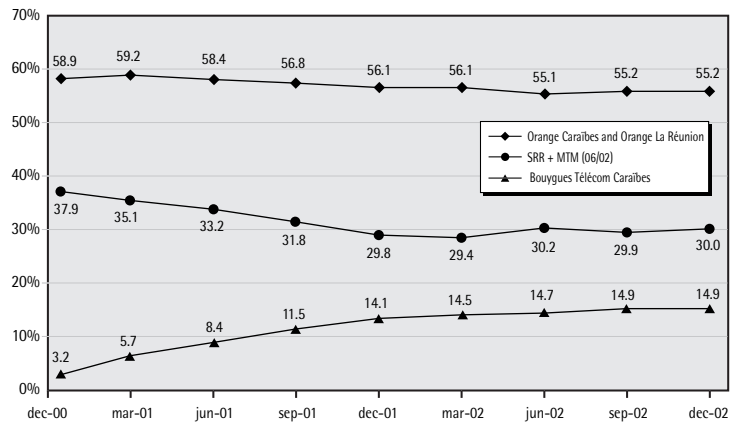
2. Overseas départements and Mayotte

The mobile customer base in the overseas *départements*[1] went from 1 to 1.2 million customers in 2002, an increase of 15.6%. There was therefore sustained growth in the overseas départements in 2002 albeit slower than in 2001 (70%). It should be noted that the figures for Mayotte have been included since June 2002.

Geographical presence of operators proposing GSM

	Groupe Orange	Groupe SFR	Groupe Bouygues Télécom
Guadeloupe	Orange Caraïbes		Bouygues Télécom (Caraïbes)
Martinique	Orange Caraïbes		Bouygues Télécom (Caraïbes)
Guyane	Orange Caraïbes		
La Réunion	Orange La Réunion	SRR	
Mayotte		MTM	

Market share of operators in the French overseas Départements and Mayotte



1 See glossary

Other GSM licence holders in the overseas *départements*[1] (Outremer Télécom, Oceanic Digital, Saint Martin & Saint Barthélemy Tel-Cell, Dauphin Télécom) had not launched their services commercially at the end of 2002[2].

3. Subscription cancellations

In 2002, 10.7 million customers in metropolitan France cancelled their subscription compared with 7.8 million in the previous year.

The annual cancellation rate, or churn is calculated by dividing the number of cancellations for the period in question by the average number of customers for the same period. The churn rate for 2002 excluding the overseas départements and Mayotte is 29.2% for the full year compared to 24% in 2001. It should be noted that churn increased for all three operators in 2002.

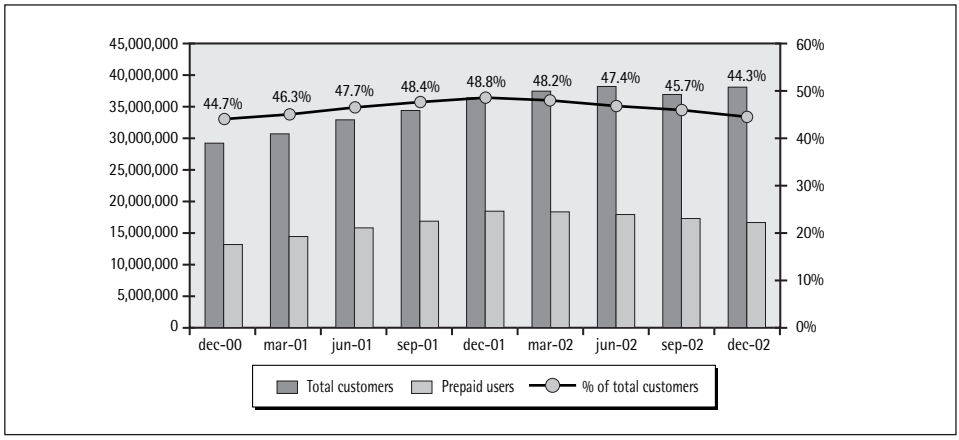
It should also be noted that the majority of these cancellations can be attributed to customers transferring from subscription to prepaid services and vice versa. In addition, the change in the validity period for Bouygues Telecom prepaid cards had a significant impact on quarterly churn in 2002.

4. Prepaid customers

The proportion of prepaid customers in the total customer base fell appreciably in 2002. On 31 December 2002, it represented 44.3% of the total mobile base corresponding to a drop of 4.5 percentage points. This contrasts with the trend in 2001 when it increased by 4.1 points. On 31 December 2002 there were 17 million prepaid card users compared with 18 million the previous year.

This is indicative of a trend towards healthier growth figures since prepaid customers generate lower and less stable revenues for the operators.

Changes in prepaid users as percentage of total customers



1 See glossary.

2 See chapter 3 II 8).

Proportion of prepaid customers, by operator

	31-dec-01	31-mar-02	30-jun-02	30-sep-02	31-dec-02
Orange	47.0%	46.9%	46.4%	45.4%	44.4%
SFR	49.5%	49.9%	49.7%	48.7%	46.9%
Bouygues	52.4%	48.6%	45.4%	40.1%	38.0%

We can see that the proportion of prepaid customers dropped significantly for all three operators. Bouygues Telecom recorded the sharpest drop due to its policy of encouraging this movement.

B. Arrival of mobile data services

In view of the imminent launch of UMTS services in France and Europe, GPRS, or 2.5G and the associated services appear to be an important step towards implementation of third generation services.

GPRS should help demonstrate technical, commercial and economic viability of mobile data services.

Upgrading GSM networks to GPRS is simpler and cheaper than building a new network from scratch. GPRS was commercially launched in 2001 for professional users and in 2002 for the general public. The three GSM operators in metropolitan France currently offer a growing range of services using this technology. (Orange sans limite from Orange France, Mulitmedi@ mobile from SFR and i-mode from Bouygues Telecom

GPRS is giving operators valuable experience in the run-up to UMTS. It allows them to sign agreements with service providers, test consumer reaction and "shape" the demand for multimedia services in mobility situations.

The main services available at present are MMS (Multimedia Messaging Service), SMS, e-mail, mobile Internet (Wap, i-mode) and data download facilities.

These new services provide permanent network connections, packet type connections for improved data transfer and bit rates three to four times higher than with GSM. New marketing and billing (e.g. per megabyte) methods are being offered.

In addition, the terminals on offer include major innovations (colour terminals, integrated cameras/video cameras, video players, games, design,...) allowing users to take better advantage of the new services.

The development of this intermediate generation paves the way for UMTS and the two systems should be able to coexist for several years. 3G should be launched commercially at the beginning of 2004 and will offer users even higher-performance value-added services.

C. Change in turnover and volumes

1. Terrestrial mobile telephony

a.Change in turnover

Euros (million)	1999	2000	2001	2002	Change
Mobile telephony	5,377	7,761	10,248	11,658	+13.8 %
Flat-rate packages	4,939	6,851	8,580	9,757	+13.7 %
Prepaid cards	438	910	1,668	1,901	+14 %

b.Change in volumes

Millions of minutes	1999	2000	2001	2002	Change
Mobile telephony	20,571	35,640	44,419	51,747	+16.5 %
Mobile to fixed calls	11,789	16,269	17,665	18,532	+4.9 %
On-net calls	4,880	11,715	16,157	20 047	+24.1 %
Mobile to third party mobile calls	3,609	6,840	9,521	11 916	+25.2 %
Mobile to international calls	293	498	692	816	+17.9 %
Outbound roaming	n.a.	318	385	421	+9.4 %

Millions of minutes	1999	2000	2001	2002	Change
Mobile telephony	20,571	35,640	44,419	51,747	+16.5 %
Flat-rate packages	n.a.	32,070	39,775	47,429	+19.2 %
Prepaid cards	n.a.	3,570	4,644	4,318	-7 %

c. SMS

Millions of units	1999	2000	2001	2002	Évolution
SMS	n.a.	1,472	3,267	5,877	+79.9 %

Data transport services on mobile networks

Euros (million)	1999	2000	2001	2002	Évolution
Data transport	n.a.	151	390	668	+71.3 %
SMS	n.a.	151	382	646	+69.1 %

d. Average monthly outgoing revenue per subscriber

	1999	2000	2001	2002	Croissance
Average monthly bill per subscriber[1] (euros)	29.1	25.7	25.0	24.4	-2.4 %
Average monthly traffic volume per subscriber[2] (euros)	107.7	118.2	111.1	114.1	+2.7 %
Average number of SMS per subscriber	n.a.	4.9	8.2	13.0	+58.6 %

II. ART actions

A. GSM

1. Operators with significant market power[3] (SMP)

ART established a list of mobile operators with significant market power pursuant to article L. 36-7 of the Posts and Telecommunications Code (CPT) as follows:

- for metropolitan France: Orange France and the Société française du radiotéléphone (SFR),
- in the overseas *départements*[4] of Martinique, Guadeloupe and Guyana: Orange Caraïbe,
- in the overseas *département*[4] of La Réunion: La Société réunionnaise du radiotéléphone (SRR).

2. Fixed-to-mobile calls/call termination/tariff recommendation

a. Call termination

In November 2001, ART made a decision to lower average call-termination charges by 40% over three years on the networks of operators with significant market power in the interconnect market (Orange France and SFR).

The call-termination charge is the main retail price component for calls made from the fixed-telephony network to a mobile and is paid by the fixed operator to the mobile operator for terminating the call.

ART set the average revenues per minute at 20.123 euro cents from 1 March to 31 December 2002, 17.074 euro cents for 2003 and 14.940 euro cents for 2004.

At the end of September 2002, Orange France and SFR submitted their tariff proposals applicable from 1 January to 31 December 2003 to ART in compliance with decisions 01-970 and 01-971. ART ensured that the proposals complied with the decisions made at the end of 2001 and that they respected the pricing level of 17.074 euro cents per minute (decisions 02-966 and 02-967).

In 2003, the new tariffs will lead to an average 15% fall in call-termination prices on the networks of the two mobile operators (both peak and off-peak). ART considers that this decrease will benefit the consumer and encourage fixed operators to adjust fixed-to-mobile prices accordingly from 1 January 2003.

1 Mobile telephony turnover excluding data transport and SMS for the average annual installed user base.

2 Concerns voice only (excl. data transport and SMS).

3 cf. Part I Chapt. 5 I.

4 See glossary.

b. Reduction of the indivisible billing period

The fixed-to-mobile call termination charge for calls originating in metropolitan France and terminating on the Orange France and SFR networks contained an indivisible billing period of 50 seconds in 2002. Given that this tariff structure heavily loads short-duration calls, ART requested the two mobile operators to take into account consumer concerns regarding this type of call.

Orange France and SFR followed these recommendations by reducing the indivisible period from 60 seconds in 2001 to 50 seconds in 2002 and then to 40 seconds in 2003.

ART has requested that a tariff structure without indivisible billing periods be established from 1 January 2004 onwards.

c. Tariff recommendations

Mobile-telephony operators with significant market power (SMP) must base their interconnection tariffs on the cost of the service provided in compliance with article L.34-8 of the Posts and Telecommunications Code (CPT).

Up until 2002, only Orange France and SFR were listed as SMP operators. ART decisions 01-970 and 01-971 adopted in November 2001 respectively required the two operators to lower their call termination prices over a three-year period on 1 March 2002, 1 January 2003 and 1 January 2004.

These reductions were designed to benefit the consumer and as a result, ART paid particular attention to the impact that they would have on retail tariffs for fixed-to-mobile calls.

In view of this, it took into account these changes in examining the tariff decisions for fixed-to-mobile calls submitted for recommendation as part of the approval process in 2002.

ART made several recommendations on the different France Telecom tariff decisions with regard to fixed-to-mobile call prices. The main recommendations were:

• ART recommendation no. 02-181 dated 28 February 2002

Recommendation no. 02-181 dated 28 February 2002 covered two France Telecom tariff decisions on prices for fixed-to-mobile calls to Orange and SFR mobiles for the residential, professional and business markets.

The planned changes in these decisions concerned the basic tariffs in the Option Plus offer and the creation of new tariff options for the professional and business markets (Avantage Mobiles Plus 2, Avantage Volume Mobiles 2 and Atout RPV Mobiles 2).

The proposed reductions for the basic tariffs were around 12.5% for the residential market and 9.5% for the professional and business market.

ART approved the tariff changes for the retail market in its recommendation, considering that they were consistent with the reduction in charges which the mobile operators Orange and SFR were obliged to apply to call termination from 1 March 2002 in accordance with ART decisions no. 01-970 and no. 01-971 dated 16 November 2001. However, ART attached certain marketing conditions to the tariff options planned for the professional and business markets, which, as they stood, were liable to cause a price squeeze for alternative operators. France Telecom made certain changes to these options and the tariff decisions referred to in recommendation no. 02-181 were approved by the Minister for Telecommunications.

• ART recommendation no. 02-782 dated 19 September 2002

In its recommendation no. 02-782 dated 19 September 2002, ART ruled on the France Telecom tariff decisions relating to price changes for fixed-to-mobile calls to Bouygues Telecom mobiles for residential, professional and business customers and on tariff decision number 2002059 concerning creation of the Option Plus Mobilité offer.

Bouygues Telecom has not been designated as having significant market power in the interconnection market and is therefore not obliged to have cost-based termination tariffs. This operator did however lower its tariffs on 1 September 2002. The France Telecom decisions were therefore designed in particular, to pass on these tariff reductions via the retail tariffs for fixed-to-mobile calls.

France Telecom also wished to market the Option Plus Mobilité offer providing a discount on the fixed-to-mobile tariffs for calls made using the Option Plus offer (for the professional market). This reduced the per-minute charge (excluding the time credit) by 11.11%.

ART took note of the tariff reductions proposed by France Telecom and issued a favourable recommendation, considering that the France Telecom decisions were unlikely to cause a significant anti-competitive price squeeze as far as other alternative operators were concerned.

• ART recommendation no. 02-1196 dated 19 December 2002

ART recommendation no. 02-1196 dated 19 December 2002 covered two France Telecom tariff decisions on prices for fixed-to-mobile calls to Orange and SFR mobiles in the residential, professional and business markets. Through these decisions, France Telecom sought to:

- lower the basic tariffs and the Option Plus tariffs for fixed-to-mobile calls to Orange and SFR mobiles.

- modify or create certain tariff options for calls from a fixed line to any mobile in metropolitan France for the professional and business markets.

ART considered that the retail tariff reduction for fixed-to-mobile calls to Orange and SFR as proposed by France Telecom, were compatible with the call-termination charge reductions that the two mobile-telephony operators were obliged to apply from 1 January 2003 in accordance with its decisions 02-966 and 02-967 dated 24 October 2002.

However, it attached conditions to the planned new tariff options, considering that they were likely to generate a price squeeze for alternative operators when calls were passed on to operators other than Orange or SFR. France Telecom made certain changes to these options and the tariff decisions were approved.

3. Per-second billing (recommendation to the Competition Authority)

Orange France brought in new tariffs in September 2002 for calls originating on its network. The key features were: per-second billing from the very first second and a surcharge on calls from its subscribers to competitors' mobile subscribers (0.12 euros/minute).

Bouygues Telecom, the consumer association UFC Que Choisir and the association CLCV made an application to the Competition Authority concerning the new tariff measures and added a request for measures of conservation to be taken.

ART made a recommendation to the Competition Authority as required by the Act. In its recommendation[1], ART supported per-second billing but expressed reservations concerning the surcharge for alternative operators' networks. Indeed, it was clear to ART that this provision was likely to have an "exclusion" effect in the market (linked to the "club effect") especially since the tariff structure had been established by an operator (for which ART had not ruled out the possibility of it being considered to be dominant) with a strong market position . During the analysis, ART also considered that in the current "bill and keep" system governing billing between operators, the cost of an on-net and an off-net call were identical as far as a mobile operator is concerned and therefore, the surcharge for calls to third party networks could not be justified in terms of the actual costs. As a result, the Orange France offer did not appear to constitute a case of competition on merits. It concluded therefore that the possibility of abuse of dominant position could not be ruled out.

Following ART's recommendation to the Authority, Orange France withdrew its new tariff structure and Bouygues Telecom withdrew its complaint. As a result, the Competition Authority rejected the grounds of the application and the request for measures of conservation[2].

4. Service quality

For the sixth consecutive year, ART carried out a mobile-telephony network quality-of-service survey for metropolitan France in collaboration with the consumer associations and users. In addition to service availability, the survey looked at how the service was perceived by customers of the three operators in terms of call continuity and audio quality on a daily basis.

This survey was carried out by the firm Thales Idatys over a six-week period between mid October and end of November 2002 under normal conditions of use for mobile phones.

A working group made up of mobile operators, consumer associations and users established the methodology and the specifications.

The results of this survey were made public on 25 February 2003 and are available on ART's website.

a. Main conclusions from the 2002 survey

Several conclusions can be drawn from the results of the survey.

- The 2002 survey indicated a noticeable improvement in most of the indicators, highlighting the progress in network quality made by the three operators. After a year of stabilisation (despite strong growth in 2001), the call-success rate (calls set up and held for at least two minutes) in urban areas showed a marked improvement, around 2% to 3%, taking the overall rate to around 98%, which is an excellent performance.
- There were fewer disparities in the proportion of calls with perfect sound quality as a function of geographical location, time of day and type of usage than in 2001. This indicates that the operators have improved load management on their networks.
- The tests on SMS show excellent service reliability for the second year in a row: all messages sent were received error-free in less than a few minutes.
- Finally, the test results in suburban trains

1 Recommendation 02-901 dated 10 October 2002.

2 Decision no. 02-D-69 dated 26 November 2002, O.J. of 28 February 2003.

and the very-high-speed trains (TGV) show an improvement over 2001. However, service quality is still below the quality observed in urban areas.

b. Urban areas with 20,000 to 50,000 inhabitants.

Experimental tests were carried out in five urban areas with 20 000 to 50 000 inhabitants under the same conditions as other urban areas.

The urban area test sample size is too small for it to be considered representative of all urban areas with 20 000 to 50 000 inhabitants and for the results to be published. However, it is possible to give an indication of service quality for the five cities tested. It was in fact similar to the larger urban areas except for the proportion of calls with perfect sound quality, which appeared to be considerably lower.

5. Mobile coverage

Improving mobile coverage nation-wide is a key issue in terms of regional development.

During the CIADT[1] (interministerial committee for regional development) meeting in July 2001 and December 2002, the State initiated a programme for extending mobile telephone coverage nation-wide. This programme provides 88 million euros of public financing, shared equally by the State and local authorities, for construction of passive infrastructure and in particular antenna towers on approximately 1250 sites in more than 1600 towns situated in so called "dead zones"[2].

ART is particularly concerned with this problem and took action on the matter in the first half of 2001, first by establishing tools to evaluate the effective mobile coverage and secondly by investigating the various methods necessary to achieve the objective.

It also developed a method for accurately evaluating the coverage canton by canton. This method was made available to those local authorities wishing to determine effective coverage in their areas as accurately as possible. Approximately 30 départements undertook field surveys using the methodology.

In addition, ART carried out a detailed study on the respective advantages of the two main possibilities under consideration i.e. local roaming and shared passive infrastructure. It evaluated these solutions with a view to providing extended mobile coverage and quality service at lowest cost without distorting the competitive situation of the three mobile operators. Generally, local roaming seems to be the method that makes optimal use of investment even if, in certain cases, shared infrastructure is more suitable.

Hence, ART had detailed discussions with Orange France, SFR and Bouygues Telecom. These discussions resulted in the definition of a common approach which was forwarded to ART's Chairman on 24 September 2002.

In this document, which was published on ART's website, the three operators indicated their commitment to providing coverage for the so-called "dead zones". They declared that they were prepared to start work on the first shared sites without delay and that they would immediately carry out tests to validate implementation conditions for local roaming.

On the basis of this, the public authorities

1 See glossary.

2 Dead zones are zones not covered by any of the three mobile operators.

actively pursued the coverage objective for "dead zones" in line with the commitment made by the government during the CIADT[1] meeting in December 2002. ART participated actively in the interministerial steering committee set up to define and implement the GSM coverage extension programme in the "dead zones" in collaboration with the mobile operators and the local authorities.

6. Mobile phone jamming devices in theatres

On 18 July 2001, an Act covering various social, educational and cultural measures was published in the Official Journal[2]. Article 26 extended the list of freely established installations in article L.33-3 of the Posts and Telecommunications Code (CPT) to include radio electric installations capable of disabling mobile telephones in theatres i.e. jamming devices.

The application of this measure required ART to make a decision based on article L.36-6 of the CPT, defining the technical conditions for using these devices and submit it to the Minister for Telecommunications for approval.

The approval of the technical conditions for use is part of a procedure consisting of the following key steps: a draft ART decision; consultation with the CCR (Radiocommunications Consultative Committee) in accordance with article D.97-1 followed by notice to the European Commission for a consultation which must last for a minimum of three months (European Directive 98/34 dated 22 June 1998[3]); and finally adoption of the decision by ART and submission to the Minister for Telecommunications for approval in accordance with CPT article L.36-6.

As part of this procedure, ART initiated a wide-ranging consultation process in September 2001 involving the interested parties and in particular the manufacturers of jamming/filtering devices, mobile operators and representatives of potential users.

This process was accompanied by a call for comments issued on 6 December 2001 for which more than 20 submissions were received. These contributions brought to light the technical and legal difficulties linked to the operation of jamming devices, thereby confirming the usefulness of the public consultation.

The players involved identified two areas of risk:

- **technical and operational risks and concerns:**
  - deterioration of mobile-network coverage and service quality, difficulties with emergency calls thereby raising security issues and compromising the operators' licence obligations,
  - uncontrolled proliferation of jamming devices,
  - difficulty in restricting the use of jamming devices to theatres.

- **legal risks:**
  - principle of unrestricted installation of jamming devices in theatres as added to para.6 of article L.33-3 called into question particularly with regard to the proportionality principle.
  - incompatibility with GSM or UMTS frequencies used for these systems, allocated to operators on an intuitus personae basis in exchange for a fee, and with the national frequency band allocation register (TNRBF).

1 See glossary.

2 Law no. 2001 dated 17 July 2001 "containing various social, educational and cultural provisions", O.J., 18 July 2001, p. 11496.

3 Directive 98/34/EC dated 22 June 1998 making provision for an information procedure in the area of standards and technical regulations, OJEC, L 204, 21/07/98, p.37.

In view of these issues, which concern public safety and correct network operation, ART consulted the Government in February 2002 concerning the way in which the process should continue.

Following the interministerial discussions which formally highlighted the difficulties raised in the public consultation, ART published the summary of the call for comments on 3 May 2002 and decided, at the Government's request, to set up a working group bringing together all the players concerned to further investigate the main difficulties raised during the consultation.

After the group had completed its task, involving in particular two meetings in June and July 2002, ART prepared a draft decision setting out the conditions for installing radio electric equipment that would disable the transmission and reception capabilities of all types of mobile telephones in theatres.

The CCR (Radiocommunications Consultative Committee) was consulted in respect of this project on 2 October 2002 in compliance with the relevant texts. Several aspects of the project were amended following comments from members of the CCR.

ART sent the draft decision to the Minister on 26 October 2002 with a view to notification at European level. This notification, which is a mandatory requirement of directive no. 98/34/EC, was made on 14 November 2002. The European Commission and the other member States had three months from receipt of the draft to make comments which France is obliged to take into account where possible. Several member states sent detailed recommendations indicating that the planned measures could possibly restrict free movement of goods in the internal market and as a result, the status-quo phase of the draft decision was extended by three months.

ART will only formally adopt the decision regarding the conditions for using jamming devices at the end of this procedure, after which it will be submitted to the Minister for Telecommunications for approval.

Naturally, the use of these devices remains prohibited until the ministerial order approving the ART decision comes into force.

In addition, the Judiciary Guidelines and Planning Act[1] no. 2002-1138 dated 9 September 2002 modified the Posts and Telecommunications Code by adding radio electric installations capable of disabling mobile telephones in penitentiary establishments to the list of installations that can be freely established. The installation of devices capable of disabling mobile telephones in penitentiary establishments is not subject to prior decision by ART.

7.Virtual mobile network operators (MVNO)

a. The CCR report

In March 2002, ART published the report on virtual mobile network operators (MVNO), which it had requested from the Radiocommunications Consultative Committee (CCR), on its website.

This report highlighted the different technical MVNO models that were possible and analyses the economic and regulatory issues surrounding these new players.

b. Settlement of the dispute between Tele2 and Orange France

The decision[2] taken on 17 December 2002 concerning the dispute between Tele2 France

1 cf.ART annual report 2002,Volume 1 chapter II

2 Decision n°02-1192 dated 17 December 2002

SA and Orange France over the finalisation of an MVNO agreement has been published on ART's website.

The dispute concerned a request from Tele2 France that Orange France be required to provide Tele2 France a service based on the "extended MVNO" model, which is the most extensive form of permanent hosting service among the types of MVNO models analysed in the report published on 22 March 2002 by the CCR (Radiocommunications Consultative Committee).

In its ruling, ART noted that this request does not fall within the scope of current Community law or French legislation on the right to interconnection or access, and that, as a result, Tele2's request could not be entertained.

However, ART emphasized that the conditions of possible integration of an MVNO activity in the dynamics of the mobile market could be evaluated under the new legal framework to be created by transposition of directive 2002/19/EC[1].

It would be useful at that time for ART to examine a set of elements that could not in any case be examined on the sole basis of the case presented

This evaluation could take advantage of the lessons learned in the market analyses ART will be required to conduct under article 16 of the "Framework" directive 2002/21/CE[2].

It will also depend on the state of development of mobile multimedia, currently in its infancy, and its impact on the degree and redevelopment of forms of competition in the mobile arena, based on acquired experience which must be preserved and developed.

It will also have to take into consideration a fair balance between the right to access and an owner's right to use its infrastructure to its own advantage. This consideration is even more important in the area under dispute because of the huge material and commercial investments required to develop multimedia in general, and the transition to third generation in particular, at a time when the financial situation is difficult.

The technical impact of MVNO hosting will have to be taken into consideration, along with the consequences in terms of capacity and the additional investment required, which can vary depending on the position of the host operators in the market under consideration.

Finally, observation and analysis of market developments by all the players concerned should help better identify the forms of MVNO most likely to play a dynamic and value-creating role in the development of competition.

ART intends to follow these developments closely and continue discussions on this topic with all the players.

8. Mobiles in the overseas départements (DOM)

a. Process underway to open the market to competition

1 European Parliament and Council directive 2002/19/EC dated 7 March 2002 concerning access to electronic communications networks and associated resources as well as their inteconnection (access directive) OJEC dated 24/04/02.

2 European parliament and Council directive 2002/19/EC dated 7 March 2002 concerning a common regulatory framework for electronic communications networks and services (framework directive OJEC dated 24 April 2002).

ART continued issuing new GSM licences in the overseas *départements*[1] in 2002 following on from the process initiated in 2001 after the public consultation launched in 2000.

Hence in 2002, ART examined two licence requests, which resulted in a GSM licence being awarded to the company Oceanic Digital[2] in Guadeloupe and Martinique and a GSM licence being awarded to Dauphin Télécom[3] in Saint-Martin and in Saint-Barthélemy (Guadeloupe).

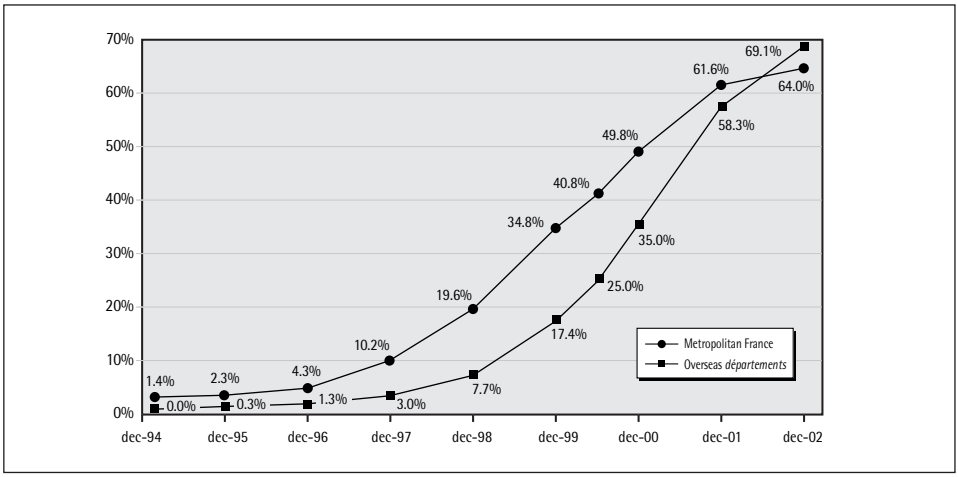
Licences awarded as of 31 December 2002

Technology	Licence holder	Standard and geographic area	Licence or frequency allocation date
AMPS	Saint-Martin Mobiles	Saint-Martin and Saint-Barthélemy (Guadeloupe)	4 july 1991
GSM	Société Réunionnaise du radiotéléphone	La Réunion	23 february 1995
GSM	Orange Caraïbe	Guadeloupe, Martinique, Guyane	14 june 1996
DECT	Dauphin Télécom	Saint-Martin and Saint-Barthélemy (Guadeloupe)	19 october 1998
GSM	SAS SPM Télécom	Saint-Pierre-et-Miquelon	21 june 2000
GSM	Bouygues Telecom	Guadeloupe, Martinique et Guyane	Frequency allocation le 8 november 2000
GSM	Outremer Télécom	Guadeloupe, Martinique, Guyane and Réunion	30 november 2000
GSM	FTM SA (Orange Réunion)	La Réunion	Frequency allocation le1 december 2000
GSM	Orange Réunion	La Réunion	24 avril 2001
GSM	Société Réunionnaise du radiotéléphone	Mayotte	26 april 2001
GSM	Bouygues Telecom Caraïbe	Guadeloupe, Martinique and Guyane	19 july 2001
GSM	Saint-Martin & Saint-Barthélemy Tel Cell	Saint-Martin and Saint-Barthélemy (Guadeloupe)	23 july 2001
AMPS	Saint-Martin Mobiles*	Saint-Martin and Saint-Barthélemy (Guadeloupe)	30 september 2001 (renewal)
GSM	Oceanic Digital	Guadeloupe, Martinique	14 march 2002
GSM	Dauphin Télécom	Saint-Martin and Saint-Barthélemy (Guadeloupe)	12 december 2002

*The licence previously awarded to Saint-Martin Mobiles using AMPS technology was renewed for a period of five years following agreement by the CSA[4] on the use of the corresponding frequencies.

1 See glossary.
2 Decision 02-31 dated 10 January 2002.
3 Decision 02-397 dated 28 May 2002.
4 See glossary.

9. The effects of opening the market to competition



The percentages of people in metropolitan France and the overseas départements who own a mobile phone came to 64% and 69.1% respectively at year-end 2002 reflect this new situation and show how dynamic the overseas département market really is. At the end of 2002 the percentage of the population with mobile phones in the overseas départements was higher than in metropolitan France.

B. Third generation

1. The second call for UMTS applications

In its decision dated 14 December 2001[1], ART defined the rules and conditions for allocating the 3G licences not taken up at the end of the first call for applications on 18 August 2000.

The second procedure was formally launched on 29 December 2001 when the Minister for Telecommunications published ART's call for applications in the Official Journal.

By the closing date of 16 May 2002, Bouygues Telecom was the only player to have filed an application in response to this call.

ART published the report and justification required by the procedure on 27 September 2002 announcing that the Bouygues Telecom[2] application had been successful.

The Bouygues Telecom UMTS licence was signed by the Minister on 3 December 2003 and published in the Official Journal on 12 December 2002. The licence was awarded for a period of 20 years and required commercial opening of the service two years after the publication date with coverage of at least 20% of the population.

The Orange France and SFR UMTS licences were modified at the same time to include the provisions of the 2001 Finance Act, particularly with respect to the validity period and fees for allocation and management of frequencies in the IMT 2000 band.

1 Decision 01-1202 dated 14 December 2001 proposing terms and conditions to the Telecommunications Minister for allocation of two licences to introduce 3rd generation mobile systems in metropolitan France, OJ dated 30 January 2002.

2 Decision 02-797 dated 27 September 2002.

This put Bouygues Telecom on the same footing as Orange France and SFR, which received UMTS licences following the previous call for applications in 2001. This additional step in the introduction of UMTS means that there will be three third-generation mobile operators in France, providing the basis for a truly competitive situation.

2. UMTS in the overseas départements (DOM)

The process of introducing mobile competition in the overseas *départements*[1], which ART has been managing since the call for comments in 2000, has led to licensing of new operators and stimulated market development. As a result, 69.1% of the population owned a mobile phone at the end of December 2002.

The interest generated by GSM in this area provides an opening for third- generation mobile (3G networks). These networks should be able to offer multimedia services in addition to telephony, and the overseas *départements*[2] and territories must have the same opportunity to access them as in metropolitan France.

Hence, ART launched a public consultation on 4 March 2002 to ascertain the opinions of those concerned on the introduction of these systems in the overseas départements and territories, and in particular, to identify whether the specific characteristics of these markets justified adapting certain aspects of the introduction process used in metropolitan France.

This consultation focused particularly on the general conditions and rules for introducing third-generation systems in the overseas départements of Saint-Pierre-et-Miquelon e.g. timetable, overall organisation and rules for awarding licences.

ART received eight contributions which can be summarised as follows:

- two replies from the Regional Council in La Réunion and the General Council in Guadeloupe,
- one response from France Telecom,
- five replies from existing GSM operators in the overseas départements either directly or through their subsidiaries.

Our summary of the public consultation on the introduction of third generation mobile telecommunications systems gives the following conclusions:

- the contributions expressed the operators' interest in establishing third generation mobile telecommunications systems in an overseas département or group of départements and/or Mayotte and/or Saint-Pierre et Miquelon.

- given the possibilities for freeing up frequencies, there did not appear to be a UMTS frequency shortage in the overseas départements, Saint-Pierre et Miquelon and Mayotte. Several operators considered that the number of 3G operators per overseas département should not exceed two or three.

- no operator planned commercial service before the end of 2004 although one wished to carry out trials at the end of 2003 or early 2004. Certain operators planned a much later roll-out.

1 See glossary.
2 See glossary.

C. Satellites

The so-called first generation S-PCS systems mainly provide mobile-telephony services.

During 2002, ART examined a licence request submitted by Globalstar Europe to take over the activities of TESAM, which had been awarded a satellite mobile-telephony licence for France in a ministerial order dated 17 November 1998[1]. Globalstar Europe was authorised by ministerial order on 14 November 1998[2] to establish and operate a public telecommunications network and to supply telephony services to the public as defined in articles L.33-1 and L.34-1.

D. Radio paging

Radio-paging services allow messages in the form of a beep or alphanumeric characters to be sent to users equipped with pocket receivers.

The service was introduced to France in the 1970s with the Eurosignal network. Other technical specifications have been used since, i.e. RDS and POCSAG i n 1987 and ERMES in 1993. Sales grew very sharply in France in 1996 and 1997 but have declined sharply since 1998, when TDR (520 000 subscribers) withdrew from the market.

Number of radio paging users in France (millions)

1995	1996	1997	1998	1999	2000	2001	2002
0.36 M	1 M	2 M	2.4 M	1.9 M	1.8 M	0.19 M	0.16 M

In 2001, the operators e*Message and Infomobile refocused their activity towards the professional market and abandoned the consumer market due to high customer acquisition costs and low profitability. Hence, the French radio-paging market is concentrated on professional customers seeking solutions to requirements that cannot be satisfied either by public mobile telephony or independent radiotelephony networks.

Radio paging seems to be used more and more for sending simultaneous information to a large number of terminals. It is also used as a transmission back-up in emergency situations (e.g. natural disasters)

Other technologies (using for example subcarriers in the radio FM band –RDS, DARC etc) appear to have developed significantly in 2002 for certain applications such as information display systems in towns, public transport display systems indicating waiting times, traffic information, remote control for isolated areas etc.

ART continues to monitor the situation in collaboration with the CSA[3] and the radio paging players to ensure that regulatory principles remain consistent as telecommunications and audiovisual technologies converge.

1 Ministerial order dated 17 November 1998 authorising TESAM to establish and operate a public telecommunications network and provide a public telephony service, OJ dated 11 December 1998 p. 18657.

2 Ministerial order dated 14 November 2002 authorising Globalstar Europe to establish and operate a public telecommunications network and to provide a public telephony service, OJ dated 13 December 2002 p.20594.

3 See glassary.

Chapter 4

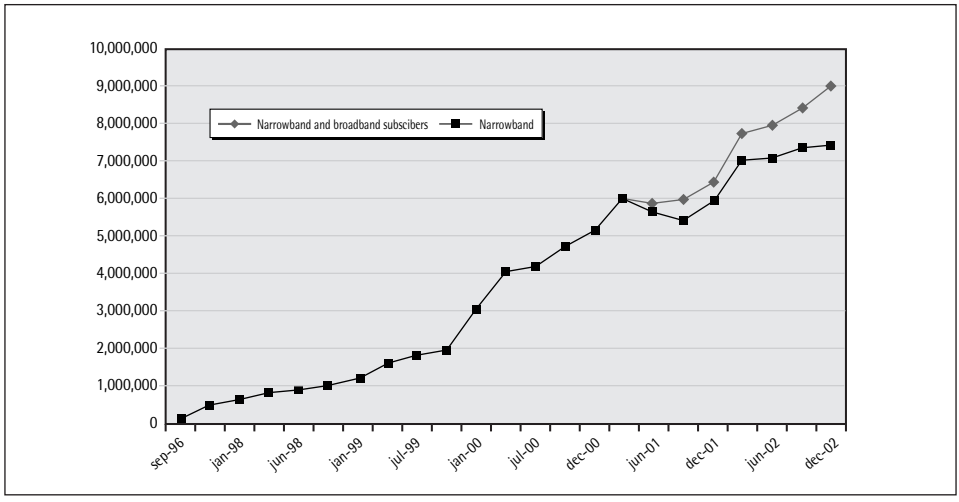
Internet

I. Introduction

There was a sharp increase in the number of paying Internet users in France in 2002, characterised by:

- continued, steady growth in the number of paying subscribers, around 30% compared to 2001,
- a sharp increase in the number of broadband subscribers, while the number of narrowband subscribers appeared to stabilise,
- major contribution to broadband subscriber growth from ADSL.

The quarterly figures published by AFA (see chart below) shows that growth in the number of paying Internet subscribers picked up significantly in 2002 and was driven mainly by broadband.



source : AFA, AFORM, France Telecom

In 2002, Internet market turnover increased slightly, to a total of 1136 million euros. Although overall growth was flat, there are contrasting underlying changes, with narrowband revenues falling by around 10% whereas broadband nearly doubled between 2001 and 2002.

Euros (million)	1998	1999	2000	2001	2002	Change
Internet revenues	162	344	731	1119	1136	+1.52%
Narrowband Internet revenues			600	815	737	-9.6%
Broadband Internet revenues			59	182	321	+76.4
Other Internet access-related services			72	122	79	-35.2%

II. Narrowband Internet

A. The market

The licensed operators account for only a small share of the Internet market. The main part of the market is driven by separate ISPs such as Wanadoo, AOL and Club Internet.

1. Change in the customer base

Units	31/12/99	31/12/00	31/12/01	31/12/02	Change
Narrowband subscribers	3,030,000	5,263,000	6,385,000	7,469,000	+17%
Licensed operators		1,447,631	2,109,827	2,691,103	+27.6%

2.Change in licensed operator turnover

Euros (millions)	2000	2001	2002	Change
Narrowband Internet revenues	600	815	737	-9.6%
Access calls	208	392	385	-1.8%
Collection services	390	412	307	-25.5%
Narrowband connections	3	11	45	+309.1%

There was a notable drop in Internet collection revenues and a slight erosion in turnover from traffic.

3.Change in licensed operator volumes

Millions of minutes	2000	2001	2002	Change
Internet volumes billed to end user	28,900	52,446	66,109	+26.1%
Internet collection services	22,160	38,195	48,878	+28%

The number of Internet minutes (which are a meaningful indicator of narrowband Internet activity) collected by the switched telephone network rose to over 5 billion minutes per month, or an increase of 26.1% in one year.

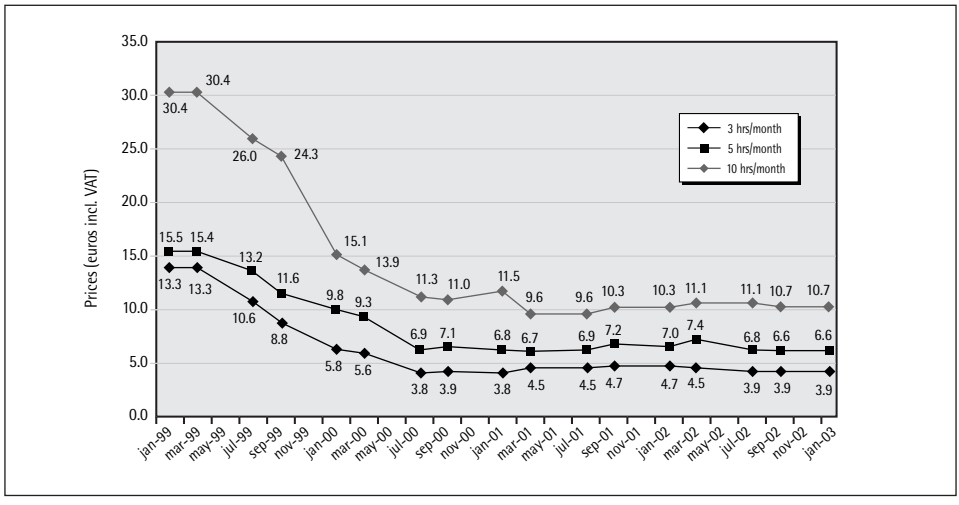
B. Price changes

The following graphs show changes in prices from December 1998 to December 2002. The prices are based on the lowest price averages of the seven main residential Internet service providers for short duration (3 to 10 hours per month), medium duration (15 to 25 hours) and long duration periods (greater than or equal to 30 hours).

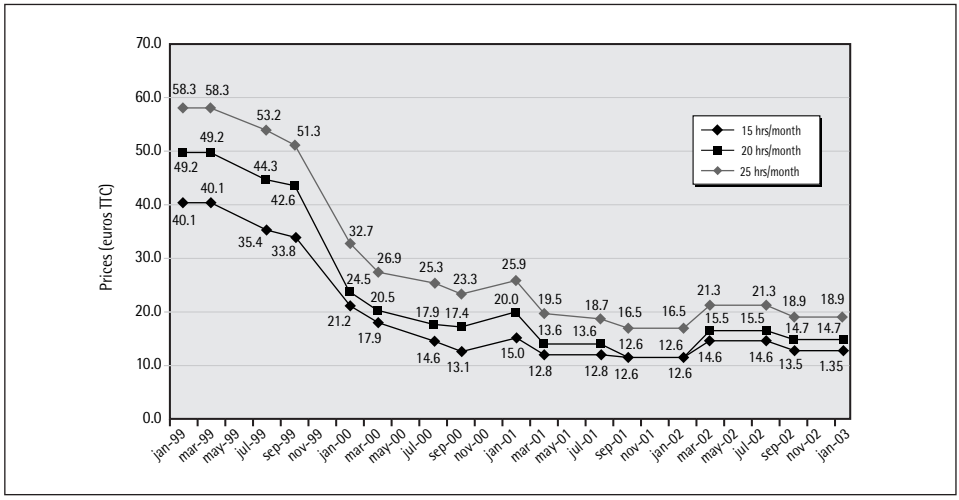
	jan-99	jan-00	jan-01	jan-02	jan-03	Change
3H/month	13.3	5.8	3.8	4.7	3.9	-70.8%
5H/month	15.4	9.8	6.8	7.0	6.6	-57.5%
10H/month	30.4	15.1	11.5	10.3	10.7	-64.6%
15H/month	40.1	21.2	15.0	12.6	13.5	-66.2%
20H/month	49.2	24.5	20.0	12.6	14.7	-70.1%
25H/month	58.3	32.7	25.9	16.5	18.9	-67.5%
30H/month	67.2	40.8	29.8	19.9	22.2	-66.9%
40H/month	84.8	55.2	43.0	32.0	29.5	-65.2%
50H/month	102.3	72.7	58.7	47.5	37.6	-63.3%
60H/month	119.6	82.2	74.3	64.0	46.1	-61.5%
70H/month	136.9	114.2	90.0	79.1	58.5	-57.3%
100H/month	188.7	166.9	134.5	121.5	91.6	-51.5%

(prices in euros incl. VAT)

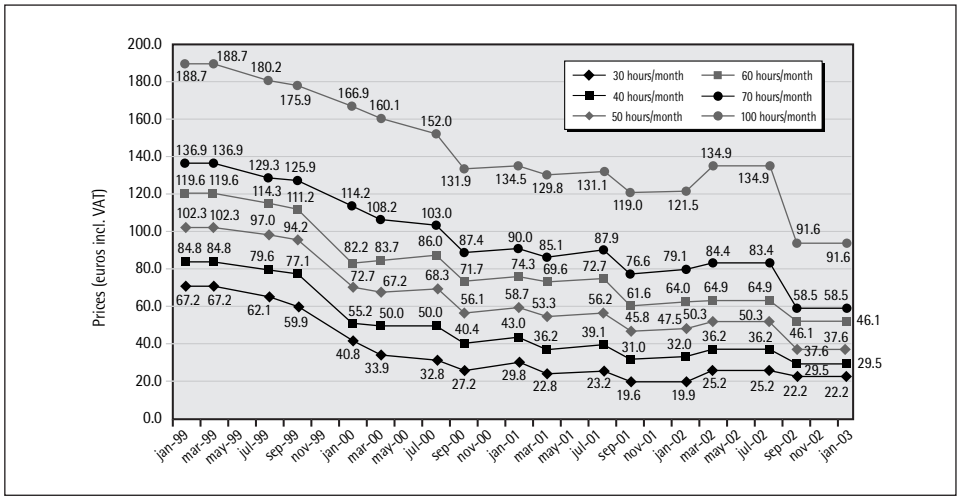
Changes in averages for the best short duration prices of the 7 main ISPs from December 1998 to December 2002



Changes in the best short duration price of the 7 main ISPs from December 1998 to December 2002



Changes in the best short duration price of the 7 main ISPs from December 1998 to December 2002



Internet access tariffs were extremely stable from 1996 until spring 1999, when the market was shared between a small number of players proposing similar tariff packages. The Internet user paid a subscription to the Internet service providers and calls were paid separately to France Telecom. Spring 1999 saw the first wave of tariff reductions with the arrival of free subscription offers (calls were still charged).

In autumn 1999, there was a reaction from the traditional ISPs with the widespread introduction of time-limited flat-rate offers, which included the subscription and call charges. These offers appeared following ART decisions to authorise an interconnection model adapted

to this type of package (so called indirect connection).

In 2000, certain ISPs launched so called "free–free" offers in which there was a limited, completely free period (free calls and subscription) followed by a fixed per-minute cost once the limit was exceeded. Others launched unlimited time, flat-rate offers. At the end of 2001, following ART decisions on flat-rate interconnection (see below), several ISPs proposed "almost unlimited" flat-rate packages (50 hours for 15 euros/month). These three categories pushed market prices down significantly.

From June 2001, prices stabilised as the market consolidated in the hands of a smaller number of players with greater influence, alongside changes in the overall economics of the internet access model. The only significant changes concerned the appearance, disappearance and reappearance of unlimited offers in long-duration packages, which had the effect of establishing price ceilings.

C. ART actions

1. IFI (Internet flat-rate interconnect) impact

In May 2002, ART sent a questionnaire to the operators as required in the 2002 standard interconnection offer to evaluate the operational experience of the flat-rate interconnection offer, along with the likely impact of withdrawing the overflow facility at the local exchange in 2003.

At the time that ART carried out this study in 2002, flat-rate interconnection was widely used by alternative operators, with over 60% of Internet traffic being collected in this way.

Implementation of flat-rate interconnection was a major exercise for the operators because it required changes to interconnection link architecture and the removal of three-way links.

Withdrawal of the overflow facility at the tandem exchange level in 2002 forced the operators to reassess their orders and reconfigure their resources. In some cases a complete change of architecture was required as well as extensions due to the separation of voice and Internet traffic.

Although the interconnection link migration went well overall, the actual lead times for converting from "minute mode" to "flat-rate" were longer than planned and were closer to two months than the six weeks indicated in the standard interconnection offer. In addition, ART's analysis showed that there were large variations in lead times from one operator to another.

In 2002, the implementation of flat-rate interconnection represented large cost savings for the operators compared to the "time dependent" offer and compared to the situation in 2001 without IFI.

However, the operators indicated that they had completely passed on the cost reductions in their prices to ISPs to take into account the changes in the Internet collection market.

Looking at local exchange interconnection in detail, it appears that no operator chose the flat-rate offer without overflow in 2002. The operators use this facility at the local exchange level as an operational tool for managing traffic peaks due to higher traffic fluctuations at this level.

Indeed, analysis of the actual data as supplied by the operators shows high traffic fluctuations at the local exchange level, with volumes varying widely during the day and from one day to the next. In addition, these fluctuations are not correlated with local exchange traffic

volumes and do not necessarily concern the same exchange from one week to the next.

However, for the operators, the economics of the business are very sensitive to the interconnection link loading i.e. providing too much capacity increases the per-minute collection cost significantly and limits the attractiveness of the flat-rate system. Providing just enough capacity is likely to jeopardise quality of service. This is even more so at the local exchange level, since the threshold effect is greater in approximately 75% of cases. (operators interconnect at local exchange level with one or two BPNs i.e. 2 mbps links).

The operators have estimated that withdrawal of the overflow facility would lead to a 25% to 35% increase in Internet collection cost.

Hence, when analysing the interconnection conditions for 2003, ART considered that withdrawal of the overflow possibility would have a significant impact on the economics of supplying Internet access to end users and asked France Telecom to retain this possibility in the standard interconnection offer for 2003.

2. Third party billing: the Free/France Telecom dispute

On 30 January 2002, ART was asked to give a recommendation on the dispute between Free Télécom and France Telecom. The dispute concerned calculation of the average revenue paid by France Telecom to Free Télécom for third-party-billed, local-tariff Internet calls collected from non-subscription access offers.

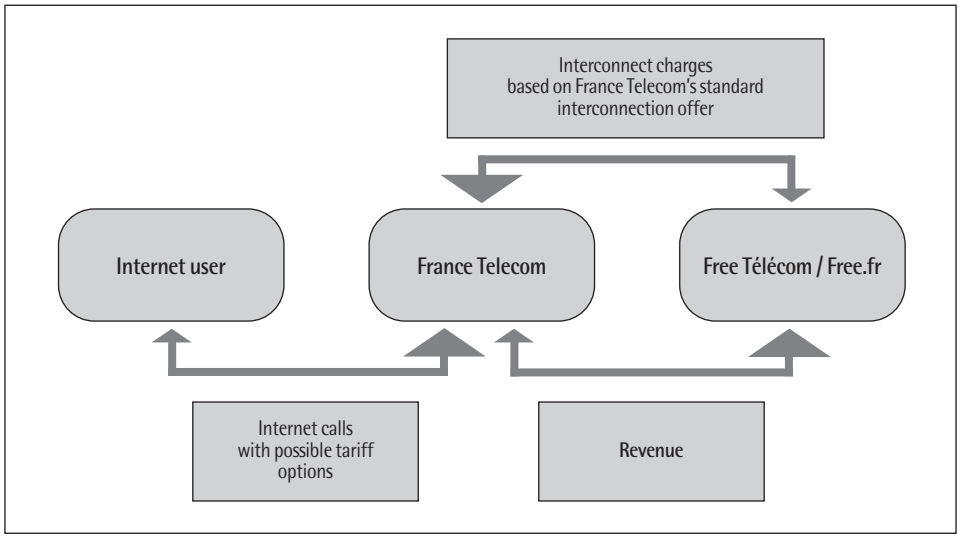
a. Calculation of average revenue for Internet access

Per-minute Internet access offers, also known as "free Internet", provide access through the switched telephone network. Users pay no subscription and are charged only for their connection time, which appears on their France Telecom bill.

This type of offer, along with flat-rates, is still a very common way to access the Internet in France, and most ISPs offer it. It is aimed primarily at occasional or new Internet users. Free Télécom claims to have about one million active[1] subscribers to its "per-minute" offer.

1 An active subscriber is a listed subscriber that has connected to the ISP at least once in the last 30 days.

The relationship between France Telecom and Free Télécom for the supply of this type of third party billing offer is as follows:



France Telecom bills and collects payment for Internet access calls on behalf of the operator that collects the Internet traffic. France Telecom then pays the operator collecting the calls (Free Télécom in this case) which qualify for France Telecom tariff options. To simplify the payback calculation, France Telecom does not pay each operator for the revenues actually generated by the Internet calls but an amount corresponding to the average revenue per minute.

Free Télécom pays France Telecom for interconnection as per the standard interconnection offer as well as for the third-party billing and payment collection.

The formula for calculating the average revenue established by ART following rulings on several disputes in 2000 (9Télécom, Siris and Free Télécom) is as follows:

$$\text{Average revenue} = \frac{\text{0860 traffic revenue+tariff option revenues - flat-rate option management costs}}{\text{0860 traffic volume}}$$

The average revenue for each traffic category (residential and business) is calculated using this formula. The combined average revenue is then calculated using an allocation rule to determine the relative proportions of residential and business traffic. The 0860 traffic volumes taken into account for the allocation rule are the total traffic volumes for all interconnected operators.

In year N, France Telecom provides the forecast average-revenue figures for that year and the final values for year N-1.

The amounts calculated by France Telecom were as follows:

Average revenue excl. VAT (euro cents)	1999	2000	2001
Off-peak	2,58*	2,75	2,445
Peak	2,00*	1,77	1,888

* By applying time-of-day weighting of 1.1 off-peak and 0.85 peak to 14.68 euro cents (decision no. 00-489).

b. The basis of the dispute

Initially Free Télécom disagreed with the average-revenue calculation and requested a calculation using the actual and not the average revenue for each operator. However, Free Télécom withdrew this request when informed of the difficulties of performing this calculation (tariff options in particular).

Free Telecom finally applied to ART, complaining of the amount of the average revenue proposed by France Telecom for 2001, and, more generally, the lack of proof in support of the France Telecom proposals. Free Télécom asked ART to recalculate the average revenue for 2001 and to redefine the method to be used in the future.

c. ART's decision[1]

ART considered first, that by taking into account the traffic of all interconnected operators and not just the Free Télécom traffic, France Telecom might, in certain cases, make payments significantly different from Free Télécom's real average revenue. Use of this method implies that the operator's revenue depends on the traffic profiles of the other interconnected operators.
During the procedure, France Telecom volunteered to change the average revenue calculation method in the future by taking into account the split between residential and business traffic, operator by operator.

As a result, ART ruled that the average revenue calculation for Free Télécom would be based on Free Telecom's own business/residential traffic split, as of 30 November 2002.

For subsequent calculations , ART requested France Telecom to send the summary tables (that it had supplied to the dispute hearing in response to a questionnaire) to all operators at least twice a year so that they could reconstitute the detailed average-revenue calculation.

Finally, in the absence of business/residential traffic data on a per-operator basis, there are two possibilities for calculating the average revenue for 2001.

• either apply the business/residential traffic split to the overall traffic by including the traffic switched to 086B PQ MCDU numbers and taking into account therefore, not only the interconnected operators' traffic, but also the traffic switched by France Telecom to 086B PQMCDU numbers for its own ISP customers,
• or by considering only the interconnection traffic and applying the allocation rules to it alone.

1 ART Decision no. 02-511 dated 27 June 2002 ruling on the Free Télécom and France Telecom dispute on the conditions for determining the turnover for traffic to Free Telecom switched access Internet services via 08 6B PQ MC DU numbers and charged to the calling party at local Internet traffic rates, OJ dated 21 September 2002

ART considered that it was reasonable to calculate the value of the interconnection traffic by applying a business/residential allocation rule corresponding to interconnection traffic.

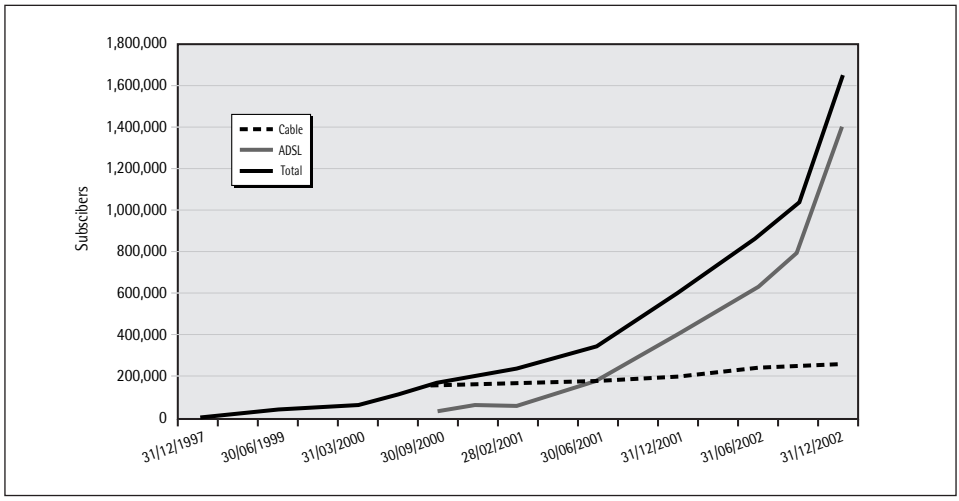
The data supplied by France Telecom in response to the questionnaire made it possible to calculate the residential/business interconnection traffic split for 2001. As a result, ART established the average revenue for 2001 at 2.29 euro cents (15 FF cents) for Free Télécom traffic to 086B PQ MCDU numbers and billed at the local Internet tariff before taking into account management costs and tariff options.

III. Broadband Internet

A. Market Figures

The number of broadband subscribers rose sharply in 2002, particularly in the last quarter. There were 1.7 million broadband subscribers (cable + ADSL) at the end of December 2002 with over 400 000 new subscribers in the last quarter.

Broadband subscribers (cable and ADSL)



Source: AFA, AFORM, France Telecom

Broadband Internet revenues

Euros (million)	1999	2000	2001	2002	Change
Broadband Internet revenues	n.a.	59	182	321	+76,4%

Change in installed base

Units	31/12/99	31/12/00	31/12/01	31/12/02	Change
Number of narrowband subscribers	n.a.	197,911	601,500	1,682,992	279.8 %
Cable[1]	50,417	121,911	190,322	282,992	+48.7 %
ADSL[2]	n.a.	67,532	408,386	1,400,000	+342.8 %
Licensed operators	n.a.	87,881	122,147	335,182	+274.4 %

The number of broadband Internet subscribers has increased by a factor of 2.5 compared to December 2001. Growth is driven by ADSL with 1.4 million subscribers, an increase of nearly 350%. The number of cable Internet subscribers continues to grow but at a slower pace than ADSL: 283 000 subscribers at the end of 2002, or a 50% increase compared to December 2001.

Trends in 2002 suggest that France should partly make up its lag in respect of European neighbours.

The limiting factor is probably PC penetration, which is around 38%.

B. Various access modes

There are now a wide variety of broadband Internet access modes.

The definitions of low and medium speed for Internet access are subjective and depend on the content to be transferred and what is considered to be normal service quality.

For certain access modes it is necessary to distinguish between downstream (downloading, Internet to PC) and upstream (transmission, PC to Internet). There is also a distinction between the maximum bit rate (that can be reached during off-peak hours when fewer users are connected) and the guaranteed bit rate (available during peak hours).

These differences, albeit arbitrary, are nonetheless important for the end user. If not explained carefully, they may result in serious disappointment for consumers promised fast Internet access but finding that, in reality, the speed is hardly better than via the switched network.

ART considers that narrowband or low speed corresponds to switched network access. The other access modes described below are broadband or high-speed access.

128 kbps could possibly be called medium speed in the future. However, this classification cannot be put forward as a standard and will only come into use once there is sufficient feedback from end users, who have only recently been exposed to this type of offer.

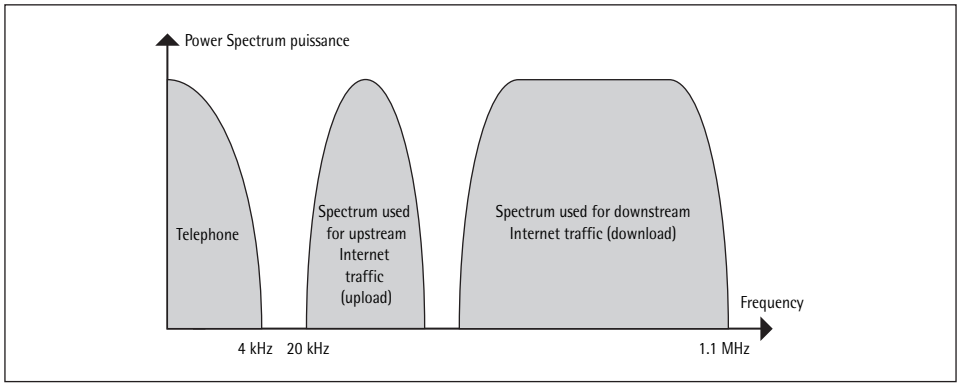
1. Wireline technologies

a. DSL

This is the most widely used access mode in France. DSL technologies use the upper frequencies of the copper pair connecting the subscriber to the switched network; the lower frequencies are used for voice. Hence, users can access the Internet without tying up their telephone line.

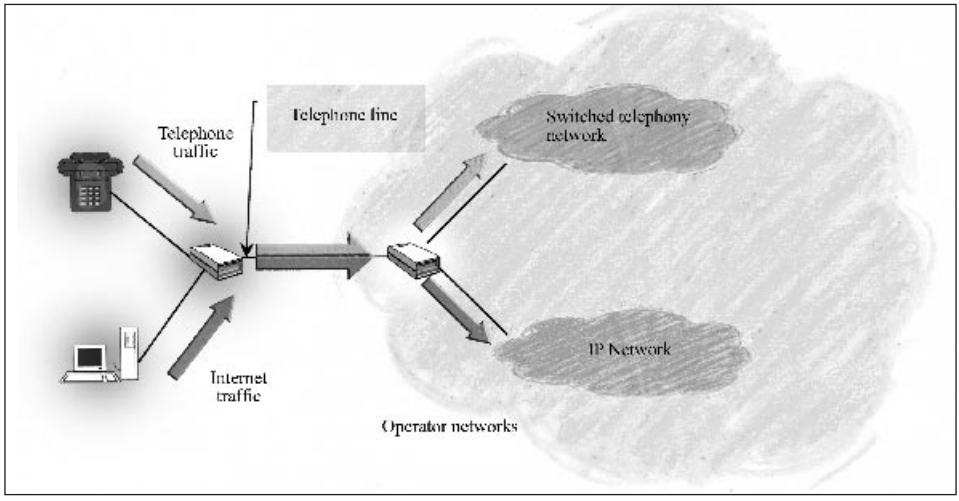
1 Source AFORM.

2 Source France Telecom.



source: ART

Internet traffic is carried on a copper pair (as is telephone traffic) from the user's PC to a distribution frame, which is the first element in the switched telephone network. At this point, it is separated from the telephone traffic and sent to a separate IP network.



source: ART

ADSL and SDSL are currently operational but other xDSL technologies such as VDSL are in the pipeline. They vary in terms of available bit rate, symmetrical or asymmetrical upstream and downstream channels, or by the maximum distance between the subscriber and the distribution frame for an acceptable bit rate.

Certain lines are not suitable for the provision of effective xDSL access , the main reason being the distance between the subscriber and the local telephone exchange.

In addition, this technology requires the installation of special equipment (DSLAM) at the

main distribution frame. This equipment is installed either by France Telecom or by an alternative operator if this latter unbundles the line[1].

At the end of 2002, approximately 2000 distribution frames in France were equipped, covering nearly 70% of the population in France.

ISPs offer flat-rate packages providing permanent and unlimited access at bit rates ranging from 128 kbps to 1024 kbps.

The can use:

- the France Telecom ADSL IP collect offer called "option 5",
- an alternative operator collection offer based on the France Telecom ADSL Connect offer called "option 3",
- an alternative operator collection offer based on shared access called "option 1".

The different options are technically neutral for the end user but allow the ISPs to differentiate their services and tariffs.

b. Cable

Cable networks were initially established for audiovisual programme distribution. However, they can also provide telecommunications services and in particular, Internet access. The cable operators were the first to provide permanent Internet access. For historical and regulatory reasons, cable networks do not provide uniform geographical coverage but are divided into geographical operating areas, each of which is served by an operator.

Cable Internet access requires networks to be upgraded and converted to digital working. There are currently 6 million cable outlets in 650 communes serving nearly 15 million inhabitants.

As of 31 December 2002, there were 282 992 cable Internet subscribers, a 49% increase in one year.

c. Optical fibre

Users with high bit rate requirements (typically large companies) are connected via optical fibre. The potential bit rate in this case can exceed 1 gbps.

Optical fibre generally remains a costly access method for residential access because of the construction work required to connect the customer. This type of access is generally used in large office complexes. The potential bit rates obtainable with xDSL technologies notably, have reduced interest in investing in optical fibre for residential customers.

The deployment of optical infrastructure in the access network could be justified in the medium term assuming a significant change in demand for broadband multimedia services generating sufficient revenue. In any case it will be a step-by-step process.

1 Local loop unbundling allows France Telecom's bare copper pairs to be used by an alternative operator which installs its own transmission equipment on the line. The incumbent is naturally paid by the alternative operator for the use of its network. The alternative operator must place its transmission equipment at the end of the local loop so that the lines can be connected to its own network.

2. Wireless technologies

a. Satellite

Satellite access is a broadband access method similar to ADSL or cable which can be used in rural or urban areas. However, it is more particularly adapted to isolated areas that cannot be reached with other infrastructures.

Two types of offer are available:

- a bi-directional access offer where the upstream and downstream paths use a satellite channel,
- a one-way access offer with a terrestrial return path using the switched network.

The tariffs of the offers proposed on the market and the cost of equipment have dropped significantly. Today, the prices of the services being proposed are close to ADSL or cable prices for an equivalent bit rate.

b. Wireless local loop

Wireless local loop (WLL) is a radio technology allowing fixed subscribers equipped with an antenna to be connected to an Internet access point via a radio channel. The commercial offers currently available have bit rates ranging from 64 kbps to 34 mbps. These solutions are essentially aimed at business users.

• Market players as of 31 December 2002

The wireless-local-loop market underwent a period of consolidation in 2002. At the end of 2002, there remained only five operators compared with nine a year before. Two of these are in metropolitan France and three in the overseas territories.

9 Telecom Entreprise, formerly Firstmark Communications France, is a subsidiary of the LD Com group and has a national licence and frequencies in the 26 GHz band. LD Com had already bought Squadran, the second operator with a national licence, in June 2002. ART therefore requested that in the context of the planned merger between the two national wireless local loop operators, LD Com provide a wireless local loop offer in all regions in France by the end of 2002 and return all the frequencies that had been allocated to Squadran whose licence had been revoked. LD Com also took over Belgacom France, the regional WLL operator in 2002.

9 Telecom Entreprise's national licence put it in competition in certain regions with Altitude Télécom (Haute Normandie and Basse-Normandie) and its subsidiary Broadnet (Paris urban area). The regional operator Landtel ceased activity following liquidation of the company in 2002.

In the overseas *départements*[1], two subsidiaries of the XTS group, XTS Network Océan Indien and XTS Caraïbes are licenced to operate a WLL network in La Réunion and in Martinique, Guadeloupe and Guyana respectively.

Finally, Cegetel La Réunion, a subsidiary of the Cegetel group, holds a licence in La Réunion for wireless local loop in the 3.5 GHz band.

• ART actions

On 31 December 2001, ART initiated checks to verify compliance with the coverage obligations contained in the licence specifications for wireless-local-loop operators.
To verify compliance with commitments, ART asked the WLL operators to supply details of roll-out on 31 December and carried out checks in the field. The roll-out percentage calculations resulting from this procedure led ART

1 See glossary

to initiate four instances of penalty procedures on 8 March 2002 against Landtel France SAS, Broadnet France SAS and XTS Network (Caraïbes et Océan Indien).

On completion of these procedures and in view of observed failures to comply, ART adopted two decisions on 27 June 2002, partially withdrawing the licences held by Broadnet France (decision no. 02-507) and Landtel France (decision no. 02-508). This led to modifications of the licences for the operators concerned. The order modifying the Landtel[1] licence was published in the Official Journal on 19 September 2002 and on 17 September 2002 for Broadnet[2].

As a result, Broadnet, which had since been bought by Altitude Telecom, kept the Paris urban area and Landtel the Paris urban and Aquitaine areas.

ART did not consider that penalties were justified in the case of the two procedures initiated against XTS Network Caraïbes and XTS Network Océan Indien. ART considered that the equipment in the 3.5 GHz band was not sufficiently ready in 2000 and 2001 to allow them to meet their roll-out requirements as of 31 December 2001.

• Verification of operators' obligations

The conclusions of the first verification showed that despite the difficulties of the telecommunications sector, WLL operators had started roll-out within 18 months of receiving their licences.

However, the real picture at the beginning of 2002 was quite mixed, as can be seen from the following figures:

- wireless-local-loop operators had implemented 175 base stations,
- 17 metropolitan areas and an overseas *département*[3] covering 18% of the population had at least one wireless-local-loop operator,
- a WLL offer is available in some 30 large urban areas with more than 50 000 inhabitants,
- approximately 1000 professional customers currently use wireless local loop.

26 GHz band	Number of regions where operator had a presence on 31 december 2001	Number of regions covered by the licence
Firstmark	13	22
Squadran	10	22
Altitude	2	2
Belgacom	7	9
Broadnet	1	15
Landtel	1	7

1 Ordre dated 10 September 2002, modifying the order dated 4 August 2000 authorising Landtel France SAS to establish and operate a public telecommunications network and provide public telephony service. OJ dated 19 September 2002 p. 15422.

2 Order dated 29 August 2002, modifying the order dated 4 August 2000 authorising Broadnet France SAS to establish and operate a public telecommunications network and provide public telephony service. OJ dated 17 September 2002 p. 15304.

3 See glossary.

• Public consultation on frequency allocation

Following partial withdrawals and market consolidation, ART launched a public consultation in November 2002 to gather the opinions of all the players concerned on the issues linked to the use and allocation of the frequencies at ART's disposition, particularly in the WLL bands i.e. 3.5 GHz and 26 GHz. This consultation also covered the 28 GHz and 32 GHz frequency bands.

The available frequencies are summarised below:

3,5 GHz band (on 31 december 2002)

Metropolitan France (2 * 15 MHz)	**3465-3480 MHz and 3565-3580 Mhz lowed & upper band**	**3480-3495 MHz and 3580-3595 MHz lowed & upper band**
	FirstMark Communications France	Available
Overseas departements (2 * 42 MHz)	**3410-3452 MHz and 3510-3552 MHz lowed & upper band**	**3452-3494 MHz and 3552-3594 MHz lowed & upper band**
Guadeloupe	XTS Network Caraïbes	Available
Guyane	XTS Network Caraïbes	Available
Martinique	XTS Network Caraïbes	Available
Réunion	XTS Network Océan Indien	Cegetel La Réunion

26 GHz band (on 31 december 2002)

26 GHz band (2 - 112 MHZ)	24549-24661 and 25557-25669 MHz	24661-24773 and 25669-25781 MHz	24773-24885 and 25781-25893 MHz	24885-24997 and 25893-26005 MHz
Alsace	•	•	•	FirstMark
Aquitaine	•	•	Landtel France	FirstMark
Auvergne	•	•	•	FirstMark
Basse-Normandie	•	Altitude Telecom	•	FirstMark
Bourgogne	FirstMark	•	•	•
Centre	•	•	•	FirstMark
Champagne-Ardenne	•	•	•	FirstMark
Corse	•	•	•	FirstMark
Franche-Comté	FirstMark	•	•	•
Haute-Normandie	•	Altitude Telecom	•	FirstMark
Ile-de-France	•	Broadnet France	Landtel France	FirstMark
Languedoc-Roussillon	•	•	•	FirstMark
Limousin	•	•	•	FirstMark
Lorraine	•	•	•	FirstMark
Midi-Pyrénées	•	•	•	FirstMark
Nord-Pas-de-Calais	•	•	•	FirstMark
Pays de la Loire	•	•	•	FirstMark
Picardie	•	•	•	FirstMark
Poitou-Charentes	•	•	•	FirstMark
Provence-Alpes Côte d'Azur	•	•	•	FirstMark
Rhône-Alpes	•	•	•	FirstMark

• Available frequencies

The public consultation in November 2002 sought to determine the players' requirements for these bands and define the technical organisation required to take into account the available resources and the players' requirements to allow preparation of frequency allocation terms and conditions.

The summary of this consultation was published in March 2003. It showed in particular that resources in the 3.5 GHz band were not sufficiently scarce to justify a call for applications for the available frequencies.

The second ART verification of roll-out obligations as provided for in operators' WLL licences is planned for 30 June 2003. It will allow ART to reassess technical roll-out and commercial development for this alternative broadband deployment technology. In spite of the difficulties encountered by the players, ART is convinced that this technology will allow development of alternative offers for small and medium businesses.

c. WLAN or WiFi[1]

Wireless local area networks (WLAN)[2] can provide point-to-point and point-to- multipoint access services allowing broadband wireless communication between users. These networks are made up of micro-cells allowing broadband Internet access, in particular, to be provided in highly frequented public areas (hot spots) e.g. railway stations, airports, hotels etc. They can also be used to connect isolated areas. The bit rates vary depending on the WLAN technologies used and can reach several tens of mbps between users in the same micro cell. Currently, the conditions for using this technology are completely open, which should enable fast development of this access mode for itinerant users.

• ART actions to relax the regulatory framework for wireless LAN (WLAN) installations in the 2.4 GHz and 5 GHz bands:

Situation up until 2002:

One of the characteristics of the 2.4 GHz and 5 GHz frequency bands is that they are not specifically allocated to a particular user and as such cannot be subject to licence fees. They are used by a wide variety of services including industrial, scientific and medical applications, low-range and low-power radio devices, amateur radio, radio direction finding, earth exploration services by satellite etc.

• The 2.4 GHz frequency bands

The use of these frequencies was authorised for local private networks in 2001, at the same time as the bluetooth standard was finalised. The technical conditions for the use of these frequencies, which resulted from an agreement between the Defence Ministry and ART on 11 January 2001, were very restrictive, greatly limiting possibilities for outdoor use.

• The 5 GHz frequency bands

The frequencies in the 5150 MHz to 5350 MHz bands are authorised for indoor use with a maximum power of 200 mW and forbidden for outdoor use. To guard against interference with national defence equipment, dynamic frequency selection (DFS) and transmitted power control (TPC) mechanisms have been introduced. The 5470 MHz to 5725 MHz band is not open in France.

1 A report is available on ART's website (http://www.art-telecom.fr) in the "Special Report" section.

2 Bluetooth, Home RF, Wi Fi (IEEE 802.11b standard), Hiperlan 2, …

European provisions

2.4 GHz	5 GHz	
CEPT recommendation	CEPT/ERC/DEC/(01)07	ERC/DEC/(99)23
Harmonised ETSI standard	EN 300 328-2	Draft (for EN 301 893)
EC recommendation	20 March 2003	

• Public WLAN consultation

In 2001, the sector showed considerable interest in this technology following appearance on the US market of relatively low cost, easy to develop products using the IEEE standard and in particular 802.11b. In December 2001, ART also launched a consultation to study questions raised by the opening of public telecommunications services in the 2.4 GHz and 5 GHz frequency bands. This consultation was well received with 74 replies sent to ART.

ART published a summary of the contributions on 4 April 2002. This allowed the state of the art to be evaluated from a manufacturing point of view as well as identifying the requirements and possible uses so that the suitability of the regulatory framework in this area could be assessed.

The contributions allowed identification of expectations in a certain number of areas:

- a widely shared interest in offering broadband Internet access in highly frequented public areas (hot spots) e.g. railway stations, airports, hotels etc.

- a fairly general demand for more flexible conditions for exterior use of this technology and for raising the transmitted power limits currently in force,

- requests for authorisation to use WLAN technology as infrastructure in isolated areas,

- the need to maintain the integrity of the numerous independent licensed networks developing WLAN services in these frequency bands,

- warnings about the possibility of distortion of competition with existing networks or future UMTS networks.

It appeared essential to modify the regulation so that the potential of this technology as a driver for broadband Internet access could be explored along with the impetus that it could give to local loop traffic. As soon as this summary was published, ART initiated a regulatory and technical study with a view to providing more flexibility for WLAN networks within the current legislative framework.

A two-fold regulatory mechanism

As a result, ART established a two-fold regulatory mechanism:

- first, a series of decisions allowing the connection of WLAN access points without authorisation (i.e. without an operator's licence) to a public network licensed to provide public services and defining the technical conditions for use,

- secondly, guidelines setting out the conditions for licensing wireless public network trials or for establishing networks for the installation of WLAN access points in public areas.

• WLAN decisions in the 2.4 GHz and 5 GHz frequency bands

On 13 June 2002, ART presented several draft decisions to the Radiocommunications Consultative Committee. There were two decisions[1] for each frequency band (2400-2483.5 MHz and 5150-5350 MHz): one defining the conditions for using the frequencies and the other defining the allocation conditions.

These decisions allow the provision of public WLAN services in public passageways or hot spots by authorising unrestricted installation of access points.

In addition to extending the service offer to public services, this change in regulation eases the technical conditions for using this equipment. The easing of restrictions by the Ministry of Defence (which will regularly update the list) in a certain number of *départements*[2] brings the conditions in France close to the conditions currently prevailing in Europe. These decisions ease the technical conditions for private use of this technology.

Given that these decisions modify the conditions for marketing terminal equipment, they had to be submitted to the CCR members for comment and then to the European Commission and the member States for opinion. This process takes three months. Accordingly, ART notified Brussels of the WLAN decisions in the 2.4 GHz and 5 GHz frequency bands on 16 July 2002 and received the European Commission's comments on 15 October 2002. The main request from the Commission was to ease conditions of use for the 5 GHz band.

ART adopted the final texts, which took these remarks into account, on 31 October 2002 for the 2.4 GHz band and on 3 December for the 5 GHz band.

ART submitted the two draft projects concerning conditions of use to the Telecommunications Minister for approval i.e. draft decision no. 02-1008 and draft decision no. 02-1092. A ministerial order dated 23 September 2002 approved decision no. 02-1008.

• Guidelines for establishing trial conditions for public networks:

Over the summer, ART prepared guidelines for trials of public networks, notably in the 2.4 GHz frequency band. The objective of these trials was to test the technology under live conditions and to evaluate its capacity to improve broadband Internet access in areas that are poorly served by existing networks.

The guidelines also allow new players to enter the "hotspot" market by allowing them to obtain a trial network operator licence for the establishment of public networks and install clusters of WLAN access points using the 2.4 GHz and 5 GHz frequency bands.

On 3 October 2002, ART presented the draft guidelines for trial public networks using WLAN technology to the CCR. They were subsequently adopted on 7 November 2002 by ART.

The trials can be conducted after a licence based on L.33-1 of the Posts and Telecommunications Code has been granted (free of char-

1 -ART decision no 02-1008 dated 31 October 2002 setting the conditions of use for radio installations in the 2400-2483.5 MHz band.
-Decision no. 02-1009 dated 31 October 2002 allocating frequencies to radio installations in the 2400-2483.5 MHz band.
-ART decision no.02-1091 dated 3 December 2002 allocating frequencies for radio equipment in the 5150-5350 MHz band
-ART decision no.02-1092 dated 3 December 2002 defining the conditions of use for high performance radio equipment in the 5150-5350 MHz band.

2 See glossary.

ge). This licence is valid for a maximum of 18 months.

The resulting networks can use indoor and outdoor power levels of 100 mW over the entire band provided that prior special permission has been obtained from the Defence Ministry. In addition, there is the possibility of establishing fixed point-to-point links for these networks in the 2.4 GHz band provided that the power[1] limits are respected or requesting frequency allocations in other ad hoc bands.

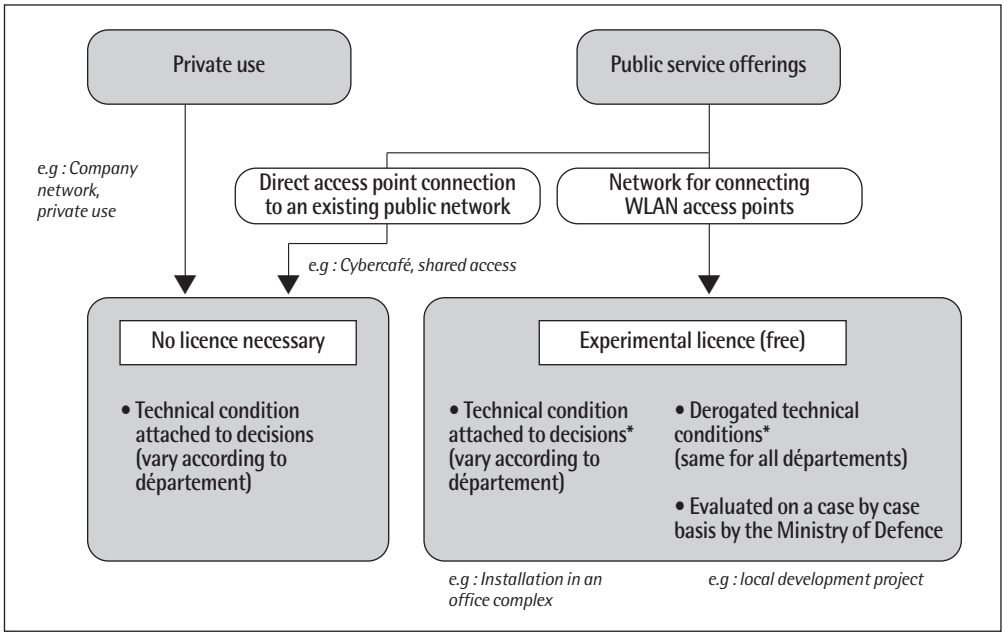
ART also indicated that the frequencies are allocated without any guarantee of protection and on condition that they do not interfere with Defence Ministry equipment.

ART examined the first requests for trial licences in accordance with the guidelines in December 2002. As an example, a favourable recommendation was sent to the Minister responsible for Industry for the following cases:

- a 2.4 GHz network developed by a geographically isolated user group giving them broadband access via WiFi and satellite,
- another concerning a company wishing to deploy networks in public places for the connection of WLAN access points in compliance with the conditions set out in the ART decisions.

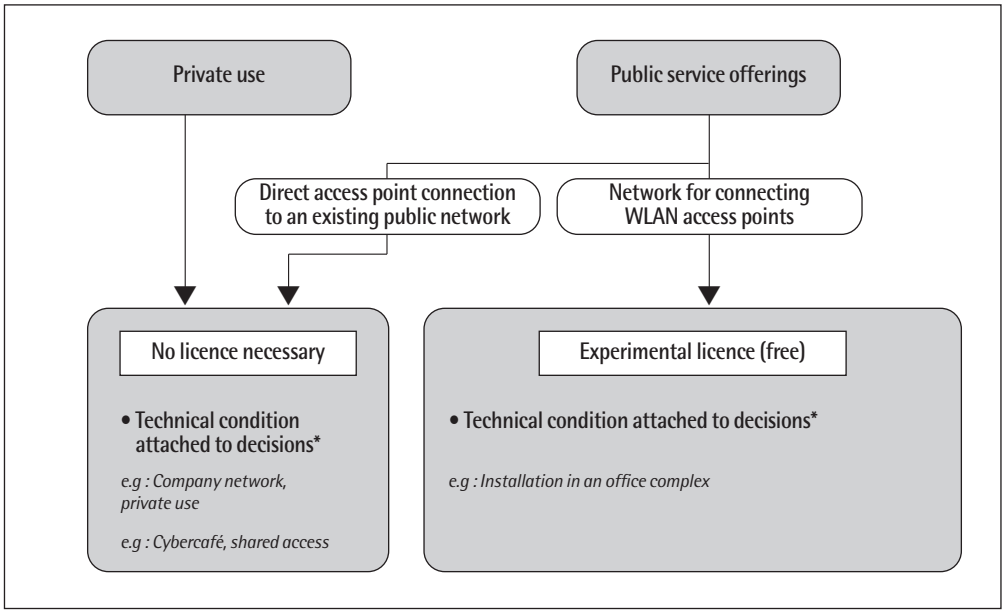
1 EIRP: equivalent isotropically radiated power

The regulatory framework for 2.4 GHz WLANs



*Equivalent isotropically radiated power (EIRP): 100 mW indoor and outdoor

The regulatory framework for 5 GHz WLANs



*5150-5350 MHz band EIRP < 200mW no outdoor use

3. Mobile Internet

The introduction of mobility is a new step in the technological evolution of Internet access methods. Although it is still in its infancy in Europe, it promises very high growth in the years to come. The market has significant potential given that there were 37 million mobile network subscribers at the end of 2001.

WAP was introduced in the year 2000 in France and was the first communication protocol allowing Internet access on mobile networks via a compatible terminal. This first attempt was a failure both technically (because of the low bit rates) and commercially.

GPRS technology, which still uses traditional GSM networks, is a packet mode data transmission standard that significantly increases available bit rates. Introduced gradually by the operators since the end of 2001, GPRS provides faster access to mobile Internet (several tens of kbps) and is billed on the basis of transmitted data volumes using a special portable phone.

The UMTS standard should progressively replace GSM. When these new mobile or so-called third-generation networks become available, it will be possible to access the Internet with bit rates of several hundred kbps.

C. Unbundling

1. Definitions and market

Local loop unbundling, or unbundled local network access , allows new operators to use the incumbent's local copper pair network to connect subscribers directly.

a. There are two ways of implementing unbundling in France:

- The end user is no longer connected to the France Telecom network but to the alternative operator's network. Hence, no subscription is payable to France Telecom.

- In shared access or shared local loop, the upper frequency band of the copper pair is made available to the alternative operator, which can use it for ADSL services, for example. The lower frequency band is used for telephony and is managed by France Telecom. Unbundling does not change anything as far as the telephone service is concerned: the incumbent continues to provide the service and charge a subscription.

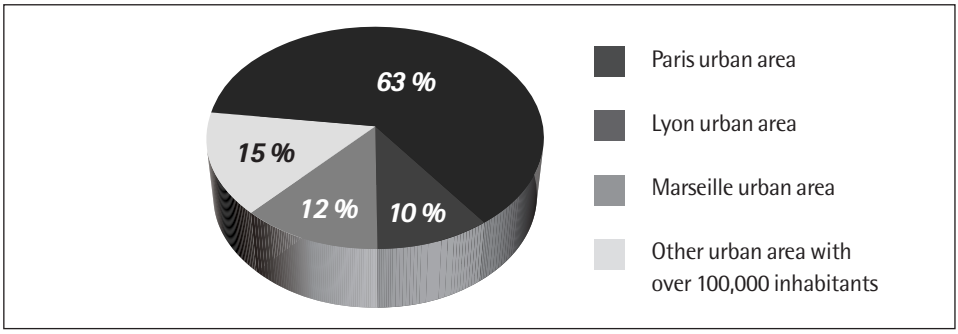
b. Operators providing unbundled services

An operator must hold a Posts and Telecommunications Code L.33-1 licence and sign a local-loop access agreement with France Telecom in order to provide unbundled service. Nine operators have signed such an agreement, however in 2002, there was some concentration in the sector. LD Com took over FirstMark, Kaptech and 9Telecom, which had all been active individually in the local loop unbundling market. Four operators out of the nine are still active in unbundling i.e. Colt, Easynet, LD Com and Free.

c. Operator coverage

When the incumbent operator provides unbundled lines it must also offer co-location for the operators' unbundling equipment in the main distribution frame area or close by. At the end of 2002, 128 co-location rooms had been built for this purpose in Paris, Lyon and Marseille as well as in several other cities with over 100 000 inhabitants. The operators providing unbundling services plan more widespread roll-out in 2003, extending the service to other cities, in particular.

Co-location rooms ordered by operators

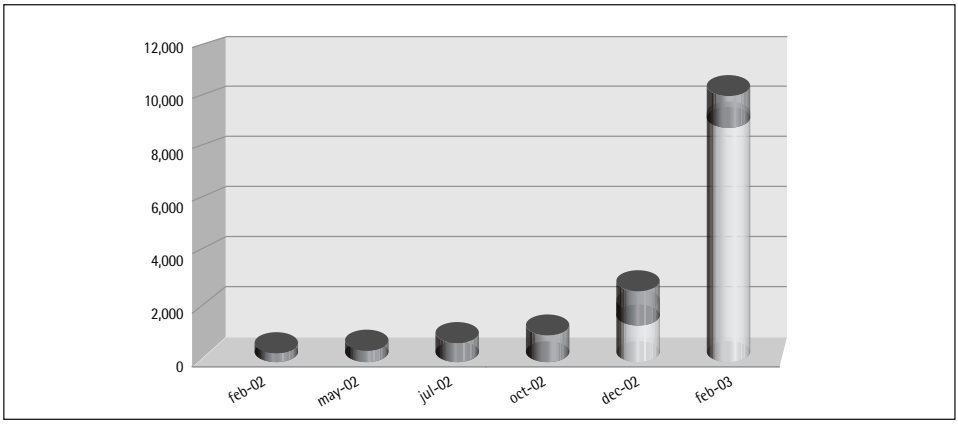


d. Unbundled lines

Full unbundling, which is aimed more at business customers, started at the end of 2001 and continued throughout 2002. In December 2002, there were approximately 1000 fully unbundled lines in Paris and the inner suburbs. Full unbundling allows the operator providing it to offer data and/or voice services to professional customers in the coverage area.

At the end of 2002, extremely competitive broadband Internet offers for consumers based on shared-access to the local loop appeared on the market. Within a few weeks, the number of shared-access lines went from a few dozen trial lines to around 10 000 lines at the beginning of February 2003. Shared-access lines are continuing to grow steadily and shared access itself has become a market reality.

Number of unbundled lines as of 1 February 2003



Inset: Local loop unbundling background

1999	ART launches preparatory work for unbundling, notably via wide-ranging public consultation and establishment of working groups.
july 2000	First trials
12 september 2000	Publication of French decree on unbundling
18 december 2000	Publication of Community rules on unbundling
2001	Orders and construction of first co-location rooms for unbundling
november 2001	First commercial fully-unbundled lines
november 2002	First commercial shared-access lines

2. Local loop unbundling report for 2002

The local loop unbundling report was created on 31 October 2001 to report on nationwide progress on local loop access. It is updated and published twice yearly.

Local loop unbundling news is presented in the form of data provided by the operators concerned. It includes the sites and lines delivered by France Telecom over the last two months. Progress is illustrated by: a map showing urban areas with unbundling sites and a table showing unbundled line deliveries. This allows evaluation of the local loop unbundling situation and the impact of events likely to occur during this period to be analysed i.e. ART decisions, modifications to the reference offer, changes in operator company structure etc.

By monitoring the situation in this way in 2002, ART was able to ensure that implementation of the process was well and truly under way. All 128 orders for co-location rooms were delivered and line orders grew sharply (2700 lines ordered by alternative operators).

Analysis of the figures in the report made it possible to determine the impact of decisive events such as implementation of the France Telecom reference offer on 14 June 2002 allowing establishment of dedicated space in the incumbent's distribution frame rooms. This solution increased the number of unbundling sites by 50% in 2002 (nearly all outside the Paris metropolitan area) and orders are still growing steadily.

The latest development at the end of 2002 was the start of the pre-production phase for shared access. The report allows ART to continue monitoring progress on local loop access nationwide and also allows spot analyses of the state of broadband access competition.

D. ART actions

1. Competition in the ADSL market: recommendations to the Competition Authority

The Competition Authority handled several ADSL related cases requiring an ART recommendation in 2002.

a. Conditions for commercial launch of the France Telecom offer

• The T-Online decision

The Competition Authority decision 02-MC-03 dated 27 February 2002 concerning the T-Online referral related to commercial launch of France Telecom group ADSL offers.

The Competition Authority's decision, which agreed with the analysis in ART's recommendation[1], adopted the following measures of conservation:

- France Telecom was to make an extranet server available to ISPs containing information on the suitability of telephone lines for ADSL and allowing them to request ADSL access under the same conditions as Wanadoo.

- Wanadoo pack sales are to be suspended in France Telecom commercial outlets pending implementation of the extranet server.

This decision and the corresponding ART recommendation are described in more detail in ART's annual report for 2001.

• The Liberty Surf decision[2]

The Liberty Surf (Tiscali France) referral, which was introduced at the same time as the T-Online case mentioned above, concerned several points relating to the way the ADSL market was working.

According to Liberty Surf, the Wanadoo pack tariffs caused a price squeeze due to the level of the France Telecom tariffs to ISPs for intermediate services needed for marketing competitive offers. These intermediate services concerned IP/ADSL resale and collection offers to ISPs as well as ADSL CONNECT ATM and local loop unbundling offers aimed at operators. Liberty Surf requested that the Competition Authority order Wanadoo to stop selling its ADSL offers, as a measure of conservation, until offers for intermediate services resulting in elimination of the price squeeze effect became available. The Competition Authority considered that it was possible that the retail price of the Wanadoo pack was lower than the access charges payable to France Telecom and that the other ISPs' offers were not profitable given the level of payment due to France Telecom for IP/ADSL.

Nevertheless, the Competition Authority followed ART's recommendation[3] and dismissed the Liberty Surf request for measures of conservation, the reason being that the request was made at a time when IP/ADSL tariffs were about to change due to the ongoing tariff approval process and that these changes would satisfy Liberty Surf. ART had in fact made a favourable recommendation on 18 July 2002[4] on significant IP/ADSL tariff reductions that would allow ISPs to supply ADSL packs under satisfactory economic conditions.

The ISP asked for the same commercial terms and conditions as those provided by France Telecom to Wanadoo (customer line suitability checks and ADSL access ordering). As a result, Liberty Surf requested the same measures of conservation as T-Online with, in particular, the establishment of an extranet server. The Competition Authority rejected this request for which it had already given a response in the case of the T-Online referral.

Liberty Surf criticised the use by France Telecom of data and information from its fixed-telephony activity to promote Internet services and requested that the Competition Authority order cessation of this practice as a measure of conservation. The Competition Authority considered that in substance, such practices

1 Recommendation 02-35 dated 09/01/02 ; OJ dated 29/04/02.

2 Competition Authority decision no. 02-D-38 dated 19 June 2002 relating to a referral and request for measures of conservation by Liberty Surf, BOCCRF dated 30/09/2002 no. 14.

3 Decision 01-1112 ; 16/11/01 ruling on the Liberty Surf , France Télécom dispute on conditions for selecting customer modems in the context of the IP/ADSL access contract.

4 Recommendation 02-594 dated 18/07/02 ; OJ 20/10/02.

could be contrary to the provisions of competition law, if use of data possessed by France Telecom as local-loop operator and used by the commercial outlets to market Interternet services supplied by Wanadoo were to give its subsidiary a competitive advantage over its rivals. However, the Competition Authority did not grant the application for measures of conservation made by Liberty Surf, considering that its application did not contain sufficient weight of evidence.

Finally, Liberty Surf also criticised France Telecom for promoting its ADSL offers on the envelopes used for sending fixed-telephony bills to subscribers and asked the Competition Authority to order cessation of this practice as a measure of conservation. The Competition Authority considered that the fact that France Telecom used envelopes to promote broadband telecommunications services without mentioning services provided by its subsidiary Wanadoo, could not be considered as being contrary to competition law given that the customer can freely choose his ISP. Hence, it declared that the content of the Liberty Surf application was not acceptable.

b. The modem market (Olitec decision[1])

Olitec manufactures Internet connection equipment and in particular, supplies access modems for broadband Internet. At the time of the events in question, France Telecom established reference lists of all modem brands successfully tested for technical compatibility with its installed DSLAM equipment.

Olitec applied to the Competition Authority concerning the conditions under which France Telecom established the reference lists, considering them to be non-transparent and not impartial.

In particular, Olitec criticised France Telecom for:

- having refused to list its modems and not giving Olitec access to the information necessary to successfully pass the tests,
- refusing to provide a Netissimo access to customers with an Olitec modem and disparaging these modems as concerns distributors.

ART gave a precise account of the context in its recommendation to the Competition Authority. At that time, ART had been called on to settle a claim brought by Liberty Surf on the same subject and had issued a ruling in a decision dated 16 November 2001[2]. In its decision, ART considered that ADSL technology was still new and that given that it was not completely standardised, it would be premature to impose the publication of technical interface specifications on France Telecom guaranteeing that all compliant manufacturers' modems would interwork with the DSLAM and the network. However, it instructed France Telecom to establish a mechanism whereby ISPs could have modems of their choice listed, in cooperation with the manufacturers concerned and in an independent laboratory of their own choosing, based on a stable, transparent and impartial test procedure.

In this particular case, and in view of the elements provided by Olitec on the conditions under which it had sought listing of its modems, the Competition Authority considered that the facts denounced by Olitec could not be considered sufficient proof of anti-competitive practices. As a result, the application was disposed as to its content, likewise the request for measures of conservation.

1 Competition authority decision n° 02-D-40 dated 25 June 2002 concerning the Olitec referral and request for protective measures , BOCCRF dated 30/06/2002 n°14

2 Decision 01-1112 dated 16/11/01 ruling on the Liberty Surf, France Telecom dispute over conditions for selecting customer modems in the context of the IP/ADSL access contract.

Concerning this matter and following on from the dispute decision mentioned above, ART took the initiative in July 2002 of setting up a multilateral working group bringing together modem and DSLAM manufacturers, network operators and ISPs to review application of the decision.

Coordination of the group was entrusted to the digital communications forum (FCN). In 2002, its work essentially concerned the procedures for communicating product changes between DSLAM and modem manufacturers to guarantee interoperability This work led to creation of a label that would ensure interworking between a modem and the operators DSL networks for a certain period of time.

This label, which will be provided under the control of the FCN, should be available in 2003. The main difficulties lie in definition of the commitments and obligations incumbent on the parties to comply with the principles of the label.

ART supports this approach initiated by the players and encouraged them to standardise ADSL line interfaces. This would allow ADSL network termination points to be fully defined and the technical specifications to be published.

2. Improvement of certain technical and tariff conditions for unbundling: The LD Com/France Telecom dispute[1]

On 28 March 2002, ART ruled on a dispute between LD Com and France Telecom that had been brought before it on 4 January 2002. This decision, which had a significant impact on the market, removed certain ADSL market entry barriers for France Telecom's competitors and gave them greater visibility.

The claim concerned four separate aspects of unbundling:

- the principles governing implementation by France Telecom of the splitters (required for separating voice and data frequencies) and internal tie cables and the corresponding tariff mechanism,
- a France Telecom guarantee of unbundled line restore time (GTR) of 4 hours, 24 hours a day and 7 days a week,
- the possibility for LD Com to select the entry chamber in France Telecom sites,
- reduction in service access charges for unbundled lines.

ART considered that on the first point, which is essential for the development of residential broadband Internet access, France Telecom should propose a frequency splitting filter. ART set the tariff for this service at a maximum of 2.25 euros/month per access for 2002. These measures put operators in an equivalent situation to France Telecom as far as the splitters are concerned, reduce entry costs and provide better visibility for cost forecasts. However, the tariff conditions for the internal tie cables had not been previously discussed by the parties and ART rejected the request pursuant to the provisions of article L.36-8 of the Posts and Telecommunications Code.

On the second point, ART considered that France Telecom should propose a guaranteed restore time of four hours, 24 hours a day and 7 days a week for a monthly tariff not exceeding 20 euros per month and accompanied by penalty incentives. This service was required to allow LD Com to market professional services on unbundled lines with quality of service conditions comparable to those of France Telecom.

1 Decision 02-278 dated 28 March 2002, OJ dated 09/06/2002

On the third point, ART requested France Telecom to allow LD Com to choose the entry chamber in its sites. ART rejected the fourth LD Com request on the grounds of insufficient justification.

3. ART modifies the France Telecom reference offer

On 16 April 2002, ART ordered France Telecom to modify the tariff and operational conditions for its unbundling reference offer as requested the previous autumn. The ART improvements were aimed at extending unbundling development beyond professional customers in several large cities. These improved essential tariff and operational conditions for unbundling came into force on 2 May 2002.

For the tariffs, ART decided to:

- lower the access tariff for full unbundling from 14.5 to 10.5 euros (-28%),
- set a maximum of 2.9 euros per access for the monthly subscription in the case of shared access (splitter included),
- reduce installation costs from 107.9 euros to 78.7 euros (-27%),
- impose a monthly subscription for the internal tie cables, at tariff levels defined as a measure of conservation pending the outcome of an ART investigation. Until now, internal tie cables had been charged on the basis of one-off payment based on a France Telecom quote.

ART's decision on the operational conditions marked progress in co-location conditions for operators on France Telecom sites as well as in ordering and delivery conditions for unbundled pairs.

The co-location part of the decision obliges France Telecom to provide space in its own equipment rooms when available for all sites where separate co-location space has not yet been the subject of a firm order from the operators. This solution provides a significant entry cost reduction compared to the previous solution which required new equipment rooms to be built specifically for the operators. The decision includes practical measures to ensure that the solution is both simple and cost- effective. They include in particular, the possibility for operators to have permanent, unaccompanied access to their co-located equipment for maintenance purposes without prior appointment. The decision also covers the lead times for operators to find out whether space is available and take delivery of it once the necessary work has been carried out, where applicable.

For ordering and delivery of unbundled pairs, the decision makes a point of specifying the conditions for ensuring that the principle of impartiality between the incumbent and the other operators is upheld. It obliges France Telecom to determine and publish the average lead times for processing orders and to ensure that the operators do not have to bear costs that cannot be correctly identified and forecast during the initial phase of unbundling.

4. Reduction in France Telecom pricing for the options 3 and option 5 offers: Tariff recommendations

ART issued two particularly important tariff recommendations concerning broadband Internet access:

- an unfavourable recommendation no. 02-346 on 30 April 2002,
- a favourable recommendation no. 02-594 on 18 July 2002.

In the recommendation dated 30 April, ART asked France Telecom to prepare new proposals which would meet the requirements for consistency between the "option 5" offer for Internet service providers and the "option 3" offer for operators to ensure effective competition in the various segments of the ADSL market.

The ensuing discussions between France Telecom and ART resulted in new tariff proposals for IP/ADSL and "option 3" offers.
ART examined the proposals to ensure that the principles of consistency as defined in its recommendation dated 30 April were upheld. In particular, it examined the effect that the new proposals would have on the conditions under which ISPs and operators could operate in the market.

a. Significant tariff reductions of 25% to 40% for all players

• For option 5

ART issued a favourable recommendation on the new France Telecom proposals on 18 July. Option 5, which is aimed at Internet service providers, fell by an average of 25%. In addition, there will be a larger range of bit rates up to 1024 kbps for ISPs and, as a result, their customers.

• For option 3

Option 3, which is aimed at the operators, fell by 40% on average. In addition, the operators will be able to offer the ISPs a differentiated range of bit rates comparable with France Telecom's IP/ADSL offer, thereby allowing them to compete with each of the incumbent's new IP/ADSL offers.

• A new so-called "differentiated" option 3

In addition, France Telecom proposed a new option 3 offer which provides differentiated bit rates in line with the range offered to the ISPs. This offer has the following characteristics: the access tariff is the same as the corresponding IP/ADSL access tariff and the bit rate tariff corresponds to that of the "standard" option 3 offer. The operators will be able to choose between the two option 3 offers i.e. the standard offer for both residential and professional customers and the so-called "differentiated" offer which allows the operator to compete with any France Telecom retail offer.

• Implementation on 15 October 2002

The availability of the financial and technical conditions for "option 3" must allow the competing operators to offer their services to the ISPs at the same time as the incumbent operator to avoid delays which would render these changes ineffective. In view of the time required to prepare the offers, ART asked for the technical and financial conditions to be ready by 15 September 2002 at the latest so that offers could be made to the ISPs by 15 October 2002.

b. A mechanism which is now complete and consistent

These tariffs were approved on 29 August 2002 on condition that they be implemented on 15 October 2002. Hence, the new measures led to a very significant improvement in the situation of Internet service providers in the ADSL market while at the same time guaranteeing viable market entry conditions for the operators.

c. Tariffs

• **ADSL Line**

	Existing tariffs	Proposal july 2002	Change with respect to previous tariffs
128kbps ADSL Line		€16 incl. VAT	
Ligne ADSL 512 (ex-Netissimo 1)	€ 30 incl. VAT	€25 incl. VAT	- 17 %
Ligne ADSL 1024		€51 incl. VAT	
ADSL pro 1024 (ex-Netissimo 2)	€90 excl. VAT	€80,13 incl. VAT or €67 excl. VAT	- 26 %

• **Accès IP/ADSL**

	Existing tariffs	Proposed tariffs	Change with respect to previous tariffs
IP/ADSL 128		€11.6 excl. VAT	
IP/ADSL 512	€21.3 excl. VAT	€15.5 excl. VAT	- 27 %
IP/ADSL 1024		€37.1 excl. VAT	
IP/ADSL pro 1024	€76.5 excl. VAT	€58.2 excl. VAT	- 24 %

Note: France Telecom decided not to market the offer "La ligne ADSL 128"

• **Architectural and functional aspects of the IP/ADSL collect offer**

In its recommendation dated 30 April 2002[1], ART asked France Telecom to maintain a traffic collection offer for metropolitan France and the overseas *départements*[2]. France Telecom agreed to this request in the framework of the current tariff decisions i.e. the IP/ADSL collect offer is broken down into an offer for metropolitan France, a specific offer for the overseas départements and a national collection offer including traffic routing from the overseas départements.

The creation of a new offer called "collecte IP/ADSL Open" which provided end-to-end traffic routing from the subscriber to the world wide web, thereby including management of Internet connectivity via the France Telecom IP network. In its recommendation dated 30 April, ART considered that this offer, which combined monopoly services (the actual collection) with services open to competition (Internet connectivity) led to a combination contrary to competition rules given the state of competition in the collection market. France Telecom withdrew this offer in the proposals made on 15 July 2002.

5. "ADSL Connect ATM" –an intermediate offer: The LD Com/France Telecom dispute[3]

a. Definition of the "ADSL Connect ATM" offer

ADSL Connect ATM is a broadband ATM service offer allowing an alternative operator to market ADSL offers to primarily residential

1 Decision 02-347 dated 30/04/02 ; OJ dated 19/06/02.

2 See glossary.

3 ART decision no.03-27 dated 9 January 2003.

customers (the needs of professional customers are addressed with the Turbo DSL offer).

Technically, it consists of collecting subscribers' Internet traffic from various regional points on France Telecom's network. It allows alternative operators to use their own national transmission infrastructure to deliver all traffic to a single national point for the various ISPs.

This offer also allows alternative operators to complete their ADSL coverage in areas where they do not have their own ADSL equipment (DSLAMs) allowing them to unbundle the local loop.

b. Changes in the "ADSL Connect ATM" offer in 2002

At the beginning of 2002, ART observed that broadband was starting to take off in terms of the number of lines delivered. However, it also noticed that there were disparities depending on which market these technologies were addressing.

ART noted that there was:

- competition in the professional market based on the Turbo DSL offer which was developing rapidly,
- competition in the residential market based on the ADSL Connect ATM offer that was developing slowly leaving France Telecom with a virtual monopoly.

In view of this less than satisfactory situation and in the interests of making the competition more effective in the residential ADSL market, ART was keen to ask the various market players to suggest possible ways of proceeding. They were initially consulted by means of a detailed questionnaire and then invited to various meetings covering the technical and economic aspects.

This process concluded with a summary presented in April 2002. It highlighted the necessary technical and economic changes required for the offer to be a viable proposition and called on the parties to set up bilateral negotiations on conditions of implementation. It was in this context that LD Com applied to ART on 10 July 2002 for a ruling on a dispute with France Telecom concerning the ADSL Connect ATM offer.

c. The dispute

ART ruled on the dispute, which related to the tariff, technical and operational conditions of the ADSL Connect offer, on 9 January 2003. In its decision, ART defined the conditions that it considered fair and which would allow alternative operators to offer ADSL Internet service providers under economic conditions similar to those offered by France Telecom internally.

The dispute chiefly concerned the following:

•Collection of Internet traffic

ART confirmed the tariff levels for regional collection i.e. €23 per month at the central point for a "generic"[1] subscriber, and specified the technical and tariff conditions for collection at the first cross-connect switch, corresponding to the main urban areas in a *département*[2]. The tariff in this case was set at €20.5 per "generic" subscriber per month.

Collection in this case is closer to the end user allowing more scope for differentiation by the operators and allowing them also to take advantage of the broadband networks which

1 A "generic" subscriber uses on average 26.3 kbps in ATM mode.

2 See glossary.

they had previously installed for collecting telephone traffic.

ART also indicated that the option 3 tariffs for the differentiated version should be set in a similar way to the generic reference offer.

• Broadband connection

Broadband connection allows the France Telecom and alternative operator networks to be linked together. When the two parties' equipment is physically located on the same site, the connection is generally carried out using optical jumpers. In addition, this connection can be the same for the ADSL Connect and Turbo DSL offers, providing a single connection for residential and professional offers. This requires installation of network terminating equipment (NTU) also.

Hence, ART defined the connection tariff, based on the use of an NTU, under the following conditions: in the case of co-located equipment and for a shared connection between ADSL Connect and Turbo DSL, the service access charges are 2 000 euros and the monthly subscription is 888 euros independent of the bit rate.

• Other requests

ART also ruled on the definition and/or tariffs of various services designed to guarantee the technical viability of the offer, ensure fair treatment with respect to delivery times and provide the necessary consistency, both within and between offers, for development of the broadband Internet market.

6. Cooperation

a. Background

In 2000, ART decided to set up a working group on unbundling with the objective of establishing the technical and tariff conditions that would initially allow access trials on copper pairs to be carried out, followed by commercial implementation.

This group included France Telecom, the alternative operators and the manufacturers and met from February 2000 to January 2002. At the last meeting, the group's chairman, M. Alain Bravo, reported on progress in defining the technical, operational and tariff specifications for unbundling. The plenary group chaired by M. Bravo had completed its activities and the sub-groups working on the different aspects of unbundling also ended their meetings. These sub-groups were:

- The "field trial" sub-group
- the "technical specifications" sub-group
- the "operational procedures" sub-group
- the "tariff-setting methods" sub-group.

b. Working group on "unbundled services ordering and delivery procedures"

ART subsequently favoured a pragmatic approach by setting up a new multilateral working group involving France Telecom and the unbundling operators, which were able to provide feedback from the field experience at a time when several hundred lines were fully unbundled. In effect, this group continued with the work of the "operational procedures" subgroup.

This group concentrated on unbundling "ordering and delivery procedures". Its main objective was to optimise the ordering conditions for copper pairs and to resolve any delivery problems as they arose during the development of unbundling. It set up a fruitful dialogue between the operators aware of the fact that operational problems could persist during sensitive operations such as unbundling. This group was responsible for a number of advances in 2002, including implementation of a test procedure for shared access to check whether the unbundled line operated correctly on delivery and acceptance of improvements to the server for verifying unbundling eligibility (indicating whether a telephone line can be unbundled or not).

c. Expert Committee for the introduction of new local-loop techniques

On 19 September 2002, ART decided to set up an expert committee for the introduction of new techniques in the local loop[1] chaired by Madame Catherine Mancini. It brings together France Telecom, the operators and the manufacturers. Its mission is to make recommendations on technical questions relating to the introduction of new technologies in the local loop and particularly on the possible changes to be made to the management plan for the local loop spectrum.

It can be called upon by ART to make recommendations on any question relating to new existing technologies for the local loop. This was the case at the end of 2002 concerning authorised techniques for the local sub-loop recently planned for the France Telecom unbundling reference offer. The committee continues to work on this subject in 2003.

E. ADSL consumer price changes

At the beginning of 2002, there were few ADSL offers on the market apart from the France Telecom offer. Some operators were reselling flat-rate packages with 512 Kbps downstream and 128 kbps upstream based on the France Telecom option 5 offer (collection and transport of DSL traffic for ISPs). The tariffs were not far apart at around 45 euros (incl. VAT) per month, with the operators differentiating themselves by offering special, more or less limited, deals. The service access charges, normally billed between 49 euros and 99.95 euros incl. VAT, were sometimes reduced or even waived for a limited time. To attract customers, modems were either free or discounted. Reduced subscription costs were also proposed during the initial months of the subscription.

Following the ART decisions in April[2] and July 2002[3], the incumbent operator introduced more attractive tariff conditions allowing competing operators to differentiate their offer. From October 2002, operators were able to propose option 5 ADSL offers that were economically viable and more attractive to residential customers. The first offers based on full unbundling or shared access to the France Telecom copper pair (option 1) were also launched. Packages offering 1024 kbps downstream and 128 kbps upstream appeared alongside the existing 512 kbps offers, as did the medium speed 128 kbps offers.

The increase in the number of offers brought down prices with the 512 kbps access dropping from 39.95 euros/month at the end of September to 29.99 euros/month on 1 October 2002. The service access charges were waived

1 ART decision no. 02-752 dated 19 September 2002 concerning the establishment of an expert committee on the introduction of new techniques in the local loop.

2 Decisions 02-323 and 02-346 dated 16 and 30 April 2002 respectively, OJ dated 15/05/2002 and 19/06/2002.

3 Decision 02-594 dated 18 July 2002, OJ dated 20/10/2002.

and the modem was loaned free of charge for the duration of the subscription and recovered by the ISP after cancellation. At the end of 2002, the average for the 128 kbps offers was 30 euros/month with 40 euros/month for the "traditional" 512 kbps packages and 85 euros/month for the 1024 kbps.

In 2003, the first option 3 offers (DSL traffic carried by an alternative operator) should become available, indicating the existence of competition for France Telecom in the data transport sector.

Chapter 5

Intermediate markets

I. The market

A. Interconnection

1. Fixed operator interconnection

Change in turnover

Euros (million)	2000	2001	2002	Change
Total interconnection services (fixed operators)	2,679	3,304	2,910	-11.9%
Incoming international traffic	707	798	730	-8.5%

Change in volumes

Millions of minutes	2000	2001	2002	Change
Total interconnection services (fixed operators)	44,255	60,096	72,383	+20.5%
Incoming international traffic	5,225	5,817	5,933	+2%

In 2002, local-interconnect prices dropped by 6%, regional prices by 16% and national prices by 23.5%. The sharp increase in volumes (+20.5%) was not sufficient to compensate for the effect of significant tariff reductions on turnover. France Telecom accounts for most fixed-operator interconnection.

2. Mobile operator interconnection

Change in turnover

Euros (million)	2000	2001	2002	Change
Total interconnection services (mobile perators)	3,148	3,484	3,338	-4.2%
Incoming international traffic	179	302	315	+4.3%

Change in volumes

Millions of minutes	2000	2001	2002	Change
Total interconnection services (mobile perators)	16,836	21,288	24,279	+14.1%
Incoming international traffic	1,062	1,592	1,607	+0.9%

The mobile-operator interconnection market is a significant source of revenue for mobile operators which terminate calls to their customers originating on the fixed network. In 2002, the market was worth 3.3 billion euros, down substantially on 2001. This trend is due essentially to the continuing reduction in call termination charges.

3. Internet access traffic interconnection

Change in turnover

Euros (million)	2000	2001	2002	Change
Interconnection	114	352	233	-33.8%

Change in volumes

Millions of minutes	2000	2001	2002	Change
Interconnection	7,864	39,363	43,830	+11.4%

Internet flat-rate interconnection (IFI) allows Internet service providers (ISPs) to reduce their interconnection charges significantly. Hence, the Internet interconnection market turnover has fallen by 30%, despite a considerable increase in Internet traffic on the switched network.

4. Total interconnection services

Change in turnover

Euros (million)	1999	2000	2001	2002	Change
Total Interconnection services	4,436	5,941	7,140	6,481	-9.2%
Incoming international traffic	655	886	1,100	1,045	-5%

Change in volumes

Millions of minutes	1999	2000	2001	2002	Evolution
Total interconnection services	48,646	68,955	120,747	140,492	+16.4%
Incoming international traffic	5,266	6,287	7,408	7,541	+1.8%

B. Leased lines and data transport

Leased line market (WLL, DSL, optical fibre)

Euros (million)	1999	2000	2001	2002	Evolution
Leased line revenues	1,469	2,011	2,883	2,433	-15.6%

Units	31/12/99	31/12/00	31/12/01	31/12/02	Evolution
Leased line installed base	321,837	357,916	399,919	361,951	-9.5%

Euros (million)	1999	2000	2001	2002	Evolution
Data transport revenues	404	530	1,011	1,150	13.7%
Fixed operators	n.a.	n.a.	n.a.	482	-
Mobile operators	n.a.	n.a.	n.a.	668	-

Leased lines are one of the basic building blocks of the telecommunications market. They can be offered as an end-user service or as an intermediate service to operators for connecting customers to their own network.

II. ART actions

A. Approval of the standard interconnection offer

On 12 February 2002, ART adopted a decision[1] to add medium-capacity leased lines (64kbps to 2 mbps) to France Telecom's standard interconnection offer. The new offer allows operators to cover the whole of France from 123 interconnection points and provides improved financial conditions. There is a 10%- 20% reduction in the wholesale leased line offer for alternative operators compared to the retail price offer (Transfix).

ART's objective when making this decision was to stimulate the development of competition. Operators competing with France Telecom can now connect customer sites beyond the reach of their network using the France Telecom nationwide interconnection service. They can connect large companies directly to their network and offer voice, broadband Internet and data transport services as well as being able to connect two distant company sites together via leased lines, etc.

The addition of this offer to the standard interconnection offer is a major step forward since until now, alternative operators were obliged to purchase leased lines at discounted retail prices. This was virtually the same price that businesses paid and ruled out the possibility of being able to provide a competitive offer.

It is important that the technical conditions attached to the new offer are attractive and continue to be so. In particular it needs to be integrated as well as possible into the existing architecture for voice interconnection and should have satisfactory quality-of-service conditions. The offer approved by ART made a point of responding to expectations in this area by proposing delivery-lead-time and guaranteed-restore-time conditions similar to the commercial Transfix offer. It also allows re-use of certain transmission investments for interconnecting voice traffic.

1 Decision 02-146 dated 12 February 2002, OJ dated 28/03/2002.

As regards the tariff conditions, the operators currently using commercial France Telecom offers will be able to migrate link by link to the interconnection offer, should they so wish. Whether the interconnection offer is worthwhile or not will depend on a number of factors and in particular, the size, the spread in length and bit rate and the geographical location of the existing links. However, specific operator cases aside, it would appear that the interconnection offer is a significant step forward compared to the existing commercial offer.

B. The MFS Communications France Telecom dispute[1]

In August 2001, ART was called upon to rule on a dispute between MFS Communications (marketing its services under the WorldCom brand) and France Telecom.

MFS Communications considered that short-distance lines (up to 50 km) with bit rates between 64 kbps and 155 mbps leased by France Telecom to public network operators for the purposes of connecting customers to their network, should be considered as being an interconnection service. They argued that the tariffs should be based on the relevant interconnection costs and in particular on the incumbent operator's long-run average incremental costs (LRIC).

Given that during the procedure, France Telecom had proposed to incorporate certain line categories into its standard interconnection offer for 2002 (see above), ART's decision, dated 12 February, mainly concerned the unresolved issues and in particular:

- high-capacity interconnection links (34 to 155 mbps) for which France Telecom is to make a proposal to MFS Communications with a view to signing a contract by the end of 2002 unless France Telecom allows MFS Communications to install fibre optic cable in its empty ducts,
- 64 kbps to 2 mbps links for which an agreement, based on the provisions of the new standard interconnection offer, should also be finalised between MFS Communications and France Telecom before 30 September 2002,
- establishment of a temporary tariff pending migration of all existing MFS Communications leased lines (64 kbps to 34 mbps) to the new interconnection offer.
- migration of the existing MFS Communications leased line architecture to the new offer free of charge except for new lines,
- improved optional quality of service conditions compared to those in the standard interconnection offer. The quality must not be less than that offered by France Telecom to its end customers to comply with the principle of impartiality.

C. Standard interconnection offer

On 28 November, ART approved the leased line interconnection offer for 2003. This service had already been included in the 2002 catalogue and therefore the changes mainly concerned the tariffs.

1. Partial leased lines

Accordingly, there was an overall reduction in prices for partial leased lines allowing alternative operators to offer short distance, medium to high capacity access links to their professional customers nationwide at prices competitive with France Telecom. The monthly tariff reduction was between 8% and 10% depending on the bit rate. It was 11% on average for the service access charge.

1 Decision 02-147 dated 12 February 2002, OJ dated 28/03/2002.

The 2003 tariffs for options giving operators improved service quality in terms of restore time, maximum outage time and delivery lead-time were the same as the 2002 tariffs.

Changes in service access charges (SAC)

	Breakdown by bitrate	SAC 2002 euro	SAC 2002 euro	Reduction 2002 and 2003
64 kbps	53 %	619.9	552.9	-11 %
128 kbps	10 %	802.9	552.9	-31 %
256 kbps	9 %	802.9	651.8	-19 %
512 kbps	4 %	802.9	651.8	-19 %
1024 kbps	4 %	802.9	651.8	-19 %
1920 kbps	5 %	802.9	831.8	4 %
2048 kbps	15 %	1 229.1	1 214.5	-1 %
Average	**100 %**	**769.8**	**682.9**	**-11 %**

2. Tie lines

Tie lines allow alternative operators to connect to a France Telecom cross-connect switch from which they can connect end users via leased lines. France Telecom has two tie line offers, one at 2 mbps and the other at 155 mbps.

As in 2002, France Telecom applies the point of interconnect (POI) link tariff conditions to 2 mbps tie lines i.e. tariff reductions (see chapter 1, II-A).

France Telecom changed the tariff structure for 155 mbps tie lines by dividing the country up into two zones as for retail leased lines at the same bit rate i.e. populated and sparsely populated areas. The fixed-service access charges remained the same, while the variable component, which depends on the length of the link, was reduced as a proportion of the fixed-component part. The ratio between a 10km and a 1 km 155mbps link was reduced from 2.91 in 2002 to approximately 1.8 in 2003. This reduction is consistent with France Telecom's 155 mbps retail leased line structure where this ratio is below 1.5.

The changes in annual 155 mbps tie-line costs (excluding the service access charges) correspond to reductions that vary with distance i.e. for a 1 km link, the reduction in 2003 is from 0% to 8% compared to 2002 depending on the zone (B and A respectively) and for 5 km the reduction varies from 28% to 35%.

D. Tariff recommendations

In 2002, France Telecom submitted several tariff decisions concerning changes in tariffs for leased lines and unswitched bandwidth services (over 2 mbps) These tariff decisions were a response to a request for all these services to be excluded from the approval process in 2000 and two competition surveys on broadband capacity services, which concluded that there were differences in the competitive situation across the country for locally provided services. At the end of 2001, beginning 2002, the situation was as follows: in the four main urban areas, (Paris and parts of the inner suburbs, Lyon, Lille, Marseille), competition was relatively well established. In the following six urban areas (Toulouse, Nantes, Grenoble, Bordeaux, Strasbourg and Nice), competition with France Telecom services was still weak. Finally, for

the rest of the country, competition was non-existent. In the wake of the conclusions of the two ART surveys, the France Telecom tariff decisions for broadband services in 2002 showed that tariffs varied according to area, being lower in the areas where ART had concluded that there was competition and higher in the rest of the country.

This was particularly the case for the decision concerning changes to the Interlan 2.0 offer where France Telecom planned to implement differentiated tariffs, with the 10 urban areas where competition was in place benefiting from low tariffs, while the hundred or so areas where there was no competition would have high tariffs. ART issued an unfavourable recommendation[1] on this decision, considering that the tariffs for the areas where there was competition were of a predatory nature. France Telecom also submitted a tariff decision concerning changes to very high-capacity leased lines (34 mbps and 155 mbps) with variations according to the geographic area (low tariffs for Paris-La Défense and higher tariffs for the rest of the country). ART issued a favourable recommendation[2] for this decision since the tariffs were not of a predatory nature and profit margins in areas without competition did not appear to be excessive.

In addition, France Telecom submitted a tariff decision relating to a new service in the SMHD range called SMHD Giga (service for connecting customer sites requiring very high capacities to a private fibre optic ring for businesses using France Telecom network optical fibre). After two unfavourable recommendations, ART agreed[3] to the launch of this offer given that the tariffs could no longer be considered predatory in nature.

Finally, France Telecom submitted an initial tariff decision concerning Turbo DSL containing reductions to existing elements as well as several structural changes to the offer. ART considered that the overall change in tariffs appeared to be consistent with the expected maturity of ADSL products. Nevertheless, ART identified three areas that required deeper analysis. It issued a favourable recommendation[4] on the other aspects of the tariff decision.

At the end of the year, France Telecom submitted a new tariff decision. This received a favourable recommendation[5] from ART at the beginning of 2003 taking into account the following:

- the tariffs of the new symmetrical links had been increased,
- the standard interconnection offer for 2003 had been approved with reductions in tariffs for the leased line interconnection offer,
- ART had carried out a survey of operators competing with France Telecom, Turbo DSL customers and France Telecom
- France Telecom had communicated sufficient information to its customers for them to evaluate the financial attractiveness of co-location.

1 Recommendation 02-592 dated 18 July 2002, OJ dated 20/10/2002.

2 Recommendation 02-525 dated 2 July 2002, O J dated 20/10/2002.

3 Recommendation 02-107 dated 31/01/2002, OJ dated 26/03/2002.

4 Recommendation no. 02-796 dated 8 October 2002 on the France Telecom tariff decision no. 2002079 on changes to Turbo DSL.

5 Recommendation no. 03-69 dated 16 January 2003 on the France Telecom tariff decision no. 2002079 on changes to Turbo DSL.

Chapter 6

Independent networks

I. Statistics and definitions

Installed base of independent networks at the end of 2002

Wireline		Approximately 400
Microwave radio (MW)		Approximately 350
Satellite	SNG	80
	VSAT	36
	Satellite mobile	4
PMR	2RP[1]	33,100
	2RC/3R2P	85
	RPNP	10
	RPX	59
	GU	16
	3RPC	3
	Loc	1
	RPN	1
	Other[2]	16

• **SNG:** satellite news gathering: ground stations for temporary satellite video links.

• **VSAT:** Very Small Aperture Terminal. Satellite telecommunications services using a narrow part of the total satellite bandwidth and a very small transmitter receiver (parabola) for low or medium speed data transmission.

• **2RP :** private radio networks (for internal company requirements).

1 Networks managed by ANFr for ART.

2 Temporary trial networks (authorised in 2002) or on special frequencies.

• **2RC :** radio network with common repeaters (network shared between several users).

• **RPNP:** Professional digital networks for private use

• **RPX:** Professional radio network (new network category assigned to an installer who supplies services to his customers)

• **GU:** large users

• **3RPC:** trunked radio network (for commercial use).

• **RPN:** Tetra or Tetrapol L.33-1 type professional digital networks.

II. L. 33-2 network licences awarded

In 2002, ART adopted 376 decisions on independent networks. More than half of the decisions (197) concerned establishment or renewal of network licences and 24 were revocations. There were 90 2RP decisions for 1 700 new network authorisations and 500 network modifications.

Decisions on independent networks

	Number of Decisions*	Wireline	mixed MW+Wireline or MW+PMR	MW	SNG	VSAT	2RP	3bis	RRI
1997	**159**	14		93	16	11		11	14
1998	**215**	21		79	27	8		37	43
1999	**278**	27	14	138	12	9		21	57
2000	**334**	26	9	95	18	8	82	17	79
2001	**400**	57	3	91	11	12	90	26	110
2002	**376**	40		95	19	14	90	12	106

* :Total number of decisions including frequency allocations

• **Microwave radio**

In 2002, there were over than 1000 microwave radio network links or hops, of which over 200 were assigned for new links or as replacements for existing links in different frequency bands. The distribution of the installed links by frequency band and the total number of links authorised over the last two years is shown in the table below.

Number of autorisations per frequency band

	Assigned in 2001	Assigned in 2002	Total assigned
1,5 GHz band	135	85	330
13 GHz band	12	28	120
23 GHz band	29	21	270
23,5 GHz band	6	4	50
26 GHz band	40	26	107
38 GHz band	16	27	190
Other bands	3	3	6
Total	**241**	**192**	**1073**

• RPX

The number of RPX networks (frequency assigned to an installer for a region) increased by 50% in 2002 (59 compared to 39 at the end of 2001). At least one licensed RPX network is deployed in 16 regions in metropolitan France and one overseas region. However, a third of the networks are in the Paris metropolitan area.

• RPNP

Ten digital RPNP type networks for internal use and using the Tetra or Tetrapol standards had been licensed at the end of 2002 compared with five a year earlier and only one in 2000. A certain number of requests are on hold due to frequency shortages in the Paris metropolitan area and near the Belgian border.

• Wireline networks

The drop in the number of wireline networks in 2001 compared to the total number of active wireline networks can be explained chiefly by non-renewal of expired licences. In fact, the distance threshold beyond which a licence is required was increased from 300m to 1 km at the end of 1996, which means that a number of small networks did not need to request a renewal.

• VSAT

There was a drop in the number of independent active satellite networks (36 compared to 49 at the end of 2001). This can be explained by the fact that several network licences were either not renewed on expiry or had been grouped under other licences.

• Databases

The list of all independent networks (excluding 2RP) is now available on ART's website. Searches can be carried out on the basis of type of activity or type of network.

III. L. 33-3 network licences awarded

Radio installations which do not use frequencies specifically assigned to the user can be freely established under the provisions of article L. 33-3 (5th paragraph) of the Post and Telecommunications Code.
ART adopted various decisions defining or modifying the conditions of use and the allocation of frequencies for these installations in 2002.

• WLAN-2.4GHz more commonly known as WiFi networks

The conditions for using WLANs in the 2.4 GHz band were modified in 2002 and the use of WLAN technology was expanded to include public services. At the same time, guidelines were published allowing public networks to be established for local development projects in accordance with the experimental licence provisions of article L. 33-1 of the Posts and Telecommunications Code.

• Low range, low power radio installations in the 2.4 GHz band (Bluetooth)

New decisions were published to take into account the relaxed requirements for use of the 2.4 GHz band. They ensure that France complies (in 58 départements[1] and nationwide in 2003) with the European regulations for non-specific applications (remote control, telemetry, remote monitoring, alarm, data, voice and video transmission) in the 2400 – 2483.5 MHz band. New radiolocation applications are also authorised in the 2446 – 2454 MHz band in accordance with the European regulations.

• 5 GHz WLAN (HiperLAN)

The conditions for using WLANs in the 5 GHz frequency band were modified in 2002 to allow connection of terminal equipment to public networks (in addition to establishment of independent networks). The installations operate only inside buildings and use the 5150-5350 MHz band with a maximum power of 200 mW.

• Several low power, low range applications were licensed in accordance with the European regulations:

- medical implants in the 402 – 405 MHz band.
- low range, low-power radio installations in the 26,957 to 27.283 MHz and 5725 to 5875 MHz bands.
- low range, low-power radio installations in the 868 to 870 MHz band.

In addition, decisions were adopted to harmonise radio spectrum use in France with European spectrum use. As a result, the use of the following frequencies will be prohibited:

- 41.225 MHz will no longer be allocated to remote alarm systems for the elderly as of 31 December 2005,
- three frequencies in the 152 MHz band and three frequencies in the 446 MHz band will no longer be usable as of 31 December 2007.

IV. ART actions

• Work in progress due to be completed in 2003

In 2003, three decisions should be adopted authorising low range, low power radio installations in the 6765-6795 MHz, 13.553-13.567 and 40.660-40.700 MHz bands as well as avalanche victim detectors on 457 kHz.

Similary, decisions should also be adopted prohibiting the use of certain frequencies for CT2 telecommunications equipment in the 864.1-868.1 MHz band, avalanche victim detectors on 2275 Hz and non-specific installations operating on three frequencies in each of the 30.71 and 407 MHz bands.

• Working group on "Independent network-public network boundaries"

In view of the increase in requests for independent networks for shared use, ART set up a working group to analyse these requests and to understand why they are being made and what the boundaries are between these networks and public networks.
In its conclusions, the working group recommended abandoning the idea of independent network closed user groups (CUG) in favour of a more accurate definition.

V. Call for comments on Dolphin

ART initiated a call for comments from interested parties on the modifications requested by Dolphin to the licence awarded on 30 March 2000 (Official Journal dated 10 May 2000) for the establishment and operation of a public professional digital mobile radiocommunications network (RPN) using the TETRA standard.

[1] See glossary.

The operator indicated in its request that the professional market was moving increasingly towards medium and high-speed data transmission, which, according to the operator, could not be satisfactorily served by the Tetra standard or the planned changes (Tetra release 2). To respond to these requirements, the operator requested permission to use CDMA-PAMR technology in the frequency bands previously allocated. This technology is derived from the CDMA 2000 standard and is part of the IMT 2000 interfaces defined by the ITU for third generation mobile systems.

ART received 564 replies.

In view of the comments made and the additional information and analysis received (particularly on the current state of international standardisation), ATR concluded that changes to the licence as requested by Dolphin were not justified at this stage and were not considered to be particularly urgent.

Chapter 7

Terminal equipment

The R&TTE directive on telecommunications terminal and radio equipment, which took effect on 8 April 2000[1], simplified the regulatory framework to facilitate marketing of telecommunications equipment and create a single market for all radio equipment.

I. Main provisions of the R&TTE directive

- It reduces the number of essential requirements for wireline terminal and radio equipment.

- It streamlines the conformity assessment procedures by introducing a quasi-generalised declaration procedure using harmonised standards. Notified bodies are only consulted for their recommendations on radio equipment if, in exceptional cases, the harmonised standards do not describe certain radio tests.

- The signatory of the conformity declaration in the European Economic Area is responsible for bringing the product to market.

- Operators of public networks are free to choose their network interfaces. However, they are obliged to publish the complete specifications for these interfaces so that terminals can be designed to function on their networks (France Telecom has published 29 types of interface to date),

- The product packaging or instructions must include information on the final authorised use covered by the declaration of conformity with the essential requirements.

- Market monitoring is now a priority.

- The edict dated 25 July 2001[2] transposed the provisions of the R&TTE directive. The *Conseil d'État*[3] is examining a decree applying these provisions.

1 European Parliament and Council directive 1999/5/EC dated 9 March 1999 concerning radio and telecommunications terminal equipment and mutual recognition of conformity, published in the J.O.C.E 91 dated 7 April 1999, p.10.

2 Ruling no. 01-670 dated 25 July 2001 on adaptation of the intellectual property code and the Posts and Telecommunications Code to Community law published in the OJ 28 July 2001 p.12132 .

3 See glossary.

• Two underlying decisions relating to "the designation of notified bodies" and labelling taking into account the provisions of the Posts and Telecommunications Code are pending.

• Finally, ART and COFRAC[1] are studying a draft agreement for carrying out the required approval of the notified bodies' test laboratories.

• ART provided the last conformity assessments in September 2001. Moreover, the ART registration procedure for telecommunications and radio installers has been cancelled.

II. Activities under ART's responsibility

• designation, monitoring and supervision of the notified bodies,
• monitoring, assessment and forward studies on the technical specifications for interfaces published by the operators,
• monitoring the terminal market.

Because of the scope of the declaration system (all wireline terminals, and a large proportion of radio terminals that meet harmonised European standards), most of the equipment does not come within the competence of the notified bodies. Consequently, ART still provides technical and regulatory assistance to importers, manufacturers and various representatives, answering any question raised to allow them to market their products responsibly and legally. ART therefore needs to constantly update its knowledge of standards for wireline and radio terminals.

Moreover, as soon as the application decree for the transposition of the R&TTE directive is published, French customs will be responsible for checking telecommunications terminals from third countries. It is highly likely that they will call on ART's technical assistance.

1 French approvals committee.

Part three

ART methods and resources

Chapter 1

Communication and dialogue

I. Communication

As in previous years, ART has made a point of regularly informing industry participants of its decisions by maintaining frequent contact with the press and publishing numerous press releases. Board members and ART's Chairman attended numerous conferences and meetings in France and other countries in 2002. The presentations made on these occasions can be found on ART's website.

A. The web site: www.art-telecom.fr

The last Conseil d'Etat[1] report on independent administrative authorities highlighted the fact that "independent authorities' websites are destined to become the main vector for publicly communicating policy and decisions". ART has been actively engaged in this area for a number of years.

ART's website went online five and a half years ago on 5 March 1998. It is the key communications medium in a sector that has high expectations in this regard and, as the statistics show, it plays an essential informative role. At the end of February 2003, there had been 1 564 739 unique[2] visitors since its creation. Another measure of satisfaction can be found in the number of subscribers (11 500) who have remained on the ART mailing list for information messages and news alerts year after year (a total of 102 messages in 2002).

1. The number of visitors continues to increase

In 2002, the number of connections increased again with a total of 421 061 unique visitors for the year compared to 315 762 in 2001 and 273 129 in 2000. These figures can be compared with the Government's information portal www.internet.gouv.fr intended to reach a broader audience, which recorded 436 232 visitors in 2002.

1 See glossary.

2 Unique visitor: each different IP address connected to the site is counted independent of the number of visits from the same address. This is in contrast with the notion of multiple visits where several connections can correspond to the same visitor who is counted several times.

In 2002, more than 35 000 unique visitors logged on to the site on average every month, an increase of 33% over 2001 which recorded 26 313 visitors per month on average. The trend shows a marked increase for the first quarter of 2003 when the number of unique visitors had already reached 50 000 per month on average.

The industry crisis in 2002 was probably reflected in the number of page views with an average of 635 607 page views per month compared to 1 008 607 in 2001. On the other hand, the average visit time was stable at around 14 minutes per session.

2002 statistics

2002 Month	Total unique visitors	Monthly total	Total page views[1]	Monthly total	Total hits[2]	Monthly total
January	1,073,458	31,070	32,351,739	675,685	71,739,386	2,386,818
February	1,102,004	28,546	32,940,144	588,405	73,760,476	2,021,090
March	1,132,950	30,946	33,570,966	630,822	75,949,641	2,189,165
April	1,165,346	32,396	34,211,098	640,132	78,294,752	2,345,111
May	1,197,550	32,204	34,800,219	589,121	80,354,182	2,059,430
June	1,229,754	32,204	35,389,340	589,121	82,413,612	2,059,430
July	1,263,835	34,081	36,018,443	629,103	85,658,080	3,244,468
August	1,294,494	30,659	36,554,208	535,765	87,559,332	1,901,252
September	1,335,984	41,490	37,208,771	654,563	89,890,121	2,330,789
October	1,377,934	41,950	37,929,764	720,993	92,686,922	2,796,801
November	1,423,234	45,300	38,629,358	699,594	95,330,224	2,643,302
December	1,463,449	40,215	39,303,341	673,983	98,188,481	2,858,257
Yearly total		**421,061**		**7,627,287**		**28,835,913**

Trends for the first quarter 2003

2003 Month	Total unique visitors	Monthly total	Total page views	Monthly total	Total hits	Monthly total
January	1,514,094	50,645	40,064,089	760,748	102,560,603	4,372,122
February	1,564,739	50,135	40,735,249	671,160	106,499,450	3,938,847
March	1,616,513	51,774	41,415,201	679,952	110,426,132	3,926,682
Yearly total		**152,554**		**2,111,860**		**12,237,651**

2. Content-rich, regularly updated and interactive

Interest in the site is maintained by regularly updating with new content and tools. In 2002, the Special Report section was reorganised and new subjects added: WLAN – WiFi, international activities, standardisation and mobile service quality.

The "publications" section was also reorgani-

1 Page views : pages consulted.

2 Hits : number of times the different elements that make up an HTML page are called (the ART site has three elements per page).

sed so that documents could be searched for by date and theme in addition to the existing document type.

Responses to frequently asked questions (FAQ) on subjects such as portability, SIM cards, unbundling and mobile number blocks reinforce the Telecom User Guide section.

A huge effort has been put into the English language section with all press releases and important documents being systematically translated. This section is backed up by a special English language mailing list which had 500 subscribers at the end of March 2003.

Two new databases have been created: the first, which was introduced in 2002, allows ART Board decisions and recommendations to be searched for by number, date of adoption, Official Journal publication date or by using key words. The second allows searches to be carried out on all independent networks in France by network type and by name and type of licence holder.

The ART server is a working tool for sharing information and establishing an effective and pertinent dialogue with users. Information is published rapidly and the site is updated regularly to provide daily information such as news headlines from press reviews and decisions and recommendations adopted by the Board. It is also used for online registration for ART events and for sending individual responses to the numerous messages sent via the site. There were on average 570 messages per month or 23 messages per day in 2002.

Finally, in December 2002, the home and section page layouts and graphics were slightly reworked to improve readability.

3. Introduction of video content

The major event in 2002 was the introduction of video content adapted for the different types of public Internet access. There was extensive coverage of the public sessions of the international symposium on the development of regulation in the French speaking countries in June using both very low speed (slide show) and Surestream[1] techniques. This allowed users in participating countries with little or poor Internet access to be catered for as well those in the advanced countries.

ART's communication section produces internal and external news reports with a lightweight digital video camera. During the Symposium, seven interviews with chairmen of international regulatory authorities (France, Canada, Morocco, Mauritania, Mauritius, Belgium and Senegal) were filmed, edited and published online entirely in-house. Interviews with Board members are now regularly used when organising external events such as ART's conference cycle "Entretiens de l'Autorité".

Finally, the use of Streaming rich media[2] video retransmission since 2002, means that the two important ART events of the year can be shared with website visitors i.e. the New Year address in January and the presentation of the Annual Report in July. This demonstrates without a doubt the principles of transparency and openness that have characterised the website since its inception.

1 Slide show : the result corresponds to a slide show with sound; Surestream : multiple coding allows the user to receive audio and video streams as a function of the modem connection (modem, LL or ADSL) for optimum listening performance.

2 Streaming rich media video allows additional information to be synchronised with the video stream e.g. slides, photos, text, animation etc. The visitor can access all the information, which is perfectly synchronised with the video, simultaneously as soon as it is broadcasted.

B. ART's newsletter

ART publishes a bimonthly newsletter, La Lettre de l'Autorité. It was initiated as part of the overall ART communication plan and helps inform the industry about the regulator's activities. In each issue, La Lettre briefs readers on current events, major issues under review and studies being carried out for the regulator. It has also featured interviews with people from the telecommunications sector and ART staff members who talk about their profession. There were seven issues in 2002. La Lettre was put online for the first time in 2003 and now reaches a much wider audience. All back issues, from the first, can be viewed or downloaded from the website www.art-telecom.fr

C. ART's conference cycle

In view of the importance of standardisation, the eighth ART conference cycle on 28 October 2002 was organised in partnership with ETSI on the following theme: "Standardisation and regulation: interactions and issues". The conference cycle was inaugurated in 1999.

ART chose mobility and the Internet (the two areas driving telecommunications sector growth) to illustrate the issues and interactions between standardization and regulation.

Indeed, discussions on standardisation, which is closely linked to research and development, often appear to be obscure and difficult for the layperson to understand. However they deal with strategic economic issues notably in the areas of market development and the influence of European players in the international arena. The standardisation of third generation mobile systems, whether in terms of objectives, form or method, is an excellent example.

The provisional UMTS timetable reflects the operational steps inherent in launching a new system whose basic principles and speed of development are closely linked to standardisation. Although the quality of the European approach is recognised worldwide, there are still some unresolved questions concerning the development of future mobile services and the many economic models associated with it in a competitive environment. The conferences allowed underlying issues to be clarified.

In addition, electronic communications networks are undergoing profound changes as a result of increasing use of the Internet, broadband and multimedia services. In this area, the fundamental problems surrounding market evolution and development in a competitive environment are now being discussed in standards organisations (e.g. link between IP address management, naming, numbering, IPV6 transition, evolution of telecommunications networks towards next-generation networks).

The conferences played an educational role in bringing standardisation issues and problems to the foreground for the 250 or so industry players present (electronic communication sector decision makers, financial analysts and journalists) and supplemented already published studies on IPV6 and NGN networks.

The IPV6 and NGN network studies along with the conference proceedings have been published on ART's website and have also been widely distributed in other organisations (particularly ETSI). This helps to inform other regulators about these new issues.

D. The documentation centre

The documentation centre was set up when ART was established to meet the information requirements of ART staff. Over the years it has built up highly specialised documentation

resources which trace the changes in the industry over the years.

The information available includes regulatory, economic and technical material for France, Europe and beyond and is available for consultation. The public can consult reports on particular topics, specialised press from France and abroad as well as reference works on telecommunications.

The documentation centre handled 2100 requests during the year of which roughly half came from outside the organisation. A third of the external requests came from companies in the telecommunications industry and two thirds from the legal profession, government departments, universities, consultants, banks, journalists and private individuals.

The centre is also responsible for tracking legal, economic and technical developments for the organisation and purchasing multi-client studies from consultants.

II. Dialogue

A. Telecommunications networks and services consultative committee (CCRST)

The CCRST is one of the two advisory committees to the Telecommunications Minister and ART. It can be consulted on topics listed in article D. 97-2 of the Posts and Telecommunications Code.

The Committee, which is chaired by M. Alain Bravo, met three times in 2002. It was formally consulted on the following draft regulatory texts or decisions:

- draft decree on universal service funding,
- draft ART decision establishing the list of emergency numbers to be routed without charge by operators licensed under articles L.33-1, L.34-1 of the Posts and Telecommunications Code.

In addition, a certain number of topics were submitted to the CCRST for consideration including ART analyses on the following:

- progress on local loop unbundling,
- the broadband ADSL market in France,
- draft modification of the rules for managing numbering and in particular 3BPQ short numbers,
- ART enquiry on the competitive situation of telecommunications markets,
- European Commission recommendation on "relevant" markets,
- number portability.

The Ministry in charge of Telecommunications presented the public consultation on implementation of a new European regulatory framework for electronic communications which was adopted in spring 2002 along with a summary of the consultation.

At the request of ART's Chairman, the Commission carried out an investigation into adaptation of the regulation and its framework. The work was mainly carried out in an ad hoc subgroup, which presented a summary of its findings.

B. The Radiocommunications Consultative Committee

Article D 97-1 of the Posts and Telecommunications Code, established the Radiocommunications Consultative Committee (CCR). This committee comprises 21 members who are recommended by ART and appointed by the Telecommunications Minister in a ministerial order. It comprises:

- 7 representatives of network operators and radio (network) service providers,
- 7 members (professional and private) representing the users of the above networks and services,
- 7 other qualified persons.
- The current membership of the CCR was set by ministerial order on 30 October 2000.

The CCR is in charge of examining proposals for regulations on radiocommunications. It may also be consulted on any subject coming under its jurisdiction. ART is responsible for the Committee secretariat.

In 2002, the CCR held four meetings chaired by Marc Houéry. ART referred applications to the CCR concerning WLANs, mobile phone jamming devices and adaptations to the regulations and the regulatory framework on the conditions for the use and allocation of microwave frequencies in the 3.5, 26, 28 and 32 GHz bands.

C. Interconnection Committee

Article D 99-6 of the Posts and Telecommunications Code, as set forth in the decree[1] of 3 March 1997, stipulates that "an Interconnection Committee will be established reporting to ART and will include the operators licensed pursuant to articles L.33-1 and L.34-1. The Committee will be chaired by ART, which will decide on its membership and operation."

The Interconnection Committee is the main consultation body run by the regulator for all issues related to interconnection. The Committee met four times in 2002.

1. Membership and mandate

The Interconnection Committee has 26 members, including the Chairman of ART and the managers of the telecommunications operators. The amended ART decision[2] of 4 June 1997 on the terms and conditions of the membership and operation of the Interconnection Committee, sets forth the following principles:

- the Interconnection Committee is chaired by the Chairman of ART or his representative,
- the individual members of the Committee are appointed by ART, each appointment is non-transferable so as to ensure the Committee's stability,
- two sub-committees (on economic issues and networks and services) have been set up and report to the Interconnection Committee,
- the Interconnection Committee meets at least twice a year. The meetings are called by the chairman who sets the agenda,
- the Chairman of the Interconnection Committee can invite qualified persons to the meetings depending on the topics on the agenda.

2. Interconnection Committee actions

The Committee met four times in 2002 to review implementation of the changes to the France Telecom standard interconnection offer for 2002 and to continue work on the 2003 standard interconnection offer.

The Committee was consulted particularly on:

- defining a method of determining interconnect costs which would provide better understanding of network cost drivers and their relationship with the different interconnection services i.e. the method for calculating long-run average incremental costs (LRIC).
- the conditions for establishing a new method for calculating interconnection tariffs over a number of years (price cap).

1 Decree no. 97-188 dated 3 March 1997 concerning interconnection as per article L. 34-8 of the Posts and Telecommunications Code (extract from Conseil d'Etat revocation decision) published in the OJ dated 28 May 1999 p. 7873.

2 Decision n° 97-155 dated 4 June 1997 defining the membership and operation of the Interconnection Committee, published in the OJ dated 10 July 1997 p. 10483.

III. External surveys and studies

The Telecommunications Act authorised ART to carry out studies and to collate information relating to the telecommunications sector. Since 1997, ART has initiated a large number of studies.

Owing to the rapid changes in the sector, the highly technical nature and importance of problems related to regulation, ART is obliged to rely on in-depth technical, economic, statistical and legal assessments. This work has allowed ART to benefit from specialist expertise and external opinions on an ongoing basis.

Board members and staff recommend subjects for examination. They are validated by the division heads before presentation for approval during a Board meeting.

The studies are rigorously monitored by a steering committee selected from the different divisions. The scope of each study, the time allotted for completion and the documents to be submitted are determined at a kick-off meeting. Meetings are held at each stage of the study to review progress reports and, if necessary, refocus the issues. For each study, a final report and a summary are produced and electronic copies are submitted. The report is then forwarded to the Chairman, the members of the Board and to the Director General. Sometimes a presentation is made to the Board or staff of ART and the studies may be published. The costs of the programme and of each study are monitored in relation to the allocated budget.

In 2002, the budget for studies totalled 1 312 000 euros. Some twenty studies were undertaken at an average cost of 60 000 euros and taking four months on average to complete.

The studies deal with topics concerning all areas of the telecommunications sector. In 2002, the subjects covered fell into seven broad categories:

- access and interconnection tariffs (unified LRIC bottom-up model of the French network, cost of capital and financial analysis of the telecommunications sector and impact on the cost of capital),
- universal service (audit of declared volumes),
- economics and networks (pan-European mobility –GPRS and UMTS- localisation services, future mobile services, portability and cable operator economics),
- regulatory policy (comparative analysis of regulatory models in the French-speaking countries),
- markets (small and medium business consumption, telecommunications sector awareness in French households, tariff monitoring and participation in the regional telecommunications observatory –ORTEL),
- service quality (mobile telephony network, fixed telephony network and relationship between fixed telephony operators and consumers),
- general support (telecommunications and the environment and unbundling surveys).

The division responsible for external studies organises appointments throughout the year with consultants wishing to present their areas of expertise and also examines any dossiers forwarded to it by the consultants containing references which are constantly being updated.

Several of these studies were published on ART's website in 2002 and can be viewed on the site or downloaded.

- cable economics in France,
- international telecommunications services,
- paper study on the issue of "radio frequencies and health",
- legal study on mobile telephone network antennae,
- technical, economic and regulatory study on migration to next-generation networks (NGN),
- migration to IPV6,
- 2002 survey on service quality on fixed-telephony networks.

Some of these studies have been translated into English.

External studies and surveys 2002

Subjects
Access and interconnection tariffs
Unified LRIC bottom-up model of the French network
Cost of capital
Financial analysis of the telecommunications sector and impact on the cost of capital
Universal service
Traffic volume declaration audits
Economics and networks (technical outlook)
Pan-European mobility (GPRS and UMTS) and localisation services
Future mobile services: multimedia messaging systems and access to WAP and i-mode services
Portability
Cable operator economics
Regulatory policy
Comparative analysis of regulatory models in the French-speaking countries
Markets
Small and medium business telecommunications consumption in France
French household perceptions and telecommunications awareness
Tariff monitoring for local, national, fixed-to-mobile and Internet calls (residential market in metropolitan France and the overseas *départements*[1])
Participation in the regional telecommunications observatory (ORTEL)
Quality and coverage
Service quality on mobile networks
Service quality on fixed-telephony networks
Relationship between fixed telecommunications operators and consumers
General support
Telecommunications and the environment – a legal study
Telecommunications and the environment – a scientific study
Unbundling surveys

1 See glossary

Chapter 2

ART methods

I. Budget

A. Budget resources

ART's annual budget is currently decided by the Minister for Economy, Finance and Industry following discussion between ART departments and the National Budget Office as well as the Secretary General of the Ministry if required.

The initial Budget Act for 2002 allocated a budget of 16.08 million[1] euros, of which 9.1 million[2] was for payroll expenses and 6.98 million[3] for routine operating expenses (excluding carry-over).

In the initial Budget Act, ART funding is recorded –as in previous years- in a single chapter of the "Economy, Finance and Industry" budget. Funding amounted to 16.75 million euros, with 9.37 million euros for payroll expenses and 7.38 million euros for routine operating expenses. These amounts do not take into account possible carry-over or credit cancellations in 2003.

B. Budgeted headcount

For 2003, the budgeted ART headcount in the initial Budget Act is 151, an increase of 2 compared to 2002.

C. ART revenues

In 2002, ART derived income from the sale of: the Annual Report (available in a paper version -22 euros incl. VAT per report and on CD ROM); the bimonthly newsletter "La Lettre de l'Autorité"; and access to the G'NUM database (flat-rate subscription of 1500 euros). These revenues totalled 31 640 euros at 31 December 2002.

Article L.36-4 of the Telecommunications Act of 26 July 1996 provides that: "the resources

1 105,48 million FF
2 59,69 million FF
3 45,78 million FF

of the telecommunications regulatory authority shall include payments for services provided and the taxes and fees payable under the conditions set out by the Finance Act or by Conseil d'Etat[1] decree. During the drafting of the annual Finance Act, the regulatory authority shall submit to the Telecommunications Minister its proposals for the funds needed to carry out its functions, over and above the resources referred to in the first paragraph. In practice the method for allocating resource to ART differs from these measures as described above.

II. Revenues collected on behalf of the State

ART issues collection orders for taxes and fees for the general budget of the State.

Hence, in 2002, on behalf of the general budget of the State, it issued nearly 1000 collection orders for a total amount of 19 million euros in taxes and 61.5 million euros in fees. The breakdown of this sum is shown below:

14.5 million euros in total fees pursuant to article L.34-10 of the Posts and Telecommunications Code for managing the national numbering plan and monitoring its use,

47 million euros in fees for allocation and management of radio frequencies. In 2001, the amount was higher due to corrections made to the applications,

18.2 million euros were collected in taxes for the management and control of licences. This item has increased significantly due to taxes payable in 2001 being invoiced in 2002,

0.8 million euros in administrative taxes. This item has decreased significantly compared to 2001 (10 million euros) due to the sharp reduction in taxes, the reduction in the number of new operators and the fact that installers are no longer subject to this tax,

Collection orders for fees and taxes amounting to 80.5 million euros were issued. The total amount of taxes and fees actually received by ART in 2002 was 95.8 million euros.

III. Human resources

In 2002, ART pursued a recruitment policy aimed at finding the best possible match between its skill requirements and the profiles of tenured and non-tenured staff. ART recruited 10 people in 2002.

A. Headcount changes

ART's headcount decreased from 145 at 31 December 2001 to 139 at 31 December 2002. The breakdown between tenured staff (civil servant status) and non-tenured staff varied considerably from the previous year. There were 84 tenured employees and 61 non-tenured employees at 31 December 2001 compared with 76 and 63 respectively at 31 December 2002.

The job-category breakdown also changed. At 31 December 2002, there were 98 employees in category A, 37 in category B and 4 in category C. The average age of tenured staff is 46.2 years and that of non-tenured staff is 36.3 years.

B. Professional training and symposiums

ART pursued its vocational training programme and its involvement in international symposiums in 2002, spending a total of 82 474 euros.

The training effort included the finalisation of a specific ART training plan designed to leverage the knowledge gained from the major regulatory processes that have been implemented.

1 See glossary

C. Labour relations

ART's Joint Technical Committee held one meeting in 2002. The main areas of focus were the training plan and miscellaneous questions on internal organisation.

D. ART's organisation

In September 2002, a group reporting to the Director General was set up to implement the new Community regulatory framework. Its mission is to track the transposition process, prepare ART contributions to the process in liaison with the different divisions, and set up internal studies on the necessary changes in organisation and working methods.

In addition, the "conformity assessment and control" group was officially disbanded following a recommendation from the Joint Technical Committee (CTP) due to changes in the legislative and regulatory texts.

IV. Computing and logistic resources

Over the last three years, ART has set up a management information system with facilities for group working, information sharing and providing access to new information technologies.

The network architecture is designed to function at 100 mbps and consists of file and application servers providing secure access to internal and external resources for 150 workstations. Powerful storage systems allow back up of over 250 gb (including 70 gb of email) every night. 2002 was devoted more particularly to providing integrated access to office and other applications as well to the Internet and intranet from a single workstation.

System resource management is centralised and uses tools such as the Help Desk to control information flows, provide instant access to remote distribution software and to respond rapidly to user requests through remote maintenance facilities.

Security systems have been implemented to protect against unauthorised access to information as well as to the premises.
In particular, the information system security has been reinforced by installing an each workstation an operating system that requires an access code along with virus protection on email and Internet access. Users are also encouraged to use the internal network when possible. These measures have been supplemented by physical security systems such as video surveillance and badge readers.

Part four

Changes to the regulatory framework in 2002

I. Decree dated 8 November 2002

The decree dated 8 November 2002[1] was issued in application of the edict of 25 July 2001 concerning the adaptation of the Intellectual Property Code and the Posts and Telecommunications Code[2] (CPT) to Community law. This regulatory measure concludes transposition of several 1997[3] directives which resulted in modification of the Posts and Telecommunications Code (CPT).

The main changes concern institution of different time limits for applying the penalty procedure, recognition of differentiation for operators with significant market power, implementation of new measures concerning verification of contractual operating conditions and material conditions for use of leased lines by the operators.

During the preparation phase, ART issued a recommendation dated 4 April 2002 on the draft decree that was largely followed by the regulatory powers[4].

A. Establishment of time-limits for implementing sanctions procedures

Article 1 of the decree, pursuant to article 10 of the 2001 edict modifying article L.36-11, provides different time-limits for operators to comply with, and for ART to take action and notify its decisions. It is part of the process for ensuring that the measures for implementing penalty procedures for general and individual

1 Decree no. 2002-1340 dated 8 November 2002, OJ, 13 November 2002, p. 18656.

2 Edict n. 2001-670 dated 25 July 2001, OJ, 28 July 2001, p. 12132.

3 European Parliament and Council directive 97/13/EC dated 10 April 1997 concerning a common framework for general authorisations and individual licences in the telecommunications sector, OJEC, L 122, 7 April 1997, p. 15. European Parliament and Council directive 97/33/EC dated 30 June 1997 concerning interconnection in the telecommunications sector for ensuring universal service and interoperability through the application of open network principles (ONP-Interconnection), OJEC, L 199, 26 July 1997, p. 32.

4 Recommendation no. 02-291 dated 4 April 2002 on the draft decree issued in application of edict no. 2001-670 dated 25 July 2001.

licences[1] in France comply with Community law.

As a result, chapter 1, title 1, book II of section 3 of the CPT is supplemented by article D.97-11 which stipulates that "the time-limit for operators to regularise their situation as mentioned in article L.36-11 para. 4, is one month. Decisions made in application of para. 2 of this article are to be adopted with two months from notification or ultimatum. The parties concerned are notified within one week of adoption".

ART issued a favourable recommendation (dated April 2002) for the first time-limit allowing operators to regularise their situation. It noted that in this case there was reasonable correspondence with the provisions of article 10 of the "Licensing" directive dated 7 March 2002[2]. On the other hand, the national regulatory provisions appeared to be in contradiction with other aspects of the same article in so far as the internal penalty procedure did not seem to be compatible with the more flexible framework provided for by the transposed Community law. Indeed, article 10 para. 2 of the directive, no longer provides for a time-limit following formal notification for imposing possible penalties. It mentions only that if the operator "does not remedy the fault within the time-limit set by the formal notification, then the competent authority shall take appropriate and proportionate measures to ensure that the conditions are met".

By the same token, ART had pointed out that according to this article, it was accepted that the operator could present its point of view and remedy any failing "within a shorter period (than the period of one month following formal notification) as agreed with the company or set by the regulatory authority, or within a longer period set by the national regulatory authority" As a result, ART highlighted the fact that if the decree were issued in these terms, it could be seen as likely to compromise achievement of the results provided for in the 2002 directive .

The Government did not agree with this analysis and the decree preserves strict control over the penalty procedure. However, this should give way to more flexible measures when the texts for the new directives are transposed.

B. Implementation of differentiated lists for SMP operators

1. Modifications designed to ensure full transposition of directive no. 97/33

Article 2 of the decree concerns sections 3 and 4 of chapter II, title 1, book II of the third part of the CPT. It modifies the Code to take into account the existence of differentiated SMP operator lists for the markets identified in directive 97/33 "ONP-Interconnection".

Article 2 I transforms the second paragraph of article D. 99-6 of the CPT which requires that interconnection agreements are henceforth to be sent to ART "on request" and not automatically "within 10 days following signature"

Article 2 II has also been modified by the Government as per ART's recommendation. The last paragraph of article D. 99-6 provides that "the contractual operating conditions attached to the operator's licence will be modified to include the new interconnection obligations and will set the time-limits within which the

1 Indeed, articles 5.3 and 9.4 of directive 97/13/EC were not transposed by the French Government within the required time-limits. Consequently, the European Commission issued a formal notification on 17 May 1999.

2 European Parliament and Council directive 2002/20/EC dated 7 March 2002 concerning the authorisation of electronic communication networks and services, OJEC, L 108, 24 April 2002, p. 21.

standard interconnection offer should be published for those operators on the lists established in accordance with a and b of article L. 36-7, paragraph 7[1]. Article 3 of the decree makes these modifications to article D. 98-1 p of the CPT[2].

The Government took into account ART's remarks on article D. 99-11 in the draft decree (concerning communication of information required to implement interconnection). Indeed, the final text extends this communication of information to operators concerned by para. 7 c of article L.36-7[3] as suggested by ART, whereas the initial wording designated only those operators concerned by parts a and c of these measures. The first sentence of the last paragraph of article D. 99-11 is now worded as follows: The operators on the lists established in accordance with a, b and c of article L. 36-7, paragraph 7 supply the other operators with the necessary information for implementing interconnection under the same conditions and with the same level of quality as the information supplied internally and to their subsidiaries and partners.

ART's recommendation was also followed for the first paragraph of article D. 99-15 so that the words "these operators" be replaced by the words "operators figuring on the lists established in application of parts a, b and d article L. 36-7 para. 7[4]. This article obliges the SMP operators to break down their interconnection offer such that "the operator requesting the service pays only for those elements that are strictly necessary for the service requested" applies to all the operators figuring on the lists a, b and d.

On the other hand, the rest of this article should apply only to operators figuring on lists a and b, i.e. the only operators required to publish a standard interconnection offer. On this last point, the Government preferred to maintain its initial approach and did not modify the article as recommended by ART.

The following measures, described in articles D. 99-17 to D. 99-22 concerning tariffs and costs are designed to apply to operators obliged to comply with cost based tariffs i.e. those figuring on lists a, b and d. ART pointed out that the scope of application should be more clearly defined. The Government powers agreed with this recommendation and modified the Code to ensure that the above-mentioned measures in the CPT are explicitly taken into account for operators on each numbered list a, b and d of article L.36-7 para.7. Following ART's recommendation, the Government modified articles D. 99-17 and D. 99-18 of the CPT. ART had pointed out that it would be necessary to specify that the exclusion of access costs from total relevant interconnection costs concerned only operators figuring on lists a and b. Indeed, if local-loop access costs have to be excluded from interconnection costs for switched-traffic interconnection, this exclusion is not relevant for partial leased line services and mobile interconnection.

Taking this into account, the Government replaced the first paragraph of article D. 99-17

1 According to article L. 36-7 7°, "'Each year and following recommendation by the Competition Authority, ART establishes the lists of operators considered to have significant market power in: a) a relevant public telephony service between fixed points, and b) a relevant leased line market (...)".

2 See below.

3 Article L. 36-7, paragraph 7 part c, of the Posts and Telecommunications Code is aimed at operators considered as having significant market power in " a relevant market for public mobile telephony service".

4 Article L. 36-7, paragraph 7 part d concerns operators considered to have significant market power in a "national interconnection market".

of the CPT by two paragraphs taking into account the definition "of operators figuring on the lists established in accordance with sections a and b of article L. 36-7 paragraph 7 (...) and mobile- radio-telephony operators figuring on the list established in accordance with the same article (...)." In addition, it is specified that they shall "remunerate effective usage of the transport network and subscriber network and reflect the corresponding costs. These operators must be able to demonstrate that their interconnection tariffs are cost based."

The second paragraph specifies that "the measures of the previous paragraph are applicable to the access tariffs mentioned in the second paragraph of article L. 34-8 IV supplied by the operators figuring on the list established in accordance with section a of article L. 36-7 para. 7."

Article D. 99-18 incorporates the ART proposal without change, providing in the second paragraph that: " costs specific to the operator's services, other than interconnection costs, are excluded from the basis for assessing interconnection service costs." In particular, commercial costs are excluded (publicity, marketing, sales administration other than for interconnection, billing and payment collection excluding interconnection) as are local loop access costs for operators figuring on list a."

The same applies for articles D. 99-20 and D. 99-21. They allow ART to independently modify the cost-calculation and tariff-setting methods for switched traffic interconnection services, leased lines or mobile interconnection services. Consequently, the first paragraph of article D. 99-20 provides that "after consultation within the interconnection committee, ART will define the method for each list in accordance with a, b, or d of article L. 36-7 para. 7 (...)." On the same subject, article D. 99-21 states that "ART may define a new method for determining interconnection tariffs (...) for each list in accordance with a, b, or d of article L. 36-7 para. 7."

Apart from the modifications required to ensure full transposition of directive 97/33, ART made a point of identifying other desirable modifications to the CPT in its recommendation on article 2 of the decree.

2. Other modifications

ART proposed certain changes in its recommendation on the draft decree based on its experience and the need to take into account changes in network and services since imposition of the legal and regulatory framework.

- With respect to article D. 99-12, it requested that the Government provide further details concerning the obligation for operators to maintain separate accounts for interconnect activities.
  These accounts should, in particular, allow general network costs to be identified. This is because the network now supports activities that did not exist in 1997. In order to ensure that cost allocations for certain items such as civil works for fibre routes and fibre are fair for broadband IP services, ART proposed adding a provision to paragraph 7 of this article stating that the cost elements used to determine general network costs should notably include the switches and transmission systems used for all services "as well as any element which is used for both interconnection and other services." The Government did not, however, make any reply to this request.
- By virtue of article L. 34-8 II of the CPT which modifies article 11 of the edict dated July 2001, the operators on the lists established in accordance with a and b of article L. 36-7 must ensure that their accounts are audited by an independent organisation approved by ART (for a period of three years), at their own cost.

Although it is considered important for ART to be able to retain the same independent organisation as mentioned above for more than a year so as to limit "learning curve" effects, it is not considered desirable for it to be tied for three years to an organisation that may have proved to be incompetent or inefficient. In addition, it should be noted that Community texts do not impose any such constraint on the national regulators. Neither has the Government made any mention of a time period in article D. 99-13.

- Finally, ART indicated that it was favourable to deleting paragraph 9 of article D. 99-16 of the CPT, since it introduced an obligation for operators on the lists established in application of a and b of article L. 36-7 paragraph 7 to provide pre-selection, which was already contained in article 11 of the above edict which inserts article L. 34-8-5 into the CPT. The government took this observation into account and deleted this paragraph.
- In addition, and in accordance with ART's recommendation, a third section was added to article D. 99-16 which authorises ART to define the practical measures for implementing number portability and carrier selection so as to ensure equal access.

Accordingly, "In application of article L.36-6, ART specifies the carrier selection services (...) as well as the conditions and implementation lead times for call-by-call carrier selection and preselection. Lastly, ART drew the Government's attention to the fact that in the case of local loop unbundling, the obligation to supply access should clearly include access to the local sub-loop. This point appeared to be a priority, first, to ensure that the provisions of the decree dated 12 September 2001[1] were harmonised with those of the European regulations dated 18 December 2000[2], and secondly, to comply with the formal notification addressed to the French Government by the Commission. However, these remarks were not taken into account in the final wording of the decree dated 8 November 2002.

C. Implementation of new measures for verifying contractual operating conditions

Concerning ART verification of standard clauses in contractual operating conditions; article 3 of the decree seeks to ensure compliance of article D. 98-1 p of the CPT, as resulting from the wording of the decree dated 8 January 2002[3], with the edict dated 25 July 2001, which provides in article L. 34-8 I for interconnection agreements to be sent to ART upon request and no longer automatically when finalised.

The Government took the various remarks made by ART into consideration in the draft modifications to this article. Indeed, ART had indicated that it was not necessary to delete the 12th and 13th points of article D 98-1 p of the CPT to take into account the provisions introduced by the edict dated 25 July 2001. The modification providing for interconnect agreements to be sent to ART upon request is, in itself, sufficient to ensure compliance with the provisions of the 2001 edict.

Thus, article 3 of the decree modifies only sec-

1 Decree no. 2000-881 dated 12 September 2000 modifying the Posts and Telecommunications Code with respect to local loop access, OJ, 13 September 2000, p. 14343.

2 European Parliament and Council no. 2887/2000/EC dated 18 December 2000 concerning local loop unbundling, OJEC, L 336, 30 December 2000, p. 4.

3 Decree no. 2002-36 dated 8 January 2002 concerning certain standard clauses to contractual operating conditions appended to licences awarded in application of article L. 33-1 of the Posts and Telecommunications Code, OJ, 10 January 2002, p. 585.

tion p of article D 98-1 of the Code by replacing the words "within 10 days following signature" by the words "at ART's request." Interconnection agreements must therefore be sent to ART upon request and not automatically on signature. This change should be compared to the changes made to article 99-6 of the CPT by article 2 II of the decree[1].

D. Changes in material conditions for leased line use

Article 5 of the decree modifies chapter V, title1 section 2 of the third part, book II of the CPT. It concerns articles D. 369 onwards relating to operators supplying retail leased-line services and designated as having to meet reinforced obligations contained in the directive 92/44 EC modified by the directive 97/51/1 EC[2].

In accordance with article L. 34-2-1 of the CPT resulting from the provisions of article 15 of the edict dated 2001, any operator figuring on the list b as provided for in article L. 36-7 para. 7, can be designated by the Minister as having to provide a leased line offer. Consequently, article 5 II replaces the words "the public operator" (France Telecom) in article D. 370 by the words "these operators" i.e. operators designated under article L. 34-2-1 of the CPT. This replacement is repeated in identical terms in articles D.370 to D. 376 of the CPT.

To ensure that the measures for modifying material conditions for the use of leased lines are identical for all operators designated by the Minister, ART proposed that the measures currently in force in France Telecom's contractual operating conditions be made applicable to other operators by adding them to the decree. The Government received this proposal favourably and modified the last paragraph of article D. 370 accordingly. This last paragraph has been replaced by the following provisions: "These operators may not withdraw a service or modify the material conditions until the users and users organisations have been informed and any remarks received (...). Proposed withdrawals or modifications, along with the relevant conditions of implementation and the lead times for ensuring equipment conformity are subject to ART approval (...)."

The Government also took into account ART's remark concerning the modification to article D. 377 of the CPT. It established a list of the costs that can be taken into account in order to comply with the cost-based tariff obligation for leased lines. These costs must appear in the "regulatory" prescribed accounts of the operators concerned.

However, the 5th paragraph of this article, which applied solely to France Telecom, required modification to ensure that all operators designated in compliance with article L. 34-2-1 of the CPT are subject to accounting separation obligations identical to those provided for in articles L. 34-8 and D. 99-13 of the CPT.

Hence, paragraph 5 of article D. 377 of the CPT has been modified by replacing the sentence "in the case of the accounting provisions in article 18 of the contractual operating conditions annexed to the above decree no. 96-1225 dated 27 December 1996, leased line costs include (...)" by "in the case of the accounting provisions in article L. 34-8 II, leased line costs include (...)."

1 See above.

2 European Parliament and Council directive 97/51/EC dated 6 October 1997 modifying directives 90/387/EEC et 92/44/EEC to adapt them to a competitive environment in the telecommunications sector, OJEC, L 295, 29 October 1997, p. 23.

II. Law on internal security

STORAGE OF DATA CONTAINING PERSONAL IDENTITIES AND COMMUNICATION DETAILS BY OPERATORS

The text presented by the Government is part of the law on internal security guidelines and planning (LOPSI) dated August 2002 outlining the plan of action for the next five years[1].

The draft law on internal security was debated according to the procedure for urgent cases. This draft law was presented to the Senate for first reading on 23 October 2002 and subsequently to the National Assembly, which amended and adopted it on 28 January 2003. Following agreement at a meeting of the joint commission, it was presented for voting to the Assembly on 12 February and to the Senate the next day. Before being distributed the text was verified for compliance with the Constitution. The Constitutional Council expressed certain reservations on its interpretation but did not contest the provisions of the Act[2].

The Act dated 18 March 2003[3] introduced several changes to the Posts and Telecommunications Code.

- In the first instance, by virtue of the additions made in fine to article L.32-3-1 III, the legislator allows telecommunications operators to retain certain data relative to the identity of persons using the service provided with respect to the technical characteristics of the communications in so far as this allows " network security to be protected." The control of data storage and processing continues to fall under the jurisdiction of the CNIL. Finally the principle whereby this data must not include the contents of any information exchanged has been maintained.
- Secondly, the legislator added via article 72, a new article L. 35-2 to chapter 1, title 1, book II, which requires operators to put in place technical measures to prevent mobile terminals that have been declared stolen from being used by blocking access to the operators' networks or services. The measure also provides in paragraph 1 that "operators operating a public radiocommunication network or supplying public radiocommunication services are obliged to put in place technical measures to prevent mobile terminals that have been identified and notified to the operators as being stolen from placing calls by blocking access to their networks or services with the exception of emergency numbers."

In order to ensure efficient coordination between the police and the judiciary, the article was supplemented by a second paragraph which allows the competent senior police officer, duly authorised by the public prosecutor or the investigating judge, to require the operator to maintain access to its network and services. The reason for this measure is to that the stolen telephone can be used to identify the authors of crimes or offences. As a result, the second paragraph of article L. 32-5 of the Code provides that "the senior police officer may require operators not to apply the provisions of the first paragraph when duly authorised by an investigating judge or the public prosecutor."

Thirdly, and to ensure application of these new obligations, the legislator supplemented article L.39-2 of the Code by introducing a fine of 30 000 euros for failure to comply with the provisions of article L. 32-5 of the Code. The infringement constitutes an offence which, if need be, may bring into play the criminal res-

1 Act no. 2002-1094 dated 29 August 2002, OJ, 30 August 2002, p. 14398.
2 CC no. 2003-467 DC dated 13 March 2003, OJ, 19 March 2003, p. 4789.
3 Act no. 2003-239 dated 18 March 2003, OJ, 19 March 2003, p. 4761.

ponsibility of legal entities under common law in accordance with article 121-2 of the Penal Code[1]. Furthermore, the application of article 131-38 of the same Code[2] with respect to an operator may result in imposition of a fine of 150 000 euros which is five times that applicable to individuals. Consequently, under the terms of article L.32-9 of the Code "any infraction knowingly committed with respect to the provisions of article L. 32-5 is punishable by a fine of 30 000 euros. Legal entities may be declared criminally responsible for any offence covered by the present paragraph under the conditions provided for in article 121-2 of the Penal Code. Legal entities risk a fine as provided for in article 131-38 of the Penal Code."

The second paragraph of this article provides for a time period to allow telecommunications operators to develop the technical measures needed to neutralise stolen telephones. It expired on 1 January 2004 for all of metropolitan France. Accordingly, article L.39-2 II specifies that "the current measures will enter into force for metropolitan France on 1 January 2004. If necessary, the conditions of application will be established by Conseil d'Etat[3] decree."

Finally, the Act dated 18 March 2003 provides, in article 126, for these measures to come into force in the overseas territories. The text starts by repealing article L.32-3-3 of the Act dated 15 November 2001 concerning day-to-day security[4], to allow the former provisions of articles L.32-3-1 and L.32-3-2 and the new provisions of article L. 32-5 to be combined in a new article L.32-6.

The result of this rearrangement is that article L.32-3-1, which obliges operators to delete or render anonymous any data relative to a communication (with the exception of requirements for detecting infringements or for billing), and article L.32-3-2, which establishes a period of one year for operators to retain traffic information for billing purposes, are added to article L.32-5 above so that they can be applied to the overseas territories in application of article L. 32-6 of the Code. This article provides that "articles L. 32-3-1, L.32-3-2 and L.32-5 are applicable in New Caledonia, French Polynesia and the Wallis and Futuna islands."

In order to ensure compliance with the provisions contained in article L. 32-5 in this geographical area, article L. 39-2-1 has been added to the Posts and Telecommunications Code to ensure that fines for infringements by legal entities or individuals are fully applicable to the above areas covered by the above local authorities. The new article is worded as follows: "The provisions of the second paragraph of article L. 39-2 are applicable in New Caledonia, French Polynesia and the Wallis and Futuna islands." The amount of the fine in these provisions is equal to its equivalent value in local currency."

As far as technical measures for neutralising stolen mobile phones are concerned, telecommunications operators operating networks and services in the overseas départements of Saint-Pierre et Miquelon, Mayotte, New Caledonia, French Polynesia and in the islands of Wallis and Futuna have been accorded an additional

1 Article 121-2 of the Penal Code : " Legal entities, with the exception of the State, are criminally responsible (...) for infringements committed, on their behalf or by their departments and agencies or representatives (…) The criminal responsibility of legal entities does not exclude the responsibility of individuals who may have committed or abetted these acts".

2 Article 131-38 of the Penal Code : "the minimum fine applicable to legal entities is five times that provided for individuals in the law responsible for punishing the infringement ".

3 See glossary.

4 Act no. 2001-1062 dated 15 November 2001, OJ, 16 November 2001, p. 18215.

period, until 1 January 2005, to implement the required measures.

As a result of article L. 39-2-1 II, articles L.32-3-1 and L. 32-3-2, which were already applicable in New Caledonia, French Polynesia and in Wallis and Futuna, will only come into force on that date. Indeed, the second paragraph provides that "the provisions of article L. 32-5 in the overseas *départements*[1] of Saint-Pierre et Miquelon and Mayotte and of article L. 32-6 in New Caledonia, French Polynesia and in the islands of Wallis and Futuna will come into force on 1 January 2005."

III. Law on judiciary guidelines and planning

The use of jamming devices in penitentiary establishments

Article 47 of the Act no. 2002-1138 dated 9 September 2002 on judiciary guidelines and planning modified article L. 33-3 of the Posts and Telecommunications code by adding to the list of installations which can be freely established as defined in article L. 33-3 of the Posts and Telecommunications Code, radio electric installations allowing mobile telephones to be rendered unusable within penitentiary establishments.

Contrary to the provision relating to public theatres, this legislative provision expressly provides that the installation of devices rendering mobile telephones unusable in penitentiary establishments does not require prior authorisation by the Authority approved by the Minister responsible for Telecommunications.

This measure, which is limited to within the bounds of penitentiary establishments, is therefore immediately applicable.

1 See glossary.

Glossary of terms and abbreviations

2G, 2,5G: Pre third-generation mobile systems e.g. GSM for 2G and GPRS for 2.5G.

3G: Third generation mobile system. 3G networks will provide users with access to a wide range of new services. One of the most important will be broadband Internet access as a result of gradual introduction on mobile networks of packet-switching technology.

3GPP (Third Generation Partnership Project): Global body bringing together worldwide standards organisations, including ETSI and US, Japanese and Korean members. Its mandate is to reach an agreement on a common radio interface in order to determine a standard for third-generation mobile telecommunications systems (UMTS). ETSI transferred the work carried out within the SMG committee on UMTS to the 3GPP.
Some of the 3GPP's partners are the GSM Association, UMTS Forum and IPV6 Forum.

Access network: Network to which customer premises equipment is directly connected, giving access to services. (cf. "core network")

Accounting rates: System that sets out the pricing principles to be used in interconnection agreements between international operators, to enable revenues for international calls to be shared between the operator in the country where traffic originates and the operator in the country that delivers the traffic. For calls to a given international destination, the operator in the country originating the traffic sets the retail price, which is called the collection rate. At the same time, this operator and the operator in the destination country negotiate a per-minute settlement rate. The settlement rate is used to determine the sum paid by the originating-traffic operator to the operator which delivers the traffic. The settlement rate is often half the accounting rate.

ACTE (Approval Committee for Telecommunications Equipment): Committee chaired by the European Commission (DG XIII), responsible for implementing the terminal equipment directive (98/13/EC), by drafting common technical regulations (CTRs) for network access.

ADSL (Asymmetrical Digital Subscriber Line): ADSL is part of the xDSL technology family and is designed to enhance the performance of access networks, particularly the subscriber line

of the conventional telephone copper access network. Two modems are used, one on the customer's premises, and the other on the subscriber line before the main distribution frame, to increase data rates 70-fold compared to the usual analogue modem. ADSL uses a line splitter to enable it to carry voice, upstream data (user to network) and a greater proportion of downstream data (network to user). Filtering at both ends of the line ensures acceptable voice quality, by removing the unnecessary parts of the signal. ADSL technology is particularly well suited to the local loop, as throughput diminishes over distance. It is relatively inexpensive, and therefore constitutes an attractive alternative to cable networks for broadband Internet access.

AFA : French association of Internet access providers.

ANFr (Agence Nationale des Fréquences): National Frequencies Agency. Body responsible for managing the RF spectrum, sharing frequencies between the different bodies and administrations with allocations in France (ART, CSA, Defence Ministry, etc.), dealing with interference and participating in international negotiations on frequencies.

Asymmetric regulation: Regulation that imposes specific obligations on the incumbent because of its dominant position in the market. e.g. special interconnection obligations, up-front retail tariff control, and universal service obligations.

ATM (Asynchronous Transfer Mode): An asynchronous transmission technique providing high-speed transport of digital data using short, fixed-length packets. ATM permits ultra-fast transmission and enhances line capacity, making it particularly well suited to high-speed multi-service networks. By improving core network performance and optimising network resources, it supports high traffic flow, while maintaining high service quality.

Audiotel: Services provided by France Télécom, which can generally be accessed by dialling a number beginning with "08 36". They enable users to access information, games, etc., via an audiotex-type voice server, which guides the caller with pre-recorded messages.

Backbone (core network): Operators' backbone networks are made up of very high- speed transmission links connecting the main network nodes to which lower-capacity links are connected. Backbone networks can be national (country wide coverage), regional (covering several countries in the case of European backbones) or global (worldwide coverage).

Bandwidth : Designates the capacity of a transmission link. It determines the quantity of information (in bps) that can be transmitted simultaneously. In IT, it is often confused with the transfer rate or capacity expressed in bits per second

BAS (Broadband Access Server): Server used to manage data transport in ATM mode for ADSL-based Internet access offerings. Each BAS on the France Telecom network is connected to approximately 10 DSLAMs and groups the traffic handled by those devices. Consequently, the area covered by a BAS is referred to by France Telecom as a platform. Two ATM circuits, one "incoming" and one "outgoing", are put in place between the client and the BAS to which he or she is connected.

Beauty contest: Method used in France for selection of candidates to use a limited resource (e.g. wireless local loop or UMTS licences and frequencies). It consists of defining a certain number of criteria and rating the candidates accordingly in order to select the most suitable candidates. It is not the same as an auction, where the price of the resource is the only criterion taken into account.

Bit rate: Amount of data carried by a network within a given time frame.

Cable networks: Refers to audiovisual distribution networks established in accordance with the Audiovisual Communication Act no. 82-652 dated 29 July 1982 and article 34 of the Act no. 86-1067 dated 30 September 1986 on freedom of communication.

Call back : The user dials a number in the country which operates "call back". There is no call set-up so no charge. An automatic device calls the number back and sets up the call on an international line. The user then dials the number of his correspondent. The call is billed at the tariff charged by the chosen foreign operator. This system enables users to enjoy the tariffs charged in the country called.

Carrier (or long distance operator): Telecommunications company which carries national long distance and /or international calls.

Carrier selection: Possibility for customers to choose between several carriers. Carrier selection concerns only long distance and international calls.

CCR (Radiocommunications Consultative Committee) and CCRST

CEN: European Committee for Standardisation.

CENELEC: European Committee for the Coordination of Electrical Standards

CEPT (The European Conference of Postal and Telecommunications Administrations): Regional regulatory telecommunications organisation of which most European countries are members. It is involved in regulatory and technical co-operation (particularly on frequencies).

Chambre Zéro or "zero chamber": Operator access point to France Telecom building and distribution frame cables for remote co-location.

Circuit : Bi-directional link between two terminal units over which a connection mode service can be provided.

Co-location: In France Telecom's standard interconnection offer, physical interconnection is possible using three different techniques:
- co-location: the operator installs its equipment on France Telecom's premises.
- interconnection link: France Telecom installs its equipment on the operator's premises.
- in-span interconnection: a solution half way between these two systems where the point of interconnection is located in the public domain, for instance.

For local loop unbundling, co-location consists of supplying the premises and technical resources needed to host and connect the equipment of alternative operators.

Conformity certification: Terminal equipment intended to be connected to a telecommunications network (telephone sets, faxes, modems, etc.) as well as radio transmitters (remote control units, CB devices etc.) must conform to quality and security standards before being placed on the market. Telecoms legislation sets out assessment procedures leading to the issue by ART of conformity certificates. Equipment which has been conformity certified carries a special label.

Consumer basket: Statistical market information tool, enabling the average change in users' bills to be measured, at constant consumption. ART has established two consumer baskets to observe the average yearly change in telephone tariffs.

Convergence: Refers to two different trends:
• convergence between the broadcasting and telecommunications sectors. Advances in technology make it possible to use different media (cable networks, terrestrial and satellite radio relay systems, computer terminals and television sets) to carry and process all kinds of information and services, including sound, images and data. This type of convergence is due to a revolution in technology (digitisation). It has economic and regulatory implications.
• fixed/mobile convergence. Increasingly similar technologies are used and services provided by fixed-telephone and mobile-telephone systems. This type of convergence opens up prospects for operators to propose the same services to all users, regardless of the technology or networks they use.

Core network (backbone): A telecommunications network comprises two parts:
• the local loop or access network, which comprises subscriber lines, i.e. in a fixed-telephony network, the part of the network where each subscriber line, generally comprised of copper pairs, is physically separated.
• the backbone consisting of all the transmission and switching elements starting with the local exchange.

CPT (Code des postes et télécommunications): The Posts and Telecommunications Code

CST (Conseil supérieur de la télématique): French telematics services authority.

CT (Commutateur de transit): see trunk exchange.

CTA (Conseil de la télématique anonyme): French advisory committee on telematics services.

CTR (Common Technical Regulations) : Joint technical regulations governing network access for terminal equipment. They are drafted in accordance with EU directive 98/13/EC by the TRAC committee and ETSI at the request of the ACTE committee, chaired by the European Commission. CTRs apply to all member States.

CUG (closed user group): The Posts and Telecommunications Code defines an independent network as a network that is shared or used for a private purpose. It "is for private use, if use is reserved for the physical or legal person that set it up, and it is for shared use if use is reserved for several physical or legal persons that have set up one or several closed user groups in order to exchange communications within that same group". ART clarified this definition by adding that a CUG must be "based on a community of interest that is stable enough to be identified and that predates creation of the network". The term 'closed user group' is also used to define a virtual private network on a public network.

DECT (Digital Enhanced Cordless Telecommunications): European digital radio transmission standard for mobile or fixed telephony (wireless local loop).

Digital block: A number of calls grouped together on the same physical transmitting medium using a technique known as multiplexing. With PDH (Plesiochronous Digital Hierarchy), the transmission standard generally used for telecommunications networks, calls can be multiplexed first into primary digital blocks (PDBs) comprising 30 calls, then into secondary digital blocks (SDBs) of 120 calls, then into tertiary digital blocks (TDBs, 480 calls) and finally into quaternary digital blocks (QDBs, 1,920 calls). Each digital block corresponds to a transfer rate or capacity expressed in bits per second, where the bit is the basic digital binary unit (which has two values: 1 or 0). The transfer rate of a PDB is 2Mbit/s. For interconnection purposes, pricing can be based on the transmission capacity, expressed in PDBs.

Digital Link: Link over which information is carried in a digital format. Digital means that all the information (sound, text, image) has been encoded and transformed into a series of binary digits, as opposed to analogue.

Direct interconnection: Call termination service, in which a call to one of France Telecom's subscribers is terminated for an operator. The call is routed by the operator to the interconnection point; it is then carried by France Telecom over its network from the point of interconnection to the subscriber's customer premises equipment.

Distributor (mobile communications service provider): Company selling and managing mobile telephony subscriptions on behalf of an operator.

Domain name: Name designating an entity to which an Internet site belongs e.g. ".fr" or ".com".

DSLAM (Digital Subscriber Line Multiplexer): One of the devices used to convert conventional telephone lines into ADSL lines for broadband data transmission, particularly for Internet access. The DSLAM is installed on the main distribution frame of the local operator's network. It combines several ADSL lines on a single medium, which routes data to and from these lines.

Dual tandem exchange interconnection: Service listed in France Telecom's interconnection offer. It enables an operator interconnected at a trunk exchange to reach subscribers served in any other trunk exchange area. Hence, it gives access to all the lines in France.

ECC (Electronic Communications Committee): New umbrella committee for the activities formerly handled by ECTRA and ERC in CEPT.

Economic regulation: The regulatory authority has to ensure that competition is effective, fair and sustainable. It does this by using precise knowledge of market developments and the legal instruments at its disposal (e.g. dispute settlement, approval of technical and financial interconnection conditions, penalties, in-depth evaluation of operators' costs).

ECTRA (European Committee of Telecommunications Regulatory Affairs): CEPT committee responsible for regulatory affairs. Its permanent office is the European Telecommunications Office (ETO)

ENUM: protocol defined by the Internet Engineering Task Force (IETF) to create Internet domain names from telephone numbers and link them to communication services (telephone, email, fax, unified messaging etc.). ENUM is the first truly convergent Internet /telecoms project combining numbering aspects with Internet naming and addressing features.

ERC (European Radiocommunications Committee): Organisation answerable to the European Conference of Postal and Telecommunications Administrations (CEPT), responsible for regulatory cooperation on radiocommunications issues. Its permanent office is the European Radiocommunications Office (ERO).

ERMES (European Radio Messaging System): European radio paging standard.

ETNO (European Public Telecommunications Network Operators Association): Association set up to foster cooperation among operators.

ETSI (European Telecommunications Standards Institute): Body set up by the European Commission to handle telecommunications standardisation for the CEPT

Extranet: A private external network that uses Internet protocols (IP) to enable businesses or organisations to exchange digital data with

their main correspondents (subsidiaries, customers, suppliers, etc.). Hypertext Markup Language (HTML) makes the presentation of data user-friendly, using hyperlinks to allow users to browse through screen pages (as on a web site).

FIP: Flat-rate interconnection point.

Flat-rate interconnection: An interconnection offer between third-party networks and the France Telecom network whereby the fees payable by the alternative operator for collecting traffic on the local loop are on a per-circuit basis and not on a per-minute basis.

Freephone numbers: Generally called a "numéro vert" (green number) by France Telecom. These numbers are free for the caller and are paid for by the individuals, companies and organisations that have requested their assignment to allow callers to reach them free of charge. Freephone numbers begin with 0800.

FRIACO (Flat Rate Internet Access Call Origination.): British Telecom's flat-rate interconnection offer in the UK.

GCT (Group Consultatif Terminaux): Voluntary working group comprising the various parties interested in telecommunications terminal equipment, such as operators, manufacturing unions, test laboratories and users. The group is responsible for drafting national technical regulations, which are used for terminal equipment conformity assessment. ART is the group facilitator.

GPRS (General Packet Radio Services): Packet switching system enabling enhanced data rates over GSM networks (cf. "Switching").

GSM (Global System for mobile communications) : Digital radio transmission standard for mobile telephony.

GTR (Groupe de Travail sur les Radiocommunications Professionnelles): working group on business communications set up within the Radiocommunications Consultative Committee.

HDSL (High Speed DSL): Bi-directional symmetrical transmission technique primarily for professional applications. Bit rates up to 2 mbps can be achieved over 2500m.

HSCSD (High Speed Circuit Switched Data): Circuit switching system enabling enhanced data rates over GSM networks (cf. "Switching").

IAB: Internet Architecture Board.

ICANN: Internet Corporation for Assignment of Names and Numbers.

IETF: Internet Engineering Task Force.

IMT 200: Third-generation mobile systems, with special features enabling improvement of mobility services. The ITU selected five terrestrial radio interfaces for third-generation mobile systems and these therefore bear the IMT 2000 label. UMTS was one of the five selected.

IMT 2000: International Mobile Telecommunications 2000

Independent network: see: CUG.

Indirect Interconnection: Call collection service, in which an operator collects a call from one of France Telecom's subscribers. The subscriber dials a prefix to select the operator. The call is carried by France Telecom from the subscriber's customer premises equipment to the point of interconnection, and from this point by the alternative operator.

In-span interconnection (in span): see "co-location".

Interconnection agreement: Private contract negotiated and signed by two operators, on a case-by-case basis, to determine their terms of conditions for interconnection. Generally when an agreement is concluded with an operator with significant market power, it is based on this operator's standard interconnection offer. If the service is not listed in the interconnect offer, new interconnection conditions are laid down.

Interconnection interface: All the technical specifications necessary to practically implement interconnection by establishing a dialogue between networks. It defines the physical interconnection arrangements, services and advanced functions accessible between the networks concerned, the control mechanism for these services and their billing and operating arrangements.

Interconnection link: see "co-location".

Interconnection: The linking of telecommunications networks to allow one operator's subscribers to communicate with any of another operators' subscribers.

International Electrotechnical Commission (IEC) :

International Settlement Rate: Amount paid by one operator to another as part of the international accounting rates system.

Internet: A network of variable sized networks interconnected by the Internet Protocol, over which a wide range of services can be provided.

Interoperability (interworking): Service interoperability is the possibility for different services to operate on different networks. The technical specifications at the interconnection interface determine, in part, service interoperability between different operators.

Intranet: A corporate network using Internet Protocol, reserved for internal communication. It enables businesses or organisations to exchange information using the IP standard. Hypertext Markup Language (HTML) makes the presentation of data user-friendly, using hyperlinks to permit users to browse through screen pages (as on a web site).

IP (Internet Protocol): Telecommunications protocol used on networks which support Internet, enabling the information to be transmitted to be broken down into data packets, transmitted independently based on address information carried in the packet and reassembled at the receiving end. Hence, this protocol uses packet switching techniques. For Internet use, it is associated with a data transmission control protocol called TCP (Transmission Control Protocol); it is therefore known as the TCP/IP protocol.

IP Address : Address identifying a terminal connected to the Internet network.

IP telephony: Voice communication service using the telecommunications IP protocol (Internet protocol) developed for the Internet.

IRG (Independent Regulator Group): Informal body comprising representatives of the various regulatory bodies in EU and EEA countries.

ISDN (Integrated Services Digital Network): Digital telecommunications network, capable of carrying image, sound and text data simultaneously.

ISO (International Standards Organisation): International organisation for standardisation.

ISP: Internet service provider.

Leased Line: From a technical viewpoint, this is a permanent link (as opposed to a switched link which is temporary) comprising one or several

parts of a public network, reserved exclusively for a given user. From a legal viewpoint, a leased line, which is also called a dedicated line, is defined in the Posts and Telecommunications Code as: "a contract between the public operator and a user for the provision of transmission capacity between given termination points of the public network. The user has no control over switching". This type of service is used by businesses for their corporate networks, and also by telecommunications service providers that do not have their own infrastructure or that wish to increase their capacity.

Least-cost routing: Optimal routing using a system that systematically chooses the least expensive links , depending on the destination and time of the call.

LEO: Low Earth Orbit.

Licences: The Telecommunications Act of 26 July 1996 states that there are no restrictions on telecommunications activities. However, it stipulates that some of these activities require a licence (also known as an "authorisation"). For example, a licence must be obtained from the Minister for Telecommunications, after applying to ART, to set up and operate a public network, to provide a public telephone service and to provide the public with telecommunications services using microwave frequencies. ART issues licences to set up and operate independent networks.

LLO: Local loop operator (see "local operator").

LMDS (Local Multipoint Distribution Services): Technology supporting high-speed transmission, which uses microwave frequencies to provide access to the telephone service, Internet and television programmes. This type of transmission is particularly well suited to scarcely populated areas, which do not have cable coverage. However, its development is hindered at present by technical barriers such as signal attenuation, caused on the one hand by the weather (rain), and on the other hand by obstructions (buildings, leafy trees, hills) which interfere with radio wave propagation.

Local exchange (CAA): Exchange to which subscribers are connected, by a line interface module. In France Télécom's tier system, this is the lowest-ranking exchange on the network and subscribers are connected using an URA (q.v.). The higher-level exchanges are called trunk exchanges.

Local exchange area: In France Télécom's network, the exchange area is the area in which subscribers are served by one (or several) exchange(s) of a given level. For local exchanges (lowest level) the area is called the local exchange area, and for trunk exchanges it is called the trunk exchange area.

Local exchange interconnection service: service listed in France Telecom's standard interconnection offer, enabling an operator to interconnect at France Telecom's local exchange. It enables 30 000 lines to be reached.

Local loop unbundling: Local loop unbundling, also know as unbundled access to the local network, consists of allowing new operators to use the incumbent operator's local network, made up of copper pairs, to serve their subscribers directly. New entrants will naturally compensate the incumbent for the use of its network. Consequently, the customers of a new entrant will no longer be required to take out a subscription with France Telecom to access their operator's services. This broad definition encompasses several options. The preparations for the public consultation conducted by ART in 1999 identified five such options: Three of these five emerged during deliberations concerning the possibility of accessing the incumbent's local loop on an unbundled basis. This unbundled access may

entail:
• physical unbundling of the local loop, where the new operator gets direct access to the copper pair. This is known as raw copper access (option 1),
• access to transmission capacities, comprising bitstream access and access to a permanent virtual circuit (options 2 and 3).
The two remaining options are equivalent to a resale business, namely local traffic resale and subscription resale (options 4 and 5)

Local loop: The wire or radio connections between the customer's premises and the local exchange. The local loop is the part of a network that gives the operator direct access to the customer.

Local operator (or local loop operator): Telecommunications company that has installed subscriber lines.

Local sorting zone: The local loop operator sends to the carrier selected by the calling party only those calls that are destined for calling parties outside the local sorting zone; calls within the local sorting zone are retained and routed by the local loop operator irrespective of the numbering sequence used by the calling party. In France, the local sorting zone generally corresponds to a département.

Long-run average incremental costs (LRIC): The Telecommunications Act stipulates that the interconnection tariffs must be set according to the actual costs incurred by the operator providing the interconnection service. Two methods can be used to determine these costs: the first consists of using the operator's historic network costs; the second consists of evaluating the cost of building a new network at current and future prices, which are generally lower than historic costs due to technological advances.
Long-run average incremental costing aims to reconcile these two methods by comparing two evaluations:
• one based on the operator's accounts, and another based on a technical and economic model of network roll-out and operation.
This reconciliation should provide better understanding of network cost drivers and their relationship with the different interconnection services.

Main distribution frame (MDF): Apparatus allowing the subscriber copper pairs to be distributed between the cables connected to the local exchange. It enables the distribution of several subscriber lines over a single cable.

Microwave radio links: Terrestrial radiocommunication links between fixed points.

Mobile radio network: Network using radio frequencies to connect mobiles to the fixed or mobile network

MRC (Milestone Review Committee): Advisory group set up jointly by ECTRA and the ERC within the CEPT to ensure that the various regulatory systems fulfil their requirements.

NAS (Network Access Server): Equipment used by operators to provide Internet access services over the switched telephone network. An NAS converts telephone calls into IP data streams, interfacing between the switched telephone network and the IP data transport network.

Network: Combination of telecommunications resources, e.g. exchanges, wire links (copper cable, optical fibre) and terrestrial or satellite radio transmission links.

Non-geographic numbers: Number beginning with 08, among which the services can be distinguished by type e.g. general mobile services, virtual private network services, and by pricing, e.g. freephone services, shared-cost services and shared revenue services.

Number portability: Possibility for subscribers to retain their telephone number when changing local loop operator (service accessible since 1st January 1998 if the subscriber does not change address) or when changing geographical location or local loop operator, or both (service accessible from 1 January 2001)

ONP (Open Network Provision): Rules enabling the incumbent's network to be used by new operators, whereby network ownership is separated from the provision of services over the network. This allows a distinction to be made between network implementation and its commercial operation. The European "ONP" directives aim to harmonise conditions so that ONP principles can be applied to all telecommunications services. The harmonised conditions guarantee open and efficient access to telecommunications networks.

Operator with significant market power (SMP operator): The Telecommunications Act requires ART to draw up annually a list of operators with significant market power (meaning that they have significant power on a relevant telecommunications market). They are obliged to publish a standard interconnection offer. Any operator that has over 25% market share of a relevant telecommunications market is deemed to have significant market power. When drawing up this list, ART also takes into account the operator's turnover in relation to the size of the market, and its control of access to the end user as well as its access to financial resources and its experience in the market.

PDH (Plesiochronous Digital Hierarchy): A digital transmission standard based on dividing information up into identical time intervals. Peering: Refers to a type of interconnection agreement between two IP backbone networks (called peer networks) for the exchange of Internet traffic between their respective networks. These exchanges take place in public or private nodes.

Plan Câble (French cable plan): This term refers to a French Government plan introduced in the Audiovisual Communication Act 82-652 dated 29 July 1982, which sought to develop audiovisual cable networks in France.

PMR (professional mobile radio): Mobile radio networks for business users. In France a distinction is drawn between:
- 3R2P: trunked private mobile radio networks for private purposes
- 2RC: trunked private mobile radio networks for commercial purposes
- 3RP: trunked private mobile radio network
- 3RPC: trunked public access commercial mobile radio networks
- RPN: digital trunked private mobile radio networks, using Tetra or Tetrapol technology
- RPX: local trunked networks (new category of networks).

POI (point of interconnection): Operator interconnection point.

PoP: Point of Presence

Public network: Telecommunications network established or used for the provision of public telecommunications services

Public telephony service: Service defined by law as "commercial provision to the public of a service consisting of the conveyance of direct, real-time voice telephony between public switched telephone networks for mobile and fixed users".

Radio interface: System enabling a mobile terminal to communicate with the network. Numerous discussions were held within ETSI in 1997 on standardisation of a radio interface for UMTS. On 29 January 1998 the SMG committee adopted the UMTS Terrestrial Radio

Access standard (UTRA - terrestrial as opposed to satellite). The standard is a compromise between two originally competitive components: WCDMA and TD/CDMA. UTRA was adopted by the ITU in March 1999 as a radio interface standard for IMT 2000.

Radio paging: Mobile communications system enabling users equipped with pagers to receive call alert signals (beeps) and messages composed of numbers (numeric) or combinations of numbers and letters (alphanumeric). The three commercial radiopaging brands in France are Tam-Tam, Tatoo and Kobby.

Regulation: In the telecommunications sector, regulation may be defined as the enforcement, by the competent authority, of all the legal, economic and technical provisions enabling telecommunications activities to be carried out freely, as stipulated by law. Telecommunications regulation is essentially economic regulation, which is not the case in the broadcasting sector, where content is also regulated in accordance with cultural objectives.

RLR(réseaux locaux radioélectriques): Wireless Local Area Network (see WLAN).

RPS (radiocommunications professionelles simplifiés): short-range business radio.

RRI(réseau radioélectrique indépendant): Private mobile radio networks (see PMR).

Satellite network: Network using radio frequencies relayed by satellite.

SFCA: (Services et Fonctionnalités Complémentaires et Avancés): Ancillary and advanced services included in France Telecom's standard interconnection offer.

Shared-cost services: Service in which the cost is divided between the calling and the called parties.

Shared-revenue services: Service in which the called party receives a payment from the telecommunications service provider.

Shelter: Housing fitted out for the installation of operator's co-located equipment for unbundled local loop.

Signalling: On a telecommunications network, signalling supports the exchange of the internal network data needed for call routing. It can be compared with the road signs on a road network. It includes the information required to identify the user for billing or calling-line identification. When carried out by the network that carries calls to subscribers, it is generally integrated in the exchange. It can also be performed by a separate network, called the semaphore network.

SIM Card (subscriber identity module): Subscriber and value-added services card (GSM standard).

Single tandem exchange interconnection: Service listed in France Telecom's interconnection offer. It enables an operator interconnected at a trunk exchange to reach the subscribers served in that trunk's exchange area, which usually means approximately two million lines

SMG (Special Mobile Group): ETSI committee responsible for mobile communications work.

SMS (Short Message Service): These messages are transmitted in the signalling channel of GSM mobile networks and have a maximum length of 160 characters. Transmission of these messages on GSM networks is standardised and a short message server integrated into the mobile network provides an interface with the fixed network.

SNG (Satellite News Gathering): Ground stations for temporary satellite video links.

S-PCS: Satellite Personal Communication Services.

SPIROU (Signalisation Pour l'Interconnexion des Réseaux Ouverts): New signalling interface developed by the French Interconnection Committee at ART's initiative, in order to adapt the French network to the ETSI European standard, ISUP. This interface comprises the specifications governing the signalling of basic telephone call commands, advanced services and functions, interworking functions with user access signalling and intelligent network protocols.

Standard interconnection offer: Technical interconnection offer and tariffs that operators designated by ART as having significant market power, pursuant to Article L. 36-7 of the Posts and Telecommunications Code, are required to publish annually to enable other operators to establish their own commercial offers and prices. The standard interconnection offer also sets out the conditions governing physical interconnection between the incumbent and other operators.

Switch: Equipment used to route calls to their destination by establishing temporary connections between two circuits in a telecommunications network or by routing data packets. France Telecom's network comprises a hierarchical system of switches. The higher the exchange in the system, the greater number of subscribers it serves.

Switched Internet: Refers to Internet access via the France Telecom public switched telephone network used for switching plain ordinary telephone service (POTS).

Switching: In a telecommunications network, switching allows temporary traffic connections to be established between two or more network points. This is carried out by switching equipment (or exchanges) located at different points of the network. The basic structure of a telecommunications network therefore comprises transmission links interconnected by exchanges. "Packet" and "circuit" switching are two techniques used in telecommunications networks. The first is used by Internet (IP) networks and the second by traditional telephony (PSTN) networks.

Tariff squeeze effect: The risk of a tariff squeeze arises when two companies A and B are competing in a retail market and when B depends on A for the supply of goods or services needed for the retail market. A tariff squeeze occurs when operator A's retail tariff is lower than the wholesale tariff for the intermediary goods or services and operator B's own costs. In the case of tests carried out in ART recommendations, France Telecom retail tariffs generate a tariff squeeze if the average revenue is lower than the average cost of an equivalent retail offer supplied by an operator considered to be "efficient" and constrained to use France Telecom interconnection services. The term "tariff squeeze" comes from the fact that the other alternative operator must compete with France Telecom retail tariffs while at the same time depending on France Telecom for intermediary services i.e. interconnection.

Tariff squeeze: see tariff squeeze effect.

TBR (Technical Basis for Regulation): Harmonised standard established by ETSI. TBRs are used as the basis of technical regulations, which lay down the essential requirements with which terminal equipment must comply. Telecommunications networks and services consultative committee : Advisory committees created by the Telecommunications Act of 26 July 1996. They report to the Minister for Telecommunications and to the ART Chairman.

Telecommunications: Transmission or reception of signs, signals, text, image, sound or other information, by wire, optical fibre, radio

or other electromagnetic means.

Télétel: Database consultation service offered by France Telecom using Minitel teletex terminals.

Terminal equipment: Equipment intended to be connected directly or indirectly to the termination point of a network in order to send, process or receive information. e.g. telephone, fax, modem etc.

The International Telecommunications Union (ITU): Organisation under the aegis of the United Nations, based in Geneva and responsible for drafting telecommunications standards.

Third-party billing: Service enabling new operators to entrust the incumbent with billing for the services offered to their customers via interconnection. In the case of special services, third-party billing cannot be used for services that are free for the caller, but only for those that are charged. As the market develops, this service is essential for effective competition.

Third-party collection: Interconnection service, which enables a network operator to collect traffic from the incumbent's network on behalf of another operator that does not have infrastructure in the geographical area concerned. This service is used in particular by L. 34-1 licensed telephone operators wishing to provide their service over an extensive area without having to rollout a network.

TRAC (Technical Regulations Applications Committee): CEPT committee traditionally set up to draft common technical regulations (CTRs) for terminal equipment.

Transmission: On a telecommunications network, transmission is the carriage of information from one network point to another. The medium used may be copper cables, optical fibres or radio relays (see "switching").

Trunk exchange area: see "local exchange area".

UMTS (Universal Mobile Telecommunications System): European-standard third-generation mobile telecommunications system, designed to support a wide range of services integrating voice, data and images. At ITU level there are several competing standards for these systems grouped under the generic umbrella called IMT 2000.

Universal service: Principle component of the public telecommunications service, defined by law. It includes provision of a telephone service to all at an affordable price, carriage of emergency calls free of charge, provision of a directory enquiry service, a directory in printed and electronic form, and supply of public phone booths on the public domain. It also sets out special technical conditions and prices for disabled and low-income users.

Unlimited flat rate: Offers unlimited Internet connection time via the switched telephone network with the end user being charged a flat-rate fee.

URA (Unité de Raccordement d'Abonné): Refers to the part of a telephone switch in the France Telecom network used to connect subscriber lines and convert information to digital format.

Virtual co-location: For unbundling, a type of co-location in which the unbundling operator's equipment is managed by France Telecom and installed alongside France Telecom's equipment.

Voice telephony: The ONP "voice telephony" directive of 26 February 1998 defines voice telephony as "a service available to the public for the commercial provision of direct transport of real-time speech via the public switched network or networks, such that any

user can use equipment connected to a network termination point at a fixed location to communicate with another user of equipment connected to another termination point." The term "voice telephony" is used in Community directives to designate the traditional Plain Old Telephone Service (POTS).

VPN (Virtual Private Network): A virtual private network shares resources on one or several public networks for the internal requirements of a closed user group, which is defined as "a group with a common interest, which is sufficiently stable to be identified and which pre-dates the supply of telecommunications services". It responds to a need for both internal communication (within the user group), and external communication (to public network users). For businesses whose sites are spread over a wide area, the virtual private network, established on their operator's network, can function like a private network, with its own private numbering plan; this simulation provides the same service as a private branch automatic exchange (PABX) while at the same time saving the business costly investment.

VSAT (Very Small Aperture Terminal): Satellite telecommunications services using a narrow part of total satellite bandwidth and a very small transmitting/receiving terminal for low or medium speed data transmission.

WAP (Wireless Application Protocol): Standard for adapting the Internet to the constraints of mobile telephones. It deals in particular, with the use of a suitable content format. This new communications protocol is part of the process of incorporating Internet applications into GSM mobile networks.

Wireless local loop: Local loop network where the traditional copper wires are replaced with wireless network technology, giving greater flexibility in infrastructure deployment.

Wireline network: Network using metal cables or optical fibres as a transmission medium.

WLAN: Wireless local area network.

WRC (World Radiocommunication Conference): International coordination in the field of radiocommunication. This coordination is essential because frequencies have no national boundaries and it is simpler to have the same type of service in the same frequencies. Organised in connection with the ITU, this conference is held every three years. The results, once incorporated into radiocommunications regulations, have the force of an international treaty. The Radiocommunications Assembly is held prior to the conference. After the conference, a preparatory meeting is held to prepare for the next conference. 2 363 delegates from 150 member countries and 95 organisations such as manufacturers, operators and international and telecommunications organisations attended the 2000 conference.

Glossary of French terms

ADF: assembly of French *départements* : representative body for local authorities

AFNOR : french standards association. A private, non profit making organisation placed under the supervision of the French Ministry for Industry.

AMF: association of Mayors of France Coordinates members' activities and provides assistance.

ANFr: National Frequency Agency Organisation for managing and planning the radio frequency spectrum.

Caisse des dépôts et consignations: the *Caisse des Dépôts* is a public financial institution created to provide secure management of private investment funds requiring special guarantees. These funds are used for social and economic investment programmes in the public interest.

CIADT: interministerial Committee for Regional Development. The theme of the CIADT meeting was : narrowing the "digital divide".

Conseil d'État: the Conseil d'Etat has an advisory role to the Government and the President of the French Republic. It examines draft laws and ordinances prior to them being submitted to the Council of Ministers. It is also the supreme administrative jurisdiction and rules on appeals brought by private individuals or legal entities against irregular administrative acts that have been considered as prejudicial to their interests and which do not fall under the jurisdiction of any other body.

Conseil Economique et Social : The *Conseil Économique et Social* issues recommendations to the French authorities and also takes part in the legislative process on Acts to be submitted for approval by the French Parliament.

CSA: French audiovisual authority. An independent administrative authority to guarantee broadcasting freedom and oversee the quality of programmes.

CSSPPT: Public service commission for posts and telecommunications Monitors the balanced development of the public service. Legal advisor to executive power for posts and telecommunications sector.

DDM: Directorate for the Development of Media.

Département : Metropolitan France is divided into 95 *départements*.

DIGITIP: Directorate for Industry, Information Technologies and the Post. Related to the Ministry for Finance and Industry, it promotes competitive development of Industry in France.

FEDER : European Funds for Regional Development. Its purpose is to offset regional inequalities and promote balanced development of European regions. Funds are granted to local players in the framework of development programmes established by the EU, the Member States and local authorities.

Préfecture : Administrative center for a *département*.

SGAR : General Secretariat for Regional Affairs. Coordinates public authority actions involving various local authorities.

Table of contents

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