RÉPUBLIQUE FRANÇAISE

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ARCEP Annual Report 2011

ARCEP
Autorité de régulation des communications électroniques et des postes
www.arcep.fr

Introduction

ARCEP celebrated its 15th anniversary in early 2012. We took this opportunity to assess our actions thus far and the outlook for the years ahead. The first thing that should be said is that regulation is currently in the throes of a deep-seated change, due in particular to the deployment of new fixed and mobile ultra high-speed networks. Where it was focused initially on opening the incumbent carrier's wireline network up to the competition, regulation today is now more symmetrical in nature, setting common rules for all operators involved in deploying new networks. In addition, by enabling undertakings to share these new systems, regulation ensures a lasting state of competition and helps reduce rollout costs. Since the transposition of the European directives, regulation has also been extended to include the internet's economic neutrality. And, finally, it helps increase awareness amongst consumers by providing them with the tools they need to make informed choices. The important work accomplished in each of these areas in 2011 testifies to the existence of a vital and dynamic regulation, and one that strives to serve the needs of affected sectors.

A complete framework for fixed optical fibre network rollouts

2011 saw the completion of the regulatory framework that applies to the deployment of ultra-fast broadband fibre to the home (FTTH) networks. France thereby became one of the first countries in Europe to have a complete framework that provides operators in both the private and public sector with the appropriate incentives and the clarity they need to invest. This framework embodies a fundamental development in regulation, namely the gradual shift from asymmetrical regulation – symbolised by the tremendous success of unbundling – to symmetrical regulation that sets rules that are common to all operators wanting to invest in this new network. To facilitate investments, this regulation is based on a high degree of network sharing, which can represent as much as 90% of rollout costs, and on creating incentives for co-investment. Both of these schemes have now been put into action: private sector operators have announced their specific rollout plans outside of very high-density areas while local authorities, who have a crucial role to play in ensuring that deployments are successful, have been engaged in very large numbers in strategic planning. This has translated into both regional digital development blueprints and the deployment of superfast public-initiative networks. Private and public sector operators have signed co-investment contracts, and some have drafted agreements allowing them to specify their respective local actions.

The mechanisms needed to allow public and private initiative to complement one another, which are key to the economics of new generation network rollouts, are thus gradually taking shape. This complementarity is vital to achieving FTTH coverage nationwide, which ARCEP estimates will cost just over €20 billion. At the same time, unbundling continues to make progress: 50% of all lines supplying the country's 21 million xDSL connections are now unbundled. All in all, the state of broadband and ultra-fast broadband in France is a very healthy one, representing a market of close to €10 billion for 22.7 million subscriptions, of which 660,000 to ultra-fast broadband solutions – or 43% more than the year before. Over half of the country's broadband subscribers have access to a connection in excess of 10 Mbps – putting France in fourth place in the EU, behind the Netherlands, Denmark and Belgium.
Launch of ultra high-speed mobile

2011 was also marked by the allocation of the frequencies needed to deploy ultra high-speed (4G) mobile systems, and particularly those in the

800 MHz band commonly known as the "digital dividend". The procedure that ARCEP designed achieved all of the set objectives. The legislature had wanted 4G networks to cover a very large percentage of the country, and in fact made it one of the top priorities. As a result, these networks will eventually cover 99.6% of the population of Metropolitan France, and at least 95% of the population of each department, with the most sparsely populated parts of the country designated as priority rollout areas. The allocation of this spectrum was not, however, to have a detrimental effect on mobile market competition: the four mobile network operators in France were thus each allocated frequencies, and each made a commitment to host full MVNOs. Nor were these commitments to be secured at the expense of proper monetisation of the public asset: the operators paid a total of close to €3.6 billion to obtain all of the available spectrum. Also, for the first time, the licences they were issued include strong incentives to pool their networks and their frequencies, not only to facilitate rollouts in more sparsely populated areas, but also to improve the quality of the superfast access services sold to consumers.

Regulation to guarantee a balance between competition and the sector's growth

For wireline and wireless systems, everything was done so that clear and incentivising regulation provided the operators with the security they needed to enter into a new investment cycle, generator of future revenue, while allowing them to reduce their overall expenditures. These measures will also help future-proof actions which are not only beneficial to consumers, but have also enabled – in a way that is unmatched in Europe – the emergence of alternative operators ready to control their infrastructure in a lasting fashion. This competition dynamic already existed in the wireline market. It intensified in the mobile market with the arrival of a fourth operator, Free Mobile, and thanks to the influence of MVNOs which now have an over 10% share of the market. These developments are helping the market move forward but not hindering operators' ability to find new growth outlets.

The only major country in Europe to have continued to grow during the economic crisis, France's electronic communications retail market's revenue shrank slightly in 2011, down to €44.1 billion. This was due in particular to the fact that mobile operators did not carry the VAT hike that came into effect in February 2011 over to their retail prices. But demand is still strong, especially for the mobile internet whose traffic has quadrupled in two years. And operators continue to spend heavily on developing their systems: a total €7.9 billion in 2011, which is the second highest figure since 1998. They also continue to create jobs: for the second year in a row, direct employment rose by 1.2% to reach close to 128,000 people at the end of 2011.

Promoting net neutrality

If 2010 was a year devoted to drafting and publishing ARCEP's first guidelines on net neutrality, 2011 was marked by the transposition of the new European framework which formalises the Authority's responsibilities, and by the first steps in the operational implementation of its guidelines – of which the first results have materialised in 2012. ARCEP has steadily acquired the means of deepening its understanding of the interconnection market that exists between internet access providers and the providers of online content and services. We also worked in tandem with all of the stakeholders to define the means of achieving an objective and transparent measurement of the quality of internet access services. We continue to work on the issue of traffic management practices, and will provide a complete account of our actions in the report submitted to Parliament and the Government in July 2012. On the matter of neutrality, ARCEP is working to ensure that competition and transparency continue be guiding forces, through non-intrusive regulation that matches the way the internet operates – preventing any undermining of the freedom to access to the wealth of content on the internet, and protecting consumers' freedom of choice.

Giving users the tools to make informed choices

In February 2011, the Authority published its proposals for improving the offers available to consumers of electronic communication and postal services, which were drafted in accordance with the objectives assigned to ARCEP by the legislature. They follow through on the measures that have already been put into place for creating a more liquid market and increasing consumers' trust. This was the underlying impetus of the reforms of value-added service pricing that began in 2011. The ultimate aim is to provide consumers with the tools they need to make informed choices, using both incentives and the introduction of more prescriptive measures. Our actions in this arena have been consolidated by the transposition of the new European framework which strengthens provisos on consumer information and consumer rights – for users with disabilities, for instance – and stipulates that, should it ascertain a clear degradation in quality, the Authority has the power to set minimum QoS requirements for internet access.

Postal services

2011 was also the year that the postal services market was fully opened up to competition. However, the weakened economic situation in which the postal sector is developing explains why this market liberalisation did not translate into a significant increase in competition. Through its actions, ARCEP intends to contribute to modernising and improving the quality of the postal service by focusing on the universal service: shortening the delivery time for registered letters; examining the terms surrounding the introduction of new offers – notably the more economical "letter verte" – in the set of universal services; reducing the price of sending small items of little value. The Law of 9 February 2010 gave ARCEP two new responsibilities: to assess the cost of the regional development mandate assigned to La Poste, which we did for 2010, and to handle complaints from users that were not satisfactorily resolved by the procedures put into place by the market's operators. In early 2012, ARCEP produced a first scorecard of its actions in this area: the opinions we received allowed us to identify concrete improvements to be implemented for tracking sent items and the terms governing the receipt of parcels. The variety and scale of the work undertaken and achieved over the course of 2011 demonstrate the capacity of the institution – and of its very high quality staff – to adapt to a sector in a constant state of development. ARCEP has thus structured itself to be able to satisfy the needs arising from the responsibilities newly assigned to us by the revised European framework, without increasing our staff and while also reducing our operating budget. We have increased our interaction with local authorities to whom we lend our expertise. We have managed to employ less intrusive forms of regulation in a growing number of instances, as in the area of net neutrality, as well as forms of co-regulation when the situation allows.

These changing methods also reflect the very nature of regulation: knowing how to reinvent one's courses of action without ever betraying one's responsibilities. But, in this sector, as in the other regulated sectors, State mandates are never confined to just the job of regulator. The Government and Parliament are attached to a broad set of essential policies and actions: fiscal environment, supporting R&D, innovation and investment; role of public enterprises; developing training for new professions, etc.

Operating alongside and helping to back private initiative, it is this set of public policies which, in tandem with the regulator's actions, steadily defines our country's economic landscape, and so that of the electronic communications and postal sectors.

Jean-Ludovic Silicani
ARCEP Chairman

1997-2012: 15 years of regulation

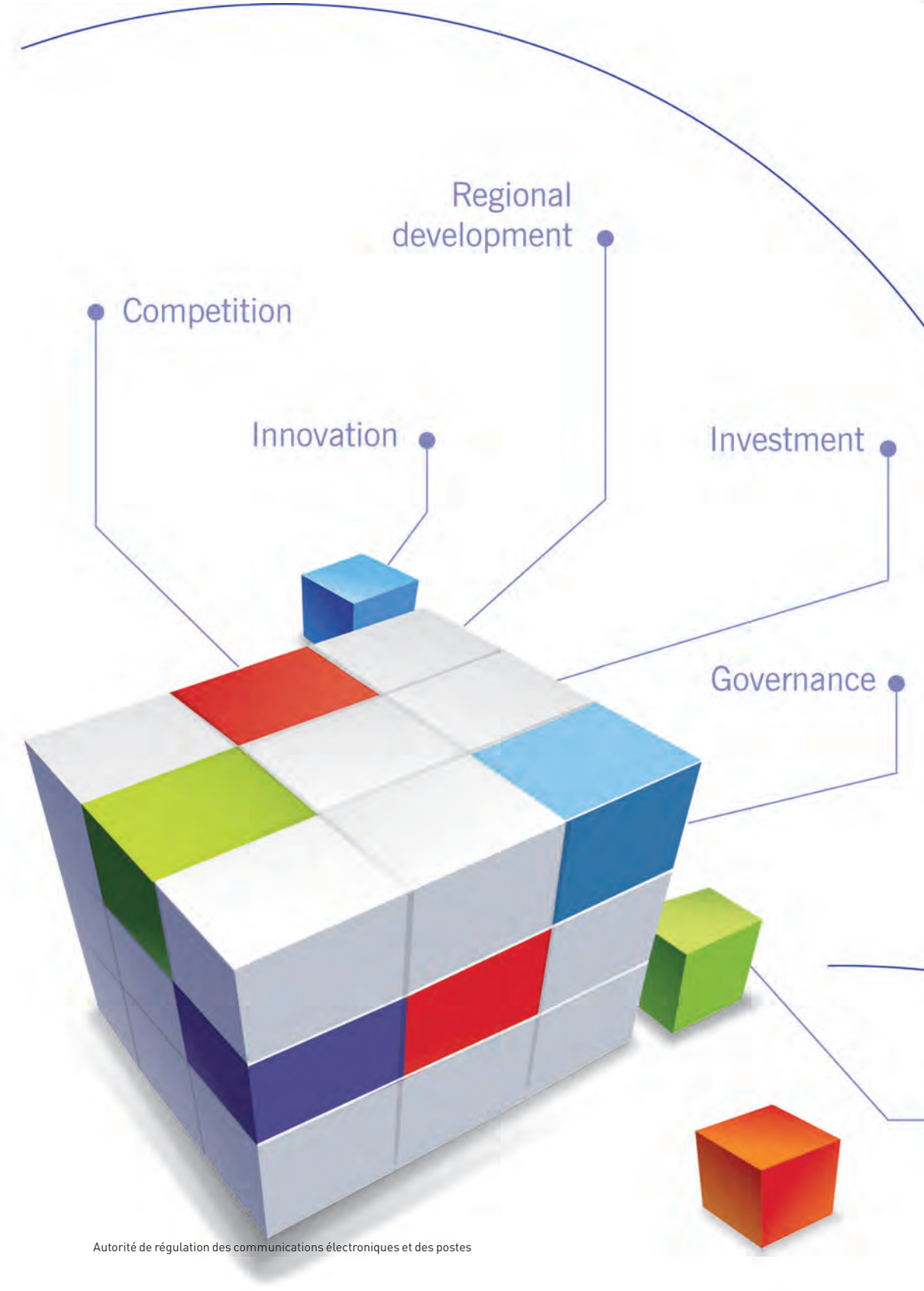
Over the past 15 years, ARCEP has managed to create the conditions for opening the telecommunications market up to competition. And this has been beneficial to consumers: prices decreased by 15% between 1997 and 2011, while consumption during that time rose by more than 20%. This additional purchasing power enabled more widespread adoption and a massive increase in usage amongst households, businesses and public services – well beyond what had been imagined in 1997. ARCEP's actions were instrumental in the process: regulation of France Telecom's wholesale tariffs, decreasing call termination rates and measures taken to increase transparency and greater market liquidity to name just a few. Nor did this decrease in prices hinder innovation, investment or, ultimately, the sector's growth. The telecom sector generated the equivalent of €26 billion in revenue in 1997, and today generates more than €41 billion – which translates into a 100% increase in volume. Since the adoption of the Law of 26 July 1996, which opened the telecoms sector up to competition, the emergence of alternative operators willing to differentiate themselves by investing in their own network has helped build a dynamic market around four players, each with a strong identity.

ARCEP has worked ceaselessly to defend objectives that are in everyone's interest, namely digital regional development and accessibility thanks to the universal service. In the postal sector, although the market's deregulation has had little effect thus far, ARCEP is working now to ensure the proper implementation of the universal service, and that it is adapted to consumers' needs.

Looking beyond what we have accomplished thus far, major developments in the digital ecosystem are ushering in a host of new challenges. Of all European cities, Paris has the largest population of innovative digital industry start-ups. This is a source of pride and we need to ensure they get the support they deserve. To take the sector's needs into account, ARCEP will make greater use of symmetrical forms of regulation and of co-regulation. In the area of net neutrality, it will be an "active monitor" – working to ensure that enough information is made available to consumers and to the marketplace so that competition can fully play its part. When exercising its newfound power to settle disputes, it will be called on to specify what constitutes fair and non-discriminatory relationships between content and service providers and ISPs. Here, the Authority will fully assume its responsibilities as the internet's technical-economic regulator. Lastly, the deployment of new infrastructure, to make the transition to ultra high-speed wireline and wireless networks, opens up tremendous opportunities in the arena of jobs and economic development. ARCEP is ready to lend its support and its expertise to the endeavour.

In early January 2012 ARCEP published a special issue of "Les cahiers de l'ARCEP" titled, "1997-2012: from telecom monopoly to the digital revolution" – taking a look back at these 15 years of telecommunications market regulation.

PART ONE
ARCEP


Regional development
Competition
Innovation
Investment
Governance

ARCEP responsibilities and activities

1. ARCEP's responsibilities

ARCEP is an independent administrative authority that was created on 5 January 1997, under the name of ART[1] – which stands for *Autorité de régulation des télécommunications*, or Telecommunications Regulatory Authority – to accompany the French telecommunications sector as it was opened up to competition, and to regulate the markets created in the process. It therefore celebrated its 15th anniversary in early 2012.

In 2005, the Law on postal regulation[2] expanded the Authority's powers. It thus became the Electronic communications and postal regulatory authority, or ARCEP (*Autorité de régulation des communications électroniques et des postes*), as it assumed the responsibility of overseeing the postal market's liberalisation and proper operation. Since 1 January 2011, the date on which the French postal market was fully opened up to competition, in accordance with the Law on postal regulation and postal activities[3], the Authority has been responsible for:

- issuing authorisations to exercise a postal activity;
- issuing opinions, which are made public, on tariffs and universal service quality objectives;
- assessing the net cost for La Poste to fulfil its regional development mandate;
- and processing complaints received from users of the postal service which were unable to be resolved through the procedures put into place by authorised postal service providers.

ARCEP's chief role in the electronic communications sector is to ensure fair and effective competition in the electronic communications market, in the interest of consumers.

The Authority's primary tool is market analysis which consists of defining relevant markets, of designating those operators that enjoy significant market power (SMP) and of setting the obligations to which they are subject, generally in wholesale markets — in other words markets where operators bill for services provided to one another – to resolve competition issues that have arisen. This is referred to as "asymmetrical" regulation as it does not apply equally to all of the

Consumers

1 - Law No. 96-659 on telecommunications regulation of 26 July 1996, Journal Officiel (Official Journal) of 27 July 1996

2 - Law No. 2005-516 of 20 May 2005 on postal activity regulation, JO of 21 May 2005.

3 - Law No.2010-123 of 9 February 2010 on the public company La Poste and postal activities, JO of 10 February 2010.

market's operators. ARCEP also has the power to set the general obligations that apply to all operators, within the scope set by law. This is what is known as "symmetrical" regulation as it applies equally to all market operators. In addition, the Authority has the power to impose penalties on any operator that does not meet its obligations, and to settle disputes between operators on the technical and pricing terms governing network access.

The allocation of spectrum and numbering resources is another responsibility entrusted to ARCEP. And, finally, the Authority sets the amount of the contributions to the universal service fund, defined by the Law of 1996, and ensures the oversight of these financing systems.

The legislative provisions that define ARCEP's role and status are contained in the French Postal and electronic communications code or CPCE *(Code des postes et des communications électroniques).*

2. ARCEP activities

2.1. Performance indicators

When enacting the Finance Act of 2006, referred to as the LOLF[4] *(Loi organique relative aux lois de finances)*, a common performance objective was set for all three of the independent administrative authorities responsible for economic regulation, namely to *"make quality decisions within a set timeframe"*. This objective has resulted in similar indicators for compliance with those timeframes being set for the three bodies. Additional indicators were defined in 2009 and updated in 2010 which pertain more specifically to "professional" performance (see table below).
For ARCEP, this applies to the average timeframe for issuing opinions on texts (21.1 business days in 2011 compared to 13.5 business days in 2010), opinions on tariffs (15.7 business days in 2011 compared to 16.8 business days in 2010) and timeframes for settling disputes (3.8 months in 2011 compared to 3.5 months in 2010).

Performance indicators

	2008	2009	2010	2011
Regulator's administrative efficiency				
- Number of opinions or decisions issued	1,457	1,133	1,377	1,510
- Number of decisions cancelled by the courts	0	1	0	0
Electronic communications				
a) Regulated market development: equipment				
- Number of broadband and ultra-fast broadband subscribers (million)	17.8	19.7	21.3	22.8
- Number of mobile subscribers (million)	58.0	61.5	65	68.5
- Number of Internet subscribers (% of households)	57.8	62.6	69.2	72.9
- Number of ultra-fast broadband subscribers (million)	0.165	0.290	0.465	0.665
b) Regulated market development: geographical coverage (% of the population)				
- Mobile	99.5	99,8	99.9	99.9
- Broadband (access at 512 Kbit/s or more)	98.3	98,7	99.0	99.1
- Fibre (homes passed)	1.3	2.4	3.2	4.4
Postal sector				
a) Quality of service				
- % of single-piece priority letters delivered in D+1	83.9	84.7	83.4	87.3
- % of "Colissimo guichet" parcels delivered in D+2	85.0	87.7	84.8	88.7
b) Number of operators	23	22	22	29

Source: ARCEP.

4 - Finance Act No.2001-692 of 1 August 2001, JO of 2 August 2001

In 2009, in tandem with the Energy Regulation Commission, CRE *(Commission de Régulation de l'Energie)*, and with the help of firms Capgemini Consulting and Ylios, ARCEP performed a comparative analysis of the means and resources employed by its fellow independent regulatory authorities in other countries (Germany, Italy, the UK, Spain).

It emerged that, compared to the revenue generated by the electronic communications sector in 2008, ARCEP's human and financial resources were significantly smaller than those of counterpart NRAs. This proved true once again in 2011.

2.2. Decisions and opinions

In 2011, ARCEP adopted 1,510 opinions and decisions.

a) Decisions

The ARCEP Board issued 1,476 decisions:

- 1,407 concerning the allocation of resources: 1,118 on spectrum resources and 289 on numbering resources;
- 69 concerning its other regulatory powers, including 9 decisions on dispute settlements between operators and 14 decisions concerning penalties, which included the issuance of notices to comply.

The two penalty decisions adopted in 2011 were appealed to the Conseil d'Etat[5] in early 2012.

No decision concerning the Authority was issued by the Conseil d'Etat in 2012. However, the Chairman of ARCEP – who has the right to take legal action – was permitted to appeal in cassation orders from the Administrative Court of Appeal relating to administrative taxes.

b) Opinions

In 2011, ARCEP issued 34 opinions, including:

- 18 opinions on draft legislation, decrees and orders;
- 5 opinions submitted in response to a request from the Competition Authority;
- 9 opinions on La Poste tariff decisions;
- 2 opinions on postal complaints.

2.3. Consultations, surveys and reports

Twenty three public consultations were launched in 2011, either as part of market analyses procedures, on matters that are within the Authority's regulatory purview, or as part of the process of implementing operators' asymmetrical obligations and market-wide schemes, e.g. universal service, Internet and network neutrality, numbering and fibre rollouts.

ARCEP published five reports in 2011:

- a report to Parliament on France Telecom copper local loop costs and how they will be affected by the transition from copper to fibre;
- a summary report on the work performed by the forum for discussions between ARCEP, local authorities and operators, GRACO (*groupe d'échange entre ARCEP, les collectivités territoriales et les opérateurs*), titled: "Local authority involvement in the electronic communications sector";
- and three reports on ARCEP fact-finding missions to the United States, South Korea and Singapore.

ARCEP also published seven market reports on topics that included the dissemination and use of information technologies in French society, and what defines an electronic communications operator.

In a bid to offer stakeholders concrete assistance in the transition to ultra-fast broadband by providing them with the most comprehensive information possible on its deployment, in May 2011 ARCEP published an updated version of its handbook on indoor fibre deployments installations whose target readership is property owners and managers, landlords, condominium boards and tenants.

The Authority also published "*30 proposals for improving the offers made available to consumers by Internet service providers, wireline and wireless electronic communication operators and postal operators*" in March 2011.

5 - *The Conseil d'Etat, or Council of State, acts as legal advisor to the executive branch of the French government and is France's administrative court of last resort.*

2.4. Operator licences and declarations

The Act of 9 July 2004[6] altered and simplified the regulatory framework that applies to electronic communications in France, as a result of which operators are required only to declare themselves to the Authority, whereas they had previously been required to apply for an authorisation.

In 2010, 190 new operators declared themselves, of which a third for a particular service area in France, while 70 operators shut down their business during that same period. As of 31 December 2011, ARCEP recorded 1,171 declared operators: of which 62% were operating a network, 54% providing a telephone service, 52% an Internet access service and 8.7% were providing mobile services.

2.5. Dispute settlements

In 2011, 10 requests for dispute settlements were filed with ARCEP. The Authority issued nine decisions, including two that related to procedures begun in 2009, while three more decisions were rendered in early 2012. Four of these requests were eventually withdrawn. A dispute settlement procedure lasts a maximum four months.

Dispute settlement decisions issued in 2011

Undertaking	Date of the request	Decision rendered on	Decision No.
Verizon / France Télécom	20/10/2010	03/02/2011	2011-0146*
SFR / France Télécom	03/12/2010	31/03/2011	2011-0359
Towercast / TDF	15/02/2011	07/06/2011	2011-0596
Towercast / TDF	15/03/2011	12/07/2011	2011-0809
Free Infra / France Télécom	25/03/2011	21/07/2011	2011-0846
SFR / France Télécom	25/03/2011	21/06/2011	2011-0734*
France Télécom / Free Infra	01/04/2011	26/07/2011	2011-0893
SFR / Free Infra	06/05/2011	01/09/2011	2011-0954*
Free SAS / France Télécom	10/08/2011	22/09/2011	2011-1114*
SRR / France Télécom	17/10/2011	07/02/2012	2012-0157
Lleida.net / SFR	24/10/2011	14/02/2012	2012-0205
Dauphin Telecom / France Télécom	25/11/2011	20/03/2012	2012-0365

** Request withdrawn*
Source: ARCEP.

Dispute settlement decisions appealed to the Paris Court of Appeal

Date of the appeal	Appelant	Defendant	Decision rendered on
03/05/2011	SFR	France Télécom	Currently before the Paris Court of Appeal following an order from the Court of Cassation on 14 December 2010
11/08/2011	TDF	Towercast	Under investigation

Source: ARCEP.

6 - *Law No. 2004-669 of 9 July, JO of 10 July 2004*

Especially noteworthy among the dispute settlement decisions issued by ARCEP in 2011 were:

Towercast vs. TDF (1)[7]

In this decision on radio broadcasting services, ARCEP granted a request from the firm Towercast to have access to the firm TDF's "Grande Jeanne" site located at Annecy.

The dispute arose following TDF's refusal to grant access to one of its broadcasting sites which Towercast considered the only relevant location in the region, given the town of Annecy's geographical restrictions and technical prescriptions set by the Broadcasting Authority, CSA (*Conseil supérieur de l'audiovisuel*).

Based on the elements provided by the parties, and the decision issued by CSA on 12th April 2011, ARCEP considered that no other site in the Annecy region makes it possible to replicate the conditions provided by the "Grande Jeanne" site operated by TDF in a satisfactory manner. The Authority also pointed out that Towercast does not have the option of deploying a site that would be collocated with the "Grande Jeanne" site on the Semnoz mountain.

ARCEP therefore concluded that it was fair to demand that TDF grant the access request submitted by Towercast, provided it is technically feasible.

The Authority specified that, within three weeks, TDF was to provide Towercast with pricing terms and conditions that are non-discriminatory, objective, relevant and efficient, and which do not create a price squeeze in relation to the offers that TDF markets to radio broadcasters.

Towercast vs. TDF (2)[8]

On 15 March 2011, Towercast requested that ARCEP oblige TDF to apply the terms of its reference offer – published in accordance with the Authority's "cycle 2" market analysis decision – to agreements on various broadcasting sites, some of which were replicable and some of which were not. The agreements had been signed on various dates, and all for a period of five years.

TDF had refused to grand this request during earlier negotiations with Towercast.

When questioned by ARCEP, TDF asserted that the market analysis in question did not require the terms of the new reference offer to apply immediately to existing contracts and that, in any event, this immediate application would be contrary to the principle of protecting earlier laws governing pre-existing contracts.

Meanwhile, Towercast asserted that maintaining previous terms, and particularly pricing terms, was discriminatory and contrary to the market analysis decision.

After having ascertained that, in accordance with the principle of public policy in the economic sphere, the directives and the texts that transposed them into internal law allowed for market analysis decisions to apply immediately to existing agreements, and that the market analysis in question necessarily provided for this application to pre-existing contracts between TDF and Towercast, ARCEP ordered TDF to bring the prices listed in the agreements cited in the dispute to comply with the obligations imposed by the "cycle 2" decision.

TDF appealed this decision to the Paris Court of Appeal.

7 - *ARCEP Decision No. 2011-0596 of 7 June 2011*
8 - *ARCEP Decision No. 2011-0809 of 12 July 2011*

France Telecom vs. Free[9] and Free vs. France Telecom[10]

As part of fibre-to-the-home (FTTH) rollouts, the Authority was asked to provide some clarification on the methods to be used for connecting branching units on the floors of multi-storey buildings and, more specifically, a service provider's ability to make an appointment directly with customers to connect them to the branching unit.

ARCEP considered that the building operator, i.e. the undertaking that installed the fibre cable in the building, must allow a third-party vendor to connect a customer to the branching unit, and notably to contact the customer directly to that end.

This decision will better serve consumers' interest by saving them from having to make two appointments when subscribing to an FTTH service, and help promote fair and effective competition between operators.

2.6. Official notices to comply and penalties

In 2011, ARCEP opened 34 penalty procedures whose purpose was to require operators to comply with their obligations: 33 were opened pursuant to Article L. 36-11 of the French Postal and electronic communications code, CPCE (*code des postes et des communications électroniques*) as it pertains to the electronic communications sector, and pursuant to CPCE Article L.5-3 as it pertains to the postal sector. During the year, ARCEP also completed 21 procedures that had been opened between 2009 and 2011.

The Authority also ascertained that Orange France and SFR had reached the target level of 3G coverage that was set in the notices to comply they were issued in 2009.

- 18 decisions on **notices to comply** were sent to operators, of which 11 were made public.

  Seven holders of wireless local loop (WLL) licences in the 3.4 – 3.6 GHz band in Metropolitan France, and four in the overseas territories, were served by the Director General of ARCEP with a notice to comply with the rollout obligations attached to their licences.

- Three penalty procedures led to hearings with the ARCEP Executive Board, of which two resulted in the adoption in a penalty decision:

  - the Authority imposed a €1,000 fine on La Poste for failing to include a reasonably-priced offer for sending small items in the universal service;

  - the Authority also imposed a penalty on Numericable for failing to comply with an ARCEP decision settling the company's dispute with France Telecom.

Up until the end of November 2011, Numericable had refused to comply with the Authority's Decision of 4 November 2010, even though it had been given a deadline of two months.

Failing to comply with an ARCEP dispute settlement decision constitutes a particularly serious breach which warrants, in that case, a fine of €5 million in cash.

9 - *ARCEP Decision No.2011-0846 of 21 July 2011*
10 - *ARCEP Decision No. 2011-0893 of 26 July 2011*

"Advance notice to comply"

When an electronic communications operator fails to meet its obligations, the Authority cannot legally impose a penalty without having first issued a notice to comply, whose purpose is to give the operator the opportunity to resolve this failure.

The notice to comply therefore sets a deadline for the required action.

When the matter at hand concerns rollout obligations with a set timetable, the fact of waiting until the deadline before issuing a notice to comply automatically pushes back the rollout schedule – as has been the case in the past with notices to comply relating to several operators' 3G rollout obligations. To avoid giving a "lateness premium" to those operators who fail to set a pace that will allow them to meet their future obligations within the set timeframe, it is possible to issue the operator in question with an "advance notice to comply," in other words before the deadline.

This procedure was introduced in 1991 by French Broadcasting Authority, CSA, whose power to impose penalties is similar to ARCEP's. The Conseil d'Etat approved this form of official notice [11].

3. Legal framework and its development

Changes to the legal framework affecting electronic communications markets result primarily from the transposition of the latest Telecoms Package[12] into national law.

3.1 Changes to the national legal framework governing electronic communications: transposition of the 3rd Telecoms Package

a) Net neutrality: putting concrete measures into effect [13]

Article 18 of the Law of 22 March 2011 – whereby Parliament authorises the Government to adopt, by means of an order, the provisions necessary to transposing the latest "Telecoms Package" – completed the list of principles governing regulation of the electronic communications sector, by adding to the objectives already listed in CPCE Article L. 32-1, "*That no discrimination exists, under analogous circumstances, in the relationship between the operators and providers of public online electronic communication services in traffic routing and access to these services*". ARCEP is thereby mandated to ensure that the principle of neutrality is respected.

Among other things, this means that ARCEP's powers in the area of dispute settlement have been explicitly expanded, and that it can now rule[14] on "*reciprocal technical and pricing terms applied to traffic routing between an operator and an enterprise providing online communication services to the public*".

The Authority may therefore be called on by either party to settle disputes between an operator and an Information society service vendor (ISV).

ARCEP may also set minimum quality of service requirements for Internet access, through a regulatory decision that applies to all operators.

11 - EC Decision of 10 July 1995, TF1, No. 141726
12 - Two directives and regulation from the European Parliament and Council of 25 November 2009, EUOJ of 18 December 2009
13 - Law No. 2011-302 of 22 March 2011 bringing various provisions for adapting to European Union laws in the area of health, labour and electronic communications, JO of 23 March 2011
14 - In accordance with Para. 5, II of CPCE Article L. 36-8

b) Strengthened regulatory powers

Several provisions have come to reinforce the Authority's regulatory powers.

- The regulator's overall independence has been increased. New provisions stipulate that ARCEP members and representatives will perform their duties with no instruction from the Government, nor any other institution. ARCEP provides its expertise within the State system, of which it is one administration, and fulfils its mandate of regulator in a completely independent fashion – as required by European law and jurisprudence.

- ARCEP has been given the power to impose functional separation on a vertically integrated operator with significant market power (SMP), in accordance with the new CPCE Article L. 38-2 . This regulatory instrument is viewed as an exceptional, last recourse measure, when all other means of regulation have failed to create free and fair competition in the marketplace.

Functional separation of France Telecom: interview with ARCEP Chairman, Jean-Ludovic Silicani, at the "Club Parliamentaire du Numérique" (Parliamentary Digital Club) on 23 March 2012

"If competition law makes it possible to penalise anti-trust behaviour from a vertically integrated operator after the fact, sector-specific regulation includes ex ante means of intervention that make it possible to prevent competitive distorsions, and particularly discrimination, and to guarantee that certain sectors – and particularly network industries – operate in an optimal fashion. In the electronic communications sector, European directives give the national regulatory authority, namely ARCEP, the choice of appropriate measures to ensure the smooth running of the markets.

To guarantee compliance with the principle of non-discrimination, the regulator can create an economic separation between the incumbent carrier's – hence the owner of the network's – infrastructure operation business and its service provision business.

Various, more or less intrusive forms of separation can help satisfy this objective: accounting, functional, legal and structural separation and separation of ownership. The best solution from an economic standpoint will depend on the prevailing market conditions, and once a choice needs to be made between the benefits enjoyed from this vertical integration (which helps to cut the costs of the integrated structure) and those expected from a stricter separation that will help ensure a lack of discrimination.

In France, ARCEP imposed accounting separation of France Telecom's businesses. It is an efficient tool for distinguishing wholesale from retail operations, and ensuring that no discrimination is occurring in the arena of prices."

- Symmetrical regulation, imposed by the legal provisions that apply to all operators, has been strengthened with the addition of a new Article L. 34-8-4 to the French Postal and electronic communications code (CPCE), on pooling land resources[15]. This article applies to all operators who enjoy significant market power in a portion of the country, regardless of their status of SMP or alternative operator on the national scale.

- Imposition of penalties may be swift, now that – in accordance with the new European directives the minimum period of one month allowed by the Director General to any operator suspected of failing to comply with its obligations has been removed from Article L. 36-11.

15 - In particular, this article makes it possible to require an operator to grant all reasonable requests for access to physical infrastructure and other resources (buildings, cables, antennae, towers, ducts, risers and boxes, etc.) which the operator has established by applying rights of way, and to impose on all undertakings that have established or are operating electronic communications lines inside a building to grant all reasonable requests for access to these lines in instances when their duplication would be economically inefficient or physically impossible.

c) Better serving consumer interests

In a market as complex as electronic communications, it is vital that consumers be fully aware of the terms and conditions available to them so that they can then make informed choices. Proper consumer information is guaranteed, in particular by CPCE Article L. 33-1 and by several legal provisions contained in the Consumer Code.

In accordance with CPCE Article L. 33-1, disabled users have the right to have access to electronic communications and emergency services that are equivalent to those available to other users.

A decree dated 30 March 2012[16], which serves to complete the CPCE, details the measures the operators must introduce on behalf of disabled users so that they might benefit from all of the components of the universal service:

- access to pricing information, contractual and billing documents through a means adapted to their disability;
- free access to the universal directory for the visually impaired;
- installation of public payphones that are accessible to those with motor disabilities, the blind and visually impaired in sufficient numbers to serve the population concerned.

For a market to operate properly, there needs to be a balanced relationship between the vendor and the consumer. ARCEP works to ensure this balance is maintained. It is to this end that it will be implementing a procedure for enabling price comparisons for retail market mobile services, in application of Article 21 of the Universal Service directive, and the principles contained in the laws that govern electronic communications, notably the obligation of transparency with respect to services.

3.2. The postal communications sector

The first outstanding event in the postal market in 2011 was the implementation of the Law of 9 February 2010 on the public company La Poste and postal activities[17].

a) End of the reserved sector

Law No. 2010-123 of 9 February 2010 on "La Poste and postal activities," which transposes the third postal directive of 2008 into French law, plans for the end of the remaining La Poste monopoly – or the "reserved sector" – over mail items weighing less than 50 g, starting on 1 January 2011.

b) Changes to ARCEP's powers in the area of postal tariffs and the quality of universal postal services

The end of the monopoly also marks the end of prior authorisation procedures for postal tariffs, and particularly the price of stamps, which have been in effect since 1990. This change does not, however, mean that postal tariffs have been fully liberalised.

Starting on 1 January 2011, ARCEP maintains the ability to supervise tariffs for universal services that are deemed public services. This means that ARCEP can set a price cap, which provides a certain degree of clarity and gives La Poste the latitude to alter its rate schedule by increasing the price of some products more than others, albeit with a cap on the average price increase over three years.

ARCEP will keep abreast of La Poste planned tariffs, and could ask the company to revise them if it has clearly strayed from the principles governing universal service pricing, i.e. they must be geographically balanced, affordable for all users and cost-based.

16 - Decree No.2012-436 of 30 March 2012 transposing the new European regulatory framework, JO of 31 March, Articles R20-30-4 to R20-30-11

17- *Law No.2010-123 of 9 February 2010 on the public company La Poste and postal activities, JO of 10 February 2010*

Lastly, the Law specifies that the quality of universal services must be measured and made public once the Minister has set the objectives for La Poste.

This provision will make it possible to track the progress that has been made in the information made available to consumers on the quality of the services, thanks to a "universal service scorecard" published by La Poste.

c) Complaints to be handled by ARCEP once postal operators' procedures have been exhausted

The Law also entrusts ARCEP with the responsibility of handling complaints which, in accordance with the terms of the new Article L5-7-1, "*were unable to be resolved by the procedures put in place by postal service providers*". This gives ARCEP the power to act to encourage fair and efficient processing of consumer complaints.

All legal entities and natural persons who employ a postal service supplied by an authorised service provider, either as sender or recipient, are entitled to appeal to ARCEP. This can concern a complaint that has not been processed or one that has been handled either improperly or in an unsatisfactory fashion.

Before appealing to ARCEP, users must have exhausted all of the avenues made available by postal operators, including appealing to the La Poste complaints mediator.

d) National postal coverage

Lastly, the Law of 2010 also specifies that La Poste must continue to operate at least 17,000 points of presence, and makes ARCEP responsible for assessing the net annual cost of fulfilling this mandate, in order to set the compensation to which La Poste is entitled as a result. An implementing decree dated 18 July 2011[18] details the cost calculation method to be used.

The purpose is to determine the costs to La Poste of increasing the density of its network in order to fulfil its universal service mandate, and which it would not have incurred without this regional development obligation.

Based on the decree of 18 July 2011, ARCEP performed an annual assessment of the net cost of increasing the density of the La Poste network in September 2011, allowing it to calculate the compensation due to La Poste for 2011[19].

e) The registered letter via e-mail

A decree on the ability to send a registered letter via e-mail was published on 2 February 2011[20].

It details the properties of the registered letter sent by an electronic channel, as well as the obligations of the third-party operator responsible for routing it. It also sets the terms concerning the identification of the sender and the recipient and, if applicable, the service provider in charge of delivering the printed version of the registered letter.

The decree further lists the mandatory references that must be found on the proof of submission and of delivery. .

18 - Decree No. 2011-849 of 18 July 2011 specifying the method for calculating the net cost of increasing the density of the La Poste network in pursuit of its regional development mandate, JO of 20 July 2011

19 - ARCEP Decision No. 2011-1081 22 September 2011 on calculating the net cost to La Poste of increasing the density of its network in pursuit of its regional development mandate in 2010

20 - Decree No. 2011-144 of 2 February 2011 on sending a registered letter by e-mail for the conclusion or exceuction of a contract, JO of 4 February 2011

ARCEP's organisation and operation

1. The Executive Board

Photo : Dominique Simon

The ARCEP Board in January 2012.
Bottom to top, from left to right: Marie-Laure Denis, Jean-Ludovic Silicani, Françoise Benhamou, Jérôme Coutant, Denis Rapone, Daniel-Georges Courtois, Jacques Stern

Since the adoption of the Law of 5 March 2007[1], this appointment of the Chairman of ARCEP takes place after receiving the opinion of parliamentary commissions.

Members of the Board cannot be dismissed, their six-year term is not renewable and their position is incompatible with any other business activity, national appointment or civil service position. The code of conduct that the Authority adopted in 2007 applies to all ARCEP Board members.[2]

In early 2011, the President of the Republic appointed two new members: Marie-Laure Denis was appointed to replace Edouard Bridoux, and Jérôme Coutant was appointed to replace Patrick Raude who resigned his position.

In early 2012, the President of the Senate appointed Françoise Benhamou to replace Nicolas Curien. The Chairman of the National Assembly appointed Jacques Stern to replace Joëlle Toledano.

1 - Law No. 2007-309 of 5 March 2007 concerning modernisation of audiovisual broadcasting and television in the future, JO of 7 March 2007.
2 - Decision No. 2007-0461 of 7 June 2007 adopting the code of conduct for ARCEP Board members

2. Organisation and department budgets

2.1. ARCEP's organisation

Organisation chart as of 1 April 2012

Institutional relations
Patricia LEWIN

Synthesis
Christian GUENOD

Forward-planning Committe

Interconnection and Access Committee

Consumer Affairs Committee

GRACO
(Working group between ARCEP, local authorities and operators)

Department of Human resources, administration and finances

Manages ARCEP's means and resources as well as its publications, documentation and information systems

Claire BERNARD
Deputy : *Elisabeth CHEHU-BEIS*

- **Human resources** — *Catherine AUTIER*
- **General administration** — *Sylviane DEMBLON*
- **Finance** — *Isabelle HAGNERE*
- **Documentation** — *Elisabeth CHEHU-BEIS*
- **Information systems** — *Jean-Philippe MOREAU*

Department of Legal affairs

Responsible for all legal aspects of ARCEP's activity, ensures the legal certainty of decisions

Stéphane HOYNCK

- **Procedures, spectrum, audiovisual media, interconnection and consumers** — *Isabelle CARON*
- **New regulations, new networks, local authorities and Europe** — *Laurent PERRIN*

Department of European and international affairs

Coordination and implementation of ARCEP's European and international activities

Anne LENFANT
Deputy : *Joël VOISIN-RATELLE*

- **European affairs** — *Françoise LAFORGE*
- **International affairs** — *Joël VOISIN-RATELLE*
- **ITU coordination and standardisation** — *Marie-Thérèse ALAJOUANINE*

Department of Economics and forward-planning

Coordination of economic analyses
Universal service and directory
Observatories and external studies
Forward planning.

Nicolas DEFFIEUX

- **Statistical observatory and market monitoring** — *Sophie PALUS*
- **Network economics, forward-plannign and universal service** — *Nadia TRAINAR*
- **Costs and tariffs** — *Gaelle NGUYEN*

Executive Board

Chairman
Jean-Ludovic SILICANI

Members
Francoise BENHAMOU
Daniel-Georges COURTOIS
Jérôme COUTANT
Marie-Laure DENIS
Denis RAPONE
Jacques STERN

Communications
Jean-François HERNANDEZ
Deputy: *Ingrid APPENZELLER*

Directorate-General

Director General
Philippe DISTLER

Deputy Directors General
Stephane HOYNCK
François LIONS

Departments

Department of Spectrum and Equipment Manufacturer Relations

Licence issuing and monitoring.
Setting up and issuing calls for candidates.
Spectrum management

Jérôme ROUSSEAU
Deputy : *Olivier COROLLEUR*

Mobile operators
Julien MOURLON

Spectrum regulation and management
Olivier COROLLEUR

Technology monitoring and manufacturer relations
Edouard DOLLEY

Department of Broadband/Ultra-fast Broadband Markets and Local Authority Relations

Regulation of wholesale and retail markets for broadband networks and services
Monitoring relations with local authorities for purposes of regional digital development

Antoine DARODES
Deputy : *Renaud CHAPELLE*

Relations with local authorities
Julie CHABROUX

Broadband and ultra-fast broadband infrastructure

Fibre network sharing and broadband/ultra-fast broadband retail markets
Guillaume MEHEUT

Fixed and Mobile Markets and Consumer Relations

Point of contact for operators
Regulation of fixed and mobile services markets
Tariff regulation
Numbering management

Renan MURET

General authorisations, network security and numbering
Catherine GALLET-RYBAK

Mobile markets
Guillaume MELLIER

Capacity services and fixed telephony markets
Pascal DAGRAS

Consumer relations
Delphine GOMES DE SOUSA

Department of postal activities

Regulation of mail-related postal activities: operator authorisations, universal service controls, accounting and tariff supervision of the universal service operator

François LIONS
Deputy : *Lionel JANIN*

Accounting, modelling and economics
Lionel JANIN

Authorisations and universal service
Julien COULIER

2.2. ARCEP budget and management

• Credits

Since 2009, ARCEP's budgetary allotment has constituted Action 13 – "electronic communications regulation" – of programme 134 of the Finance Act's economic mandate, "business and job development". For 2011, Parliament allocated ARCEP a budget of €15 million in payment credits for personnel expenses (item 2) and €7.56 million for operating expenses (item 3).

After a 4.5% decrease in operational spending in 2010, ARCEP stepped up its austerity plan in 2011 – cutting costs by a further 5.6% (€7.13M in payment credits used). Budgetary management efforts included renegotiating the rent for the Authority's offices, which decreased by 15%, reducing its fleet of vehicles down to six, compared to 22 in 2009, decreasing communications/PR costs – which included suppressing the reception that had traditionally held in June to mark the publication of the annual report, along with all the other overhead items which have been decreasing steadily for several years now.

These management efforts were saluted by the National Assembly Finance Committee's rapporteur who, in his report for the draft finance Act for 2012, called ARCEP a "*budgetarily virtuous independent administrative authority.*" In these times of increasing budgetary pressure, ARCEP's operating budget for 2012 is expected to decrease by close to 12%.

The shift from physical to electronic: helping modernise operations and control costs

Starting in 2011, as part of an IT blueprint that was approved in late 2010, ARCEP has employed only electronic files for the dossiers examined during Executive Board sessions.

This trend has been successfully expanded, starting with a number of files that are widely or narrowly disseminated – making better use of the Intranet – and later for the entire mail circuit (incoming and outgoing).

This is an all-encompassing issue that affects the way our departments operate and the reliability of internal process, in addition to representing sizeable savings over the long term, within a context of increased austerity in the coming years.

• Revenue

2011 was marked by an especially high level of revenue (licensing fees and taxes) collected by the Authority, which is deposited into the State's general budget: **coming to a total €1.21 billion**, of which €936 million from the sale of licences to use the 2.6 GHz frequency band for 4G ultra high-speed mobile services.

2.3. Human resources

As of 31 December 2011, ARCEP had a staff of 167 people (43% women and 57% men), of which 36% are civil servants and 60% are contractors. The average age of ARCEP personnel is 40.2 years.
The breakdown of staff has been optimised to enable the Authority to assume increasingly diverse and complex responsibilities, while complying with:

- a maximum number of personnel allowed by Parliament (174 full-time equivalent employees), with some positions being part-time and some occasional work being assigned to interns with training contracts;
- staff credits provided for in the Finance Act.

2.4. Outside expertise

The pace of the changes at work in the sector, and the highly technical nature and importance of regulatory issues have led ARCEP to seek outside technical, economic, statistical and legal expertise.

The work of consulting firms has allowed ARCEP to benefit from specialised skills and unbiased outside advice. For the Authority, this usually results in the appropriation of tools for internal use which are not intended to be made public. However, certain reports and certain consumption or quality of service (QoS) surveys are intended as a means of informing the sector, are thus freely available on the ARCEP website.

In 2011, the report budget amounted to €1.2 million. Twenty three reports were commissioned, at an average cost of €52,700 and an average duration of four months.

Chief external reports and surveys commissioned in 2011
Fibre and broadband
New – notably media – content services on ultra-fast broadband networks, and their impact on the fibre business model (1)
Modalities for connecting small buildings and detached homes to fibre-to-the-home (FTTH) networks
Legal and economic specificities of shared investment schemes between private and public sector players for superfast electronic communications network rollouts
Postal activities
Benchmark on the main postal operators in the marketplace
Additional work on the bottom-up cost model for postal distribution
Voice and capacity services
Technical study on M2M communications: issues and outlook
Risks and methods for ensuring the resilience of MVNOs' electronic communications networks in Europe (2)
Verification of obligations and audits
Technical-economic modelling of a wireless terrestrial broadcasting network
Update of the two technical-economic network cost models – one for the Antilles-Guyana region and one for the Reunion-Mayotte region – for an efficient generic mobile operator in the overseas territories
Use and usefulness of public payphones
Annual audit of the quality of voice services on 2G and 3G mobile networks (4)
Annual audit of the quality of data services on 2G and 3G mobile networks (4)
Coverage survey of 3G mobile networks in Metropolitan France
Survey on measuring 3G mobile network coverage
Audit of electronic communications services' 2010 revenue statements
Compared profitability of the French telecoms sector

Chief external reports and surveys commissioned in 2011
Market knowledge
Monitoring the prices residential users are charged for the various types of call: local and long distance, calls to special numbers, international, fixed to mobile, mobile calls in mainland France and the overseas departments in 2011
Forward-looking analysis of the Internet interconnection market
Dissemination and use of information technologies in French society (3) (4)
Employment and investment in electronic communications (including sub-contracting/outsourcing), assessing the new jobs that will be created by the development of fibre and postal activities
Operations
What defines an electronic communications operator? (4)
The disabled
Accessibility audit of electronic communications services

(1) Report commissioned jointly by CSA, CNC, DGCIS, DGMIC, HADOPI and ARCEP
(2) Report commissioned jointly with the Ministry of the Economy, Industry and Employment (DGCIS and ARCEP)
(3) Report commissioned jointly by the Committee for industry, energy and technologies, CGIET (Council général de l'industrie, de l'énergie et des technologies), the Ministry of the Economy, Industry and Employment and ARCEP
(4) These audits are available on the ARCEP website: www.arcep.fr

2.5. Documentary resources

With a staff of three, ARCEP's information and documentation centre is responsible for putting information management systems into place, monitoring the electronic communications and postal sectors, disseminating this information internally and answering requests for information from members of the Executive Board and from ARCEP staff, as well as enquiries from the public about the Authority's areas of activity.

The team takes on complex research, drawing on the documentary portal that was created around an online module, along with professional outside sources, both legal and economic, and from the media.

The centre also works with a network of documentary resource centres – including the Cujas legal library, the Ministry of the Economy, Industry and Employment documentary resource centre and the documentation network of independent administrative authorities. In 2011, the centre was involved in drafting a blueprint for information systems, and particularly the overhaul of ARCEP's internal "Opinions and decisions" database.

3. Forward-planning committee

In late 2009 a Forward-planning committee was formed with the aim of better identifying and understanding medium and long-term developments in those areas that fall under the Authority's purview. This committee is made up of ARCEP Board members and outside experts with a wide variety of competencies who help inform ARCEP in its decision-making, and enable it to better perform its duties of monitoring and informing market stakeholders.

After a first cycle of meetings devoted to analysing supply and demand mechanisms in the digital technologies sector, and particularly the role that public authorities need to play to stimulate the development of new markets, the Forward-planning committee began a new cycle of discussions in 2011, dedicated to "the regions of the digital economy".

- The meeting on 16 June 2011 focused on the use of digital technologies and innovations in cities. Daniel Kaplan, the Secretary General of the Foundation for a new-generation Internet, FING (F*ondation pour l'Internet nouvelle génération*), described the concept of the "smart city," or digital city, as a set of

potentially shared infrastructures and open data that users can enhance and use to create new collaborative solutions.

Stefana Broadbent, a digital ethnographer from University College London, analysed the impact that information and communication technologies have on the divisions between the home, work, consumption and leisure.

- The meeting on 15 September 2011 focused on the role that ICT plays in large-scale urban planning projects. André Loechel, president of the Territories of Tomorrow living lab, and a specialist in urban innovation strategies, spoke out in favour of an approach whereby regional innovation does not occur by decree, saying that urban developments are structured by a set of intangible resources: local cultural heritage, relationships between residents, businesses and local elected officials, able to provide training tailored to local needs.

Pierre-Alain Jeanneney, member of the board of *Grand Paris* (a government-backed initiative devoted to the future development of the greater Paris area) and former Chairman of ART (which later became ARCEP), explained that Grand Paris was originally an economic development project before becoming focused on transportation. One of the chief goals is not to compromise future innovations – something that could be achieved by creating an infrastructure capable of hosting the services and technologies of tomorrow.

- The meeting of 8 December 2011 focused on leveraging the regions' economic potential and the regulation of international players. Matthieu Pélissié du Rausas, senior associate director at McKinsey, presented the findings of the report titled, "Internet Matters" on the Internet's significance in the French economy: 3% of GDP and 18% of GDP growth between 2004 and 2009.

Barrister Jérôme Philippe explained how ARCEP could require a foreign company to respond to its requests for investigation and submit, if necessary, to its injunctions or penalty decisions

- Lastly, ARCEP's Forward-planning committee met on 22 March 2012 to discuss cloud computing, in other words supplying IT resources remotely – a project being supported with a view to future investments.

This would involve the "industrialisation" of information systems and a real paradigm shift for all digital ecosystems. SFR and Thalès each presented their views on the development of a "sovereign cloud" in France for "critical" State and private enterprise systems (Andromède project).

The operator Celeste also presented its prototype for an innovative and environmentally-friendly data centre.

4. The other ARCEP advisory committees

4.1. The Consumer affairs committee

ARCEP meets several times a year with its Consumer affairs committee – an advisory body that was created in 2007 – to present the specific work it is doing on various subjects that are of interest to consumers.

This is a forum for discussing and exchanging information with consumer associations and the General directorate for fair trade, consumer affairs and fraud control, DGCCRF (*Direction générale de la concurrence, de la consommation et de la répression des fraudes*), representatives of the electronic communications ombudsman and the national consumer agency, CNC (*Council national de la consommation*).

The committee meeting on 10 February 2011 gave ARCEP the opportunity to discuss its plans for improving the offers made available to consumers of electronic communications and postal services with consumer associations, after having submitted them to public consultation and following talks with the various stakeholders.

The latest committee meeting was on 11 April 2012, and chaired by ARCEP Board member, Jérôme Coutant. The Authority delivered a status report on broadband and ultra-fast broadband markets and rollouts, the work being performed on last-metre deployments for FTTH networks, and spoke specifically about slamming. The quality of Internet access services was also discussed, particularly within the context of a public consultation that was launched in December 2011.

The Consumer affairs committee on 11 April 2012

4.2. The Electronic communications advisory committee (CCCE)

The Electronic communications advisory committee, CCCE (*Commission consultative des communications électroniques*) was created on 23 June 2009. It replaces the two previous advisory committees: the Advisory committee for radiocommunications, CCR (*Commission consultative des radiocommunications*) and the Advisory committee for electronic communications networks and services, CCRSCE (*Commission consultative des réseaux et des services de communications électroniques*).

ARCEP acts as the committee's secretary. Under the aegis of the Government and ARCEP, the CCCE is consulted on all draft measures concerning electronic communications.

Composed of 24 members, the committee provides equal representation to network operators and service providers, consumer representatives and experts. The committee chairman is Engineering Corps member, Charles Rozmaryn.

The CCCE was consulted on three occasions in 2011, and asked in particular to give its view on the use of the 2.6 GHz and 800 MHz frequency bands for ultra high-speed mobile networks, and on the methods to be used for producing and verifying information on fixed Internet access coverage in France.

4.3. Interconnection and access committee

The Interconnection and access committee (*Comité de l'interconnexion et de l'accès*) is made up of representatives of public network operators and service providers, appointed by ARCEP decision. The Authority's Chairman presides over the committee, and the Authority itself ensures its secretarial duties. The committee provides the sector's stakeholders with a forum to discuss current issues with ARCEP.

The committee met three times in 2011, and focused in particular on the following subjects:

- increasing connection speeds in the provinces;
- ultra-fast broadband, and particularly fibre network sharing issues;
- market analysis decisions on fixed telephony, wholesale physical network infrastructure access (including shared or fully unbundled access) at a fixed location and bitstream access offers;
- regulation of mobile voice call and SMS termination;
- international roaming;
- the terms of the general authorisation system (number portability, emergency calls, work on changes to VAS number pricing, etc.);
- publication of QoS indicators for fixed networks.

4.4. Committee for monitoring overseas markets

This committee devoted to supervising access and interconnection services in French overseas markets was created in 2009.

It is composed of operators who do business in overseas markets and ARCEP representatives. It meets twice a year to address issues that are specific to the French overseas markets:

- ensuring monitoring of overseas markets;
- informing operators in overseas markets of ARCEP decisions and the work it is doing;
- provide a forum for discussion and conciliation between undertakings operating in the overseas markets, local authorities and ARCEP;
- identifying those issues that are specific to French overseas markets and monitoring current initiatives.

In 2011, the committee focused in particular on the quality of fixed access services, mobile call termination and overseas roaming tariffs, and fixed and mobile number portability processes.

5. A broad palette of information and communication tools

For it to be efficient, the business of regulation needs the information produced by ARCEP to be disseminated quickly to all of the stakeholders: elected officials, consumer associations, economic actors, etc.

To this end, the Authority employs a wide array of modern communication tools which guarantee that the entire sector will have access to the most exhaustive and useful information possible, on both the work being performed by ARCEP and on the sector itself. These tools are also used to solicit the opinions of the sector's players on regulatory issues, and to stimulate dialogue and debate.

5.1. ARCEP websites

www.arcep.fr, the Authority's institutional site

ARCEP manages four websites, which are continually being refreshed: its core institutional site, which marked its 14th anniversary in March 2012; a site devoted to consumers that was created in late 2008; a site devoted exclusively to 118 numbers (telephone directory services) and the Fratel website, which is a network of telecom regulators from French-speaking countries for which ARCEP is the permanent secretary.

ARCEP's website is the preferred platform for disseminating information, **in both French and English**. Updated on a daily basis, it satisfies the essential requirement of providing instantaneous information on a sector in a state of constant flux. More than 19 million unique visitors have used the site in its 14 years of existence.

Easy to read and easy to use

- important information is displayed in chronological order on the homepage, in addition to being posted to the different dedicated sections;
- several searchable databases: on the spectrum that ARCEP is responsible for allocating, on the telephone numbers that the Authority assigns to telecom carriers, on articles published in the ARCEP review, "*Les cahiers de ARCEP*".

www.arcep.fr, the Authority's main website

Accessible to the visually impaired

L'ARCEP en audio

Since mid-December 2008, a portion of the ARCEP website has been providing dedicated access for the visually impaired: press releases are systematically "translated" into an audio version thanks to the use of a robot that automatically transcribes text to speech in the form of MP3 files.

In addition to most press releases, the visually impaired can listen to the main speeches by the Chairman of ARCEP along with the discussions from conferences organised by the Authority.

An important, efficient and reputed source of information

- The main information is pushed via e-mail to users who sign up for either of the two ARCEP mailing lists: on telecommunications or the postal sector, both available in French and English. Close to 21,000 people subscribe to these lists.
- Some of the documents produced by ARCEP that are available for download in PDF have been very popular. For instance, the day it was uploaded to the site, the handbook titled "*La fibre optique arrive chez vous*" (Fibre optic coming to your home) was downloaded close to 38,850 times, and viewed a total 421,178 times in 2011.

A window on the world

- Although a particular effort is made to provide English translations (press releases are systematically translated and posted online, at the most 24 hours after the publication of the French-language version), information is provided in other languages as well: abstracts are available in six other languages, namely Spanish, German, Italian, Portuguese, Korean, Chinese and Japanese.
- In most cases, the summary reports of Board members' fact-finding missions abroad are produced in both French and English and available for download in a dedicated section. These documents are generally downloaded several thousand times. ARCEP published three such reports in 2011: on its trips to the United States, South Korea and Singapore.

Consumer chats

On 26 July 2011, ARCEP held a live online chat on increasing connection speeds in the provinces. More than 500 questions were asked in all, and 876 Internet users logged on to the live chat – which is a record high for ARCEP.

A consumer chat

A few figures on www.arcep.fr in 2011

- More than 2.5 million unique visitors, or around 7,000 visitors a day.
- 26.8 million page views
- 17,415 subscribers to the French language telecoms mailing list (1,247 to the English language version), and 2,287 to our mailing list devoted to the postal sector (around 100 to the English language version)

www.appel118.fr, the directory services site

Since 3 April 2006, consumers in France have had access to new telephone directory services by dialling 118, followed by three digits.

To inform users, ARCEP created a website that provides a list of open 118 services, their main tariffs and a history of the changes made to these tariffs.

Also included on the site is an FAQ on 118 numbers (access, choice, billing, etc.) and on the universal directory (registration in the directory, subscriber rights, etc.), both of which are updated on a regular basis, despite the steady decline of this segment.

The *appel118.fr* site logged 58,462 visits in 2011, or an average 160 visitors a day.

www.telecom-infoconso.fr, dedicated site for consumers

In early January 2009, ARCEP launched a website aimed specifically at telecommunications services users: www.telecom-infoconso.fr

Informative, practical and educational, the purpose of the site is to provide consumers with access to all of the information they need to defend their rights, and better understand how the sector operates and the outstanding issues of the day.

There were close to 234,633 unique visitors to the site in 2011 (643 visitors a day), logging around 730,000 page views.

5.2. « *Cahiers de l'ARCEP* »

ARCEP publishes a quarterly review of around 50 pages that examines a variety of topics and themes – such as Net neutrality or digital regional development – from different angles, including a forward-looking perspective.

To help broaden readers' perspective, the Cahiers de l'ARCEP devotes a great deal of space, in the form of interviews and articles, to the views of market players and personalities from a wide range of backgrounds – institutions, researchers, philosophers, sociologists, etc. – from both France and abroad. The articles can be browsed by theme or author from the website's database.

A total of 6,500 print copies are distributed for free, and a PDF version is available on the ARCEP website, and downloaded around ten thousand times, on average.

Three issues of the *Cahiers de l'ARCEP* were published in 2011.

The first issue of the year was devoted to the postal sector. It was downloaded more than 6,865 times, and viewed 16,142 times. It took a look at the future of Europe's postal sector in the era of the full liberalisation of postal activities, and the growing use of electronic mail.

As an extension of the 2011 conference, for its second issue ARCEP wanted to focus on the topic of "Innovation, investment *and growth*" in the digital economy. How to stimulate the emergence of ecosystems that will enable ultra high-speed network rollouts? How to encourage the players to invest? These were just two of the questions that were asked of digital economy stakeholders. This issue was viewed 73,000 times and downloaded 7,591 times.

Devoted to regulation at the service of consumers, the third issue of the *Cahiers de l'ARCEP* in 2011 (4,519 downloads and more than 100,000 views) came on the heels of the Authority's publication of its 30 proposals for improving the offers made available to consumers of electronic communication and postal services. ARCEP explored all of the topics that affect consumers of these services, and sought especially to offer up as many voices as possible: market players, consumer associations, telcos, elected officials, public authorities as well as sociologists and digital society experts.

Published in early 2012, the first issue of the Cahiers marks ARCEP's 15th anniversary. Titled: "*1997 - 2012: from telecom monopoly to digital revolution – 15 years of regulation,*" the issue is built around 10 themes and takes a look back at 15 years of regulation and the benefits that have resulted from opening telecommunications and postal markets up to competition.

2011 conference: "Growth, innovation, regulation"

5.3. Annual conference

Since its creation in 1997, the Authority has been holding regular talks on topics that relate either directly or indirectly to its areas of responsibility. These events provide an opportunity to have open discussions on what are often complex issues, to exchange differing viewpoints, particularly by hearing from speakers from foreign markets, and to engage in forward-looking analyses.

On 4 May 2011, ARCEP held is annual conference, this time devoted to the topic of "*Growth, innovation, regulation*". The event brought together some 20 speakers from France and around the world who participated in four round-tables, moderated by Eric Le Boucher, Editor-in-chief of *Enjeux-Les Echos* and by Philippe Escande, Editorial writer for Les Echos. Each debate was prefaced by a talk from a captain of French industry.

Stéphane Richard, President & CEO, France Telecom; Jean-Bernard Levy, Chairman of the Management Board, Vivendi; Xavier Niel, Vice-president & Chief Strategy Officer, Iliad Free, and Pierre Danon, Chairman of the Management Board, Completel Numericable were all on hand to share their views.

The entire conference can be streamed on the ARCEP website.

5.4. Weekly e-newsletter

In September 2010, ARCEP completed its range of communication tools by launching a weekly newsletter that is sent out via e-mail every Friday afternoon.

The purpose of the newsletter is to satisfy the often-expressed need for regular, succinct and recent information on the Authority's activities, and on the sectors that it covers, namely electronic communications and postal affairs.

Viral tools were incorporated into the e-newsletter that allow subscribers to share the information it contains on Facebook, Twitter, MySpace and Viadeo.

Introduced in September 2010 and sent out initially to a very targeted readership, the newsletter quickly became very popular and is now available to everyone. It currently has close to 2,400 subscribers.

5.5. Other ARCEP publications

Every year, ARCEP also publishes several brochures and booklets – in a PDF version which is available online, and occasionally a print version as well.

In 2011 these included:

- three reports on overseas fact-finding missions: to the United States, South Korea and Singapore.
- a report to Parliament on "France Telecom local copper loop costs, and how they will evolve during the transition from copper fibre" (December 2011)
- 30 proposals for improving the offers made available to consumers of electronic communication and postal services (February 2011)
- summary of the conference held on 4 May 2011: "Growth, innovation, regulation" (July 2011)
- a handbook on optical fibre rollouts for elected officials and local authorities: "The nationwide transition to ultra-fast broadband" (July 2011)
- summary of the work performed by GRACO in 2011 (December 2011)
- guidebook on the terms of optical fibre rollouts, for landlords, property owners and managers (3rd edition – May 2011)

5.6. Social networking sites

In September 2011, ARCEP created a Twitter account that allows it to relay information quickly to users and stakeholders.

The account has close to 400 followers and sends out an average 25 tweets a month.

Relationships with other public authorities and actors

1. Relationship with Parliament

The Authority gives a regular account of its activities to Parliament, in the form of reports or hearings. In 2011, ARCEP addressed Parliament on 18 occasions. The Chairman of ARCEP addressed the Senate Economic Affairs Committee on 30 November 2011, and the National Assembly Economic Affairs Committee on 28 February 2012 – providing them with a status report on the Authority's activities.

ARCEP is also called upon on a regular basis to address permanent National Assembly and Senate committees, particularly those responsible for economic affairs. It may also be called on by members of Parliament to provide its expertise on certain dossiers when proposals, bills or projects that will affect the sectors under its purview are being examined.

1.1. Hearings

a) Hearings on core industry issues

Meetings were held when preparing the call for applications for the award of fourth generation mobile telephony licences in the 800 MHz and 2.6 GHz frequency bands. ARCEP hosted a working meeting on this topic with Senator Bruno Retailleau and Deputy Laure de La Raudière (23 March 2011).

The Chairman of ARCEP also addressed the Parliamentary commission on the digital dividend on 11 May 2011.

The work with Parliament focused to a large extent on digital regional development and on fixed and mobile network coverage. ARCEP's Deputy Director-General, Michel Combot, was questioned by Senator Bruno Sido when the latter was preparing his report on national mobile coverage (1 February 2011).

ARCEP Board member Jérôme Coutant went before the Senate on 2 March 2011 to answer questions from Hervé Maurey, rapporteur on the digital regional coverage taskforce (*mission d'information sur la couverture numérique du territoire*) and on 17 May 2011 for a round-table organised by the National Assembly public policy assessment and oversight committee (*comité d'évaluation et de contrôle des politiques publiques de l'Assemblée nationale*) on digital development in rural areas.

Parliament also continued work begun in 2010 on Internet and network neutrality. Deputies Laure de La Raudière and Corinne Erhel chaired the hearings on this topic (3 May 2011).

b) Hearings on bills and proposed measures

The Chairman of ARCEP was interviewed in the Senate by Bruno Retailleau, rapporteur on the bill concerning the transposition of the new European framework, on 20 January 2011.

The bill strengthening consumer rights and protection also resulted in several meetings: at the National Assembly, chaired by Jean-Luc Warsmann, Chairman of the Judiciary Committee (15 June 2011) and Daniel Fasquelle, rapporteur for the bill (23 June) and at the Senate, chaired by Alain Fauconnier, rapporteur for the bill (17 November 2011).

The Chairman of ARCEP was questioned at the National Assembly by Deputy Didier Quentin, for the working group on civil servant mobility chaired by Deputy Christian Paul. At the National Assembly, he also spoke with Jérôme Chartier, special rapporteur for the economic task force, during budget preparations (9 October 2011).

ARCEP Board member Joëlle Toledano, was also called on by Deputy Alfred Trassy-Paillogues, rapporteur, to give her opinion on the budget for electronic communications and postal affairs (12 October 2011).

1.2. Report submissions

Every year, ARCEP submits its annual report to the Presidents of the National Assembly and the Senate, to the President of the Republic, to the Prime Minister and to concerned members of the Government. The annual report for 2010 was submitted on 7 July 2011.

The Law of 9 February 2010[1], transposing the postal directive of 2008, also gives ARCEP the responsibility of assessing the net cost to La Poste of fulfilling its regional development mandate, and submitting a report to Parliament and the Government on the matter. This report was submitted on 22 November 2011.

In accordance with the provisions contained in the Law of 22 March 2011[2], ARCEP will also produce a report in 2012 on Internet and network neutrality – covering issues such as the quality of Internet access services, the status of data traffic interconnection markets and traffic management practices.

2. Relationship with the federal government and its administrations

ARCEP works in tandem with the government, and all of the concerned administrations, on the various topics that fall under its purview.

To ensure consistency in government actions in the regulated sectors, the Authority maintains close ties with the Minister responsible for electronic communications, with whom it shares a certain number of powers in the area of regulation. The decisions that ARCEP issues in its capacity of regulator are only given regulatory force once they have been approved by the Minister. The Minister also solicits the Authority's opinion on draft decrees and orders relating to issues for which it is responsible. As a result, there is regular contact between the various ARCEP departments and the Ministry responsible for Industry, and particularly the General directorate for competition, industry and services, DGCIS (*Direction générale de la compétitivité, de l'industrie et des services*), but also the General directorate for fair trade, consumer affairs and fraud control, DGCCRF (*Direction générale de la concurrence, de la consommation et de la répression des fraudes*) and the Legal affairs department, DAJ (*Direction des affaires juridiques*).

In the performance of its duties, ARCEP also maintains regular relations with other ministries, notably the Ministry of Culture and Communications (Directorate General for media and cultural industries/*Direction générale des médias et des industries culturelles*), the Ministry for Overseas France (*Ministère chargé de l'outre-mer), the Secretary of State for consumer affairs (secrétariat d'Etat à la consommation*) and the Secretary of State for social welfare and social cohesion (*Ministère de solidarité et de la cohésion sociale*), with which it co-signed "charter of voluntary commitments from the telecom sector to facilitate access to electronic communications services for people with disabilities". For matters pertaining to regional development, which represented a substantial portion of its actions during the year, ARCEP was in regular contact with the Ministry of the Interior, the Ministry for Overseas France

1 - Law No.2010-123 of 9 February 2010 on the public company La Poste and postal activities, JO of 10 February 2010
2 - Law No.2011-302 of 22March 2011 bringing several amendments to European Union legislation in the areas of healthcare, labour and electronic communications, JO of 23 March 2011.

and local authorities (*General directorate for local authorities/Direction générale des collectivités locales*), the Ministry of Rural affairs and regional development (*Ministère de l'espace rural et de l'aménagement du territoire*), the Ministry of Agriculture, Food, Fishing, Rural development and Regional development (*Ministère de l'agriculture, de l'alimentation, de la pêche, de la ruralité et de l'aménagement du territoire*), the Inter-ministerial land planning and regional action delegation, DATAR (*Délégation interministérielle à l'aménagement du territoire et à l'attractivité régionale*), and the General Commission on Investment (*Commissariat général à l'investissement*) – the last two being under the aegis of the Prime Minister.

ARCEP also works with regional government authorities, and particularly those responsible for ICT development initiatives working for the General Secretariats for Regional Affairs, SGAR (*secrétariats généraux pour les affaires régionales*) and the regional prefects.

Relationship with the National Frequency Agency

The French Postal and electronic communications code (CPCE) gives the National Frequency Agency, ANFR (*Agence nationale des fréquences*) – which is a public State administration – a central role in managing radio frequencies, in tandem with the undertakings licensed to use them. As a result, ARCEP works especially closely with ANFR. An ARCEP representative has a seat on the ANFR Board of Directors, and therefore takes part in its operation.

ANFR is responsible for managing national spectrum assignment records. As the authority responsible for allocating spectrum, ARCEP informs the National Frequency Agency of the frequency assignments it has authorised, and submits the Agency with any plans to create or alter radio stations operating in the frequency bands for which ARCEP is responsible. In some instances, and particularly networks open to the public, ARCEP delegates this obligation to declare any changes to the spectrum licence-holders themselves.

ANFR supervises the use of spectrum, and is therefore required to verify that undertakings licensed to use the frequencies are complying with the technical terms set by ARCEP. The Agency also investigates interference complaints.

Furthermore, working in tandem with spectrum licence-holders, ANFR performs a periodical examination of the use they are making of their spectrum, and recommends any necessary adjustments. It produces the national frequency allocation table, which is ratified by the Prime Minister.

The national frequency allocation table

Frequency bands are allocated by the International Telecommunication Union (ITU) Radio Regulations (RR), to one or several radiocommunication services: this international treaty governs the use that signatory countries make of radio frequency spectrum.

In Europe, the European Conference of Postal and Telecommunications Administrations, CEPT, keeps a European table of frequency applications and allocations – the aim being to harmonise spectrum use across the 48 Member States. In addition, some frequency bands are covered by harmonisation decisions from the European Commission, and which therefore apply to all EU Member States.

These dispositions are listed in the national frequency allocation table ratified by the Prime Minister, which specifies the rights of each undertaking that has been allocated spectrum, and the methods for their coordination.

In France, because of the possibilities offered by the RR and the international treaties that France has signed, it is the Prime Minister who ratifies the distribution of spectrum between services and licence-holders, in accordance with Article 41 the French postal and electronic communications code, CPCE: "*after having received the opinion of the Broadcasting Authority, CSA, and the Electronic communications and postal regulatory authority, ARCEP, the Prime Minister will define the radio frequencies or frequency bands that are assigned to State administrations, and those to be assigned by CSA or ARCEP*".

The administrations concerned, as well as ARCEP and CSA are referred to as "spectrum assignees". ANFR amends the table on a regular basis to take account of changing spectrum requirements. These changes are then brought into force by the Prime Minister, after having consulted with CSA and ARCEP.

In accordance with the French Postal and electronic communications code, ANFR is responsible for preparing France's position and for coordinating its representation at international radio spectrum negotiations. As a result, it does the preparatory work for the ITU world and regional radiocommunication conferences (WCR/RRC) and for the European Conference of Postal and Telecommunications Administrations (CEPT), as well as European Union conferences devoted to these issues that fall under its purview.

ARCEP assists ANFR in international negotiations on the use of radio spectrum for electronic communications.

The Authority is thus a member of the French delegation led by ANFR for the various CEPT working groups on frequencies. At the national level, ARCEP implements the agreements that ANFR has obtained on the terms of use for radio spectrum in the frequency bands it is responsible for allocating.

Lastly, ARCEP subcontracts technical advisory work to ANFR which corresponds to some of its responsibilities for issuing spectrum licences in two very specific fields – namely the assignment of frequencies for:

- professional mobile radiocommunications;
- temporary networks, notably for special events broadcasting.

Here, ARCEP and ANFR are bound by an agreement that has been renewed every year since 1997.

3. Relationship with local authorities: GRACO

Local authorities, which are authorised to act as electronic communications operators by virtue of Article L. 1425-1 of the local and regional collectivity code, CGCT (*Code Général des Collectivités Territoriales*), have very deep concerns about the digital development of their regions. This is why ARCEP created a forum back in 2004 called GRACO (*groupe d'échange entre l'ARCEP, les collectivités territoriales et les operators*), to host discussions between the Authority, private sector operators and local authorities.

In 2011, ARCEP hosted three technical meetings, on 31 March, 6 July and 19 October. Each of these meetings was attended by some 100 stakeholders: operators, local authority representatives, institutional partners such as the Caisse des dépôts, the Directorate General for investment (Commissariat général à l'investissement), the Inter-ministerial land planning and regional action delegation, DATAR (*Délégation interministérielle à l'aménagement du territoire et à l'attractivité régionale*) and the Directorate General for competition, industry and services, DGCIS (Direction générale de la compétitivité, de l'industrie et des services). Discussions focused on the implementation of the regulatory framework governing FTTH rollouts, and the scheme for increasing connection speeds on the France Telecom sub local loop. These meetings also provided an opportunity to obtain feedback on pilot FTTH rollouts performed as part of France's national ultra-fast broadband programme. They were also a chance to provide everyone in attendance with updates

Field visit in Auvergne | *Meeting in Auvergne* | *Field visit in la Manche*

on the progress being made by the smaller working groups chaired by ARCEP, and composed of local authorities and operators.

Fibre rollouts were one of the main topics of debate at the plenary meeting of GRACO on 6 December 2011. More than 250 people, including members of Parliament, local elected officials, representatives of local authority associations, the heads of the main carriers, equipment manufacturers, consultancies and State officials all took part in the discussions[3].

The main concern voiced by those who took the floor was the need to coordinate public and private initiatives. If the call for letters of intention to invest that the Government issued in late 2010 helped obtain information on private operators' rollout plans for the next five years[4], the federal Government and local authorities wanted to see these plans made concrete through contractual committments, in particular to be able to coordinate their deployments with the ones being performed by private sector players, under good conditions.

ARCEP has therefore been working since 1 October 2011 to support the proper coordination of public and private initiatives by listing the rollout projects being performed by local authorities as part of the national ultra-fast broadband programme (programme national très haut débit). As the Chairman of ARCEP said at the GRACO meeting on 6 December, "*ARCEP is and remains available, within the limits of its powers, to work with all public and private sector players, and always favours the conjugation of public and private initiative rather than their opposition*".

On 22 July 2011, ARCEP Chairman, Jean-Ludovic Silicani, along with Executive Board members, Joëlle Toledano and Jérôme Coutant, travelled to the Auvergne region in response to an invitation from the region's prefect, Francis Lamy, and the Chairman of the r*egional council*, René Souchon. Jean-Ludovic Silicani and Joelle Toledano also travelled to the Manche department on 30 September in response to an invitation from Jean-François Le Grand, Chairman of the local General Council (*general council*), and Gilles Quinquenel, President of *Manche numérique*. Both of these trips provided an opportunity to discuss ultra-fast broadband network deployments across the country with local elected officials.

A GRACO technical meeting was held on 21 March 2012. ARCEP provided a status report on 4G, on the wireless local loop, and on increasing bandwidth and FTTH rollouts in residential buildings with fewer than 12 units. Also on the agenda was the progress being made on calculating optical fibre deployment costs.

The Competition Authority shared its views on the dangers of a distortion of competition in local authorities' calls for proposals for ultra-fast broadband. The General Directorate for Investment spoke about the national ultra-fast broadband programme, while the topics of FTTH last-metre deployments and the challenges of covering businesses and business parks with superfast broadband access were addressed in talks from representatives from the Aquitaine region and by carriers SFR and France Telecom.

3 - Le thème de cette réunion plénière était « L'intervention des collectivités territoriales dans le secteur des communications électroniques ». Le compte rendu des travaux est disponible à cette adresse : http://www.arcep.fr/uploads/tx_gspublication/rapport-graco-dec2011.pdf

4 - In February 2011, operators announced plans to perform FTTH rollouts in close to 3,600 municipalities

4. Relationship with the courts and other independent authorities

4.1. Relationship with the courts

In its capacity of independent administrative authority, ARCEP makes decisions which can, for the most part, be appealed to administrative courts. Because ARCEP is a State administration, its actions can be brought before a judge under the terms of ordinary law: the Authority's independence does not confer on it any exceptional judicial status.

Appeals of an ARCEP decision will generally be made to an administrative court. The Conseil d'Etat did not adjudicate on the merits of any ARCEP decisions in 2011.

It did, however, grant the Authority Chairman the ability to appeal in cassation Administrative Court judgements on administrative taxes.

ARCEP decisions concerning dispute settlements fall under the jurisdiction of the *Cour d'Appel de Paris* (Paris Court of Appeal) which has an economic regulation division that specialises in regulation and competition disputes.

Although called on to make an administrative decision, the court rules on the Authority's decision in the form of an appeal. It may therefore uphold, cancel or amend the decision. In 2011, the Paris Court of Appeal issued four legal judgements concerning dispute settlements handled by ARCEP.

Judgements issued by the Court of Appeal and the Court of Cassation in 2011 and early 2012

Appeal filed on	Plaintiff	Defendant	Judgement issued
12/08/2010	Mobius and La Réunion Numérique (LRN)	LRN and Mobius	24 February 2012: both requests rejected (LRN appealed in cassation on 24/03/2011)
08/12/2010	Numericable SA	France Télécom and NC Numericable SA	23 June 2011: rejected (Numericable and NC Numericable SA appealed in cassation on 21/07/2011)
20/12/2010	Numericable SAS	France Télécom and NC Numericable SA	Order of 3/02/2011: Rejecting request by NC Numericable SA for suspension of the execution of Decision No. 2010-1179
22/12/2010	France Télécom	Bouygues Telecom	19 January 2012: rejected

Source: ARCEP.

- In its **judgement of 24 February 2011**, in response to an application from the firm Mobius, the Paris Court of Appeal ruled on the decision issued by ARCEP on 1 July 2010, to settle a dispute between Mobius and the firm Réunion Numérique (LRN). The Paris Court of Appeal confirmed ARCEP's power to set fair terms of access and interconnection supplied under a public service contract. According to the Court: "*the circumstances under which the operator is providing the services under a public service contract, which are the subject of the dispute, are not such that they exclude the Authority's power to settle a dispute concerning access or interconnection between this operator and another declared operator, and that it is solely up to the operator executing the public service contract to take all of the necessary measures to comply fully with the dispute settlement decision, if need be by appealing to the delegating authority, in accordance with the provisions of the applicable public service delegation agreement.*" In this same judgement, the Court defined the notion of fairness as it must be applied by ARCEP when settling disputes: fairness does not mean disregarding rules of law but, on the contrary, taking into account the

objectives of regulation defined in Article L. 32-1 of the French Postal and electronic communications code (CPCE), and the imperatives of public policy in the economic sphere.

- In its **judgement of 19 January 2012**, rejecting France Telecom's appeal of the ARCEP decision on the carrier's dispute with Bouygues Telecom, the Court confirmed ARCEP's ability to rule on a complaint from an operator that was tending to be offered the opportunity to co-finance last-metre deployments on optical fibre networks after they had been performed. The Authority' power to adopt a regulatory decision does not mean it is unable to rule on a request to settle a dispute on that same topic. Moreover, the Court upheld the Authority's approach, namely that it is essential that financing modalities not create a barrier to entry for a new entrant with a small market share. The distribution of costs imposed by ARCEP, namely that the commercial operator will assume 90% of the costs, indeed appears to reconcile the conflicting interests in this case. The judgement of 19 January 2012 thereby confirms the rules for the application of the existing regulatory framework.

Lastly, the Chairman of ARCEP informs the public prosecutor of the facts that are likely to be qualified as violations, as the French Postal and electronic communications code provides for criminal offences in electronic communications and postal activities.

4.2. Relationship with the Competition Authority

ARCEP has close institutional ties with the Competition Authority (*Autorité de la Concurrence*), and can solicit its opinion when it believes that an SMP operator is abusing its dominant position, or in the event of practices that are preventing competition from being exercised freely in the electronic communications sector or in the area of postal activities.

Moreover, when it performs an analysis of electronic communications markets to determine whether or not any operator enjoys significant power in a relevant market, ARCEP must hold public consultations on its draft decisions and solicit the opinion of the Competition Authority on the market definition and the SMP operator analysis.

In return, the Competition Authority informs ARCEP of any incoming matters concerning the electronic communications and postal sectors that it is responsible for regulating.

4.3. Relationship with CSA

The legislature has sought to strengthen the cooperation between the French Broadcasting Authority, CSA (*Conseil supérieur de l'audiovisuel*) and ARCEP by putting mutual consultation procedures in place. In general, ARCEP must obtain the Broadcasting Authority's opinion when making decisions that will have a significant impact on the broadcast of radio and television services. Such was the case in 2011 when settling the two disputes between the firms Towercast and TDF (see page 17).

In exchange, CSA must obtain ARCEP's opinion on any decision it makes that concerns electronic communications.

CSA and ARCEP created a working group in 2011 that is chaired by their respective boards. The group meets on a regular basis to address topics where their interests overlap. This allows both institutions to better understand the other's point of view and, if applicable, to take it into account when making decisions. During the year, the group devoted efforts to the broadcasting market, connected television and Net neutrality.

4.4. Relationship with CNIL

When performing its market analyses, ARCEP is careful to solicit the opinion of the French National commission on computing and freedom, CNIL (*Commission nationale de l'informatique et des libertés*) on matters that concern the treatment of personal data. The two authorities have therefore discussed the issues that the application of the Law on Computing and Freedoms of 1978 raises for telecom carriers.

In 2011, ARCEP appointed a "CNIL correspondent" to its Legal Affairs Committee who is responsible for ensuring that the Authority is acting in compliance with the Law of 1978 when performing its duties as

regulator and when defining standards: this correspondent keeps all ARCEP departments apprised of details on the use of computer files that are likely to affect privacy protection.

5. Relationship with European and international bodies

5.1. European Parliament and the European Council

The European Parliament and Council have had a very busy legislative schedule since the start of 2011, with the adoption of a multi-annual radio spectrum policy programme[5] and negotiations over the third international roaming regulation, which is in the final stage of adoption.

In July 2011, the Commission had published a new proposed text on roaming, while the existing regulation is in effect until 30 June 2012.

Unlike earlier texts, the Commission suggested adding two remedies to the tariff supervision and transparency measures that aimed to change the market's very structure and, as a result, set a date for lifting ceiling tariffs:

- in the wholesale market, the obligation to grant all reasonable request for access to roaming services;
- in the retail market, the fact of permitting roaming offers to be separated from national offers means that, starting in July 2014, consumers would be able to purchase these services separately and so choose the service providers that best serve their roaming needs.

ARCEP has provided French authorities with its technical expertise since Council negotiations began.

The Body of European Regulators for Electronic Communications (BEREC) has also provided vital expertise to European institutions, through an opinion issued in mid-2011[6] that analysed the Commission's initial project, and later through contributions to the Commission, to the European Parliament and the European Council's Danish President, which included an assessment of wholesale roaming costs[7] that will help European institutions determine wholesale and retail ceiling tariffs.

The text is then to be formally adopted during the plenary session of Parliament on 10 May, then by the Telecoms Council on 8 June before taking effect on 1 July 2012.

5 - *http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:081:0007:0017:EN:PDF*
6 - *http://www.erg.eu.int/doc/berec/bor_11_46.pdf*
7 - *http://www.erg.eu.int/doc/2012/bor12-14_int_roaming.pdf*

Ceiling tariffs set by future regulation				
	1 July 2011 – 30 June 2012 (current regulation)	1 July 2012 – 1 July 2013 -	1 July 2013 – 30 June 2014	1 July 2014 – 30 June 2016 : implementation (decoupling)[9]
Wholesale voice (/min)	18 €cents	14 €cents	10 €cents	5 €cents
Retail voice, outgoing (/min)	35 €cents	29 €cents	24 €cents	19 €cents
Retail voice, incoming (/min)	11 €cents	8 €cents	7 €cents	5 €cents
Wholesale SMS	4 €cents	3 €cents	2 €cents	2 €cents
Retail SMS	11 €cents	9 €cents	8 €cents	6 €cents
Wholesale data (/Mb)	50 €cents	25 €cents	15 €cents	5 €cents
Retail data (/Mb)	N/A	70 €cents	45 €cents	20 €cents

Source: ARCEP.

5.2. BEREC

2011 a été la première année de fonctionnement plein et entier de l'organe des régulateurs européens des communications électroniques (ORECE), avec le soutien de son office. Les nouvelles tâches qui lui ont été dévolues par le paquet télécom de 2009 ont été mises en œuvre, tels les avis donnés au Parlement et au Conseil au cours des débats sur le règlement relatif à l'itinérance (voir ci-dessus) ou son intervention dans la procédure d'analyse des marchés lorsque la Commission émet un doute grave sur l'analyse de marché d'une ARN (*cf.* page 129).

BEREC

BEREC was created by regulation when drafting the new European regulatory framework (No. 1211/2009). Composed of the national regulatory authorities (NRA) of European Union Member States, its chief role is to advise European institutions on the establishment and implementation of regulation in the sector. NRAs from European Economic Area (EEA) member countries, and EU candidate nations have the status of observers. BEREC headquarters are located in Riga, Latvia. In 2012, the chairmanship of BEREC was assumed by Austrian regulator, RTR.

BEREC also continued to work with the Commission on the issues of the day in Europe:

- Net neutrality (see Part 2, chapter V. § 2.);
- new generation access (NGA) network rollouts and regulation, with a report on the implementation of the recommendation on regulated access to NGA in European countries[9] ;
- rules for integrating broadband in the universal service: the Commission concluded from an earlier consultation that it should be left up to Member States to decide whether to include broadband access in the universal service, depending on the state of market development. It nevertheless wants to harmonise the criteria that Member States will use to make this choice (cf. Commission communication on the universal service[10]) ;
- the review of Commission guidelines on public funding for broadband and ultra-fast broadband networks[11], which defines the areas where the Commission agrees to the use of public funding for

8 - Decoupling allows consumers to buy their roaming services separately, from an operator other than the one providing them with national services.
9 - Commission Recommendation of 20/09/2010 on regulated access to new generation access networks (NGA
10 - Communication on universal service in e-communications: report on the outcome of the public consultation and the third periodic review of the scope in accordance with Article 15 of Directive 2002/22/EC - COM(2011)795
11 - Further details on this review can be found at: http://ec.europa.eu/competition/consultations/2011_broadband_guidelines/index_en.html

these networks – from among what are referred to as white, grey and black areas – as well as the properties of the access that the network manager must provide to operators, and the rules for NRA involvement at the nation level for the *a priori* supervision of these rules. The revised guidelines are due to be published in October 2012;

- two draft recommendations from the Commission which resulted in public consultations[12], one on the application of the non-discrimination obligation, and the other on cost accounting during the transition from copper to optical fibre-based networks.

Twice a year, BEREC publishes a benchmark of call termination rates for fixed and mobile voice calls and for SMS, as well as roaming tariffs in Europe[13]. From 7 to 9 December, ARCEP Board members Jérôme Coutant and Nicolas Curien attended the BEREC plenary meeting in Bucharest, Romania. The work programme for 2012[14] picks up the main strategic directions adopted by BEREC during the previous year, focusing its efforts on new generation access networks, consumer protection, international roaming and Net neutrality.

5.3. ERPG

The European Regulators Group for Postal Services (ERGP) was established by the European Commission decision of 10 August 2010 – taking as its model the European Regulators Group (ERG) which was the predecessor to BEREC. The group is composed of all postal sector NRAs from the 27 EU Member States. In the vast majority of countries, the postal regulator is also the electronic communications sector regulator. NRAs from European Economic Area (EEA) member countries, and EU candidate nations have the status of observers. The main responsibility of the ERGP is to examine regulators' best practices, to act as an advisor to the European Commission with a view to consolidating the internal market for postal services.

The inaugural meeting of the European Regulators Group for Postal Services was held in Brussels on 1 December 2010 – during which ARCEP Executive Board member, Joëlle Toledano, was elected chairperson of the ERGP for 2011. Göran Marby, Chairperson of Swedish regulator, PTS, took over from her in 2012.

2011 was therefore the first year of operation for the ERGP – which included creating working groups devoted to issues such as the cost of the universal postal service, regulatory accounting, consumer protection and market indicators.

At the plenary meeting in December 2011, reports on issues surrounding regulatory accounting were submitted to public consultation: first, on the allocation of shared costs and, second, on calculating the net cost of fulfilling universal service obligations and costing a benchmark scenario. ARCEP was represented by Executive Board member, Marie-Laure Denis.

Documents on quality of service, consumer satisfaction and postal market indicators (data collection methodology) were adopted, along with the initial findings of a questionnaire on the current status of the VAT regimes in place for postal services in Europe. The work programme for 2012 was aslo submitted for consultation[15].

Adopted in January 2012, this work programme includes six main areas of focus, which follow through on the work begun in 2011:

- allocation of shared costs,
- calculating the net cost of universal service,
- procedures for handling complaints and consumer protection,
- quality of service and consumer satisfaction,
- postal market indicators
- new entrants, dispatchers and consolidators' access to the postal network and to postal infrastructure networks

12 - Further information on European Commission consultations can be found at: http://ec.europa.eu/information_society/policy/ecomm/library/public_consult/cost_accounting/index_en.htm
13 - International Roaming, BEREC Benchmark Data Report -January 2011 – June 2011
14 - BEREC Analysis of Wholesale Roaming Costs, 23 February 2012
15 - List of ERGP consultations: http://ec.europa.eu/internal_market/ergp/documentation/consultations_en.htm

Joëlle Toledano, ERGP Chairperson

"Cost allocation is part of our core competencies and missions. Regulatory texts stipulate that tariffs are to be "cost based".

Because postal operators are by nature suppliers of multiple products, understanding costs is crucial.

Our aim is to work together to deepen our understanding of cost allocation rules using cost drivers deriving from economic principles.

Les cahiers de l'ARCEP, March 2011

5.4. International bodies

In addition to its work at the European level, ARCEP also maintains relations with international bodies.

a) International Telecommunication Union (ITU)

ARCEP participated in the different ITU meetings in 2011, including the Council and the different groups preparing for the conferences in 2012: the World Radiocommunication Conference (WRC), the World Conference on International Telecommunications (WCIT) – which is to review international telecom regulations – and the World Telecommunications Standardization Assembly (WTSA). It also contributed to the work of the Standardisation section's Study Group 2, which it currently chairs and which is devoted to service definition, numbering and routing.

As it does every year, ARCEP participated in the Global Symposium of Regulators dedicated to regulatory best practices for promoting broadband rollouts, encouraging innovation and making the digital world available to all.

In October, the Authority took part in the annual TELECOM trade show in Geneva, giving a talk on the topic of broadband. It was represented by Executive Board member, Daniel-Georges Courtois.

ARCEP helped prepare the French government's position on telecommunications in the decision-making bodies of the ITU.

The Authority was also a member of the French delegation at the different preparatory meetings for ITU conferences that were held as part of the CEPT (European Conference of Postal and Telecommunications Administrations).

b) Organisation for Economic Cooperation and Development (OECD)

ARCEP continues to contribute to the work being done by the OECD Working Party on Communications and Infrastructure and Service Policies (WP CISP) and the Committee on Information, Computer and Communications Policy (ICCP).

Efforts in 2011 focused specifically on:

- updating statistical methodologies for broadband coverage, tariff baskets and a new indicator for wireless broadband;
- comparative studies of universal service policies as part of national broadband schemes and on international roaming, on the changing relationship between wireline and wireless networks, and on regulation by geographical sector.

c) Cooperation with Francophone countries: FRATEL

- The technical seminar on 11 and 12 May 2011 in Sofia, Bulgaria , which brought together 60 representatives, including 17 regulatory authorities from network member countries and players from the telecommunications sector who shared their views on "The consumer at the heart of the regulator's actions".

- The 9th annual meeting on 10 and 11 November 2011 in Conakry, Guinea which was attended by over 80 participants, including 15 regulators, along with the International Telecommunication Union, carriers, consulting firms, lawyers and academics, who discussed the topic of "Regulation that listens to the market". ARCEP was represented by Executive Board member, Jérôme Coutant.

- The technical seminar on 3 and 4 April 2012 in Ouagadougou, Burkina-Faso, which brought together 18 NRAs and a number of market stakeholders – including donor agencies, equipment manufacturers, telcos, lawyers, consultants and administrations – to discuss the topic of optical fibre rollouts. ARCEP was again represented by Executive Board member, Jérôme Coutant. Work focused on broadband as an instrument of economic development, on sharing infrastructure and civil engineering, and on the issues surrounding international optical fibre cables. The new Fratel.org website was also unveiled

- Support for the training provided to executive members of French-speaking African regulatory authorities and operators by the *grandes écoles* (i.e. the most prestigious higher education establishments in France), known as BADGE training. Telecom ParisTech, the *Authority de régulation des communications électroniques et des postes* (ARCEP) of Burkina Faso, the French National Frequency Agency (ANFr) and ARCEP have all signed an agreement to support the programme. Since its creation, the BADGE programme has provided training to more than 130 people from 15 different countries.

FRATEL meeting in Ouagadougou

FRATEL Chairman, Mathurin Bako

The new FRATEL website

d) Euro-Mediterranean network of regulators: EMERG

ARCEP has been involved in the Euro-Mediterranean network of Regulators, or EMERG – an initiative financed by the European Commission – since its creation.

In 2011, the Authority sent experts to take part in a workshop on new generation and broadband access network development policies, public funding and regulating access to NGN, as well as in a workshop in Paris on consumer protection. ARCEP outlined its actions along with 12 of its fellow EMERG members, and consumer protection agency, UFC Que choisir.

e) Bilateral relations

Over the course of 2011, ARCEP met with representatives of 25 foreign entities involved in the telecom and postal services sectors (ITU, ministries, foreign NRAs, research institutes, etc.). It also travelled overseas for two fact-finding missions: one to Canada and the other to Singapore and South Korea.

Relationship with economic stakeholders

1. Telecom carriers

1.1. Electronic communications operators

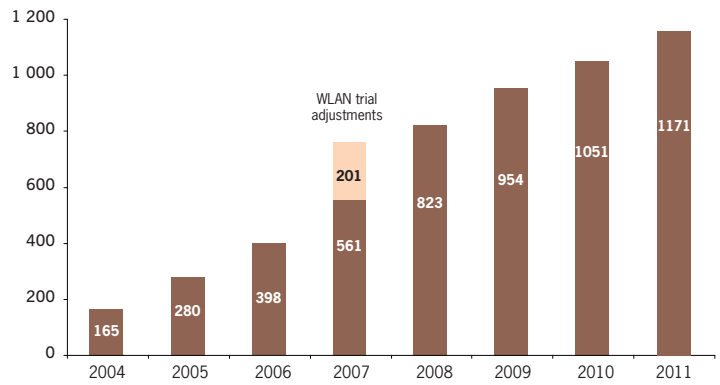
• Operators of fixed and mobile electronic communications networks that are open to the public, or which provide the public with electronic communications services, are subject to a system of prior declaration to the Authority.

As of 31 December 2011, the Authority had recorded 1,171 undertakings which had declared their intention to engage in the business of electronic communications operator:

- 729 of which operate an electronic communications network (fibre, cable, Wi-Fi…),
- 630 providing a telephone service,
- 871 providing services other than telephony, including: 610 providing Internet access, 541 data transmission services, 102 mobile services,

The number of operators has increased steadily, by around 100 to 150 a year, since the declaration regime was implemented in 2004, as illustrated in the following graph.

Growth in operator numbers



Source: ARCEP.

To improve the interaction with operators and their supervision, in 2011 ARCEP introduced an online income statement interface that serves as the basis for calculating administrative taxes. This interface constitutes the first stage in the IT blueprint being implemented by the Authority.

In 2012, this was completed by a new database of all of the players that have a relationship with ARCEP, the majority of which are electronic communications operators. Requests for numbering resources are now available online. The fact of standardising the process will help facilitate requests for number block assignments.

- ARCEP maintains close ties with electronic communications operators. Our Chairman presides over the Interconnection and access committee (*Comité de l'interconnexion et de l'accès*) whose members include telcos, trade associations and the Authority. The Committee meets three or four times a year to discuss concrete changes to regulatory mechanisms. The ARCEP Board meets regularly with operators, notably when preparing decisions with significant economic implications – such as those relating to voice call and SMS termination.

  In the area of services, several working groups have been created to provide a necessary forum for technical and economic discussions between ARCEP experts and operators. These groups focus on a wide variety of topics, such as the number portability process, the technical terms of fibre rollouts, unbundling, the quality of wireless, wireline and Internet access services, and numbering – for instance when public consultations are held on reorganising certain number arrays.

  ARCEP departments host twice-yearly multilateral talks with operators from Metropolitan France on number portability, both fixed and mobile. Similar meetings are held with operators from French overseas markets, for the Antilles-Guyana and Reunion-Mayotte regions. It was these talks that helped reduce the length of the number portability process, for instance. Quarterly meetings are also held on the system for monitoring QoS indicators, after operators have published their results.

  On the whole, all of the Authority's areas of responsibility result in technical consultations with market stakeholders, on either a regular basis or as the need arises.

  These discussions are completed by more formal, systematic public consultations on the actions the Authority plans to take. Operators are the most frequent contributors to these consultations.

- In 2011, ARCEP continued to devote efforts to ensuring operators' compliance with symmetrical obligations, which include number portability and monitoring QoS indicators for fixed services which came under review in 2011 (see pages 118 and 125), in a bid to better serve consumers' interests.

- ARCEP also continued to work on the issue of emergency call routing, by taking an active role on the Interministerial committee on telecommunications network and services coordination, CICREST (*Commission interministérielle de coordination des réseaux et des services de télécommunications*), devoted to emergency call location, and on the European Commission working group dedicated to the eCall project whose aim is to impose the installation of an emergency response system in all vehicles.

  In addition, the Authority contributed to the work being performed by the Inter-ministerial committee on disabilities, CIH (*Comité interministériel du handicap*), and deployed the preliminary means and mechanisms required for the introduction of the "114" emergency number on 14 September 2011. Since then, a person who is deaf or hearing impaired and in need of emergency services can contact this number by SMS or fax.

- On the matter of legal interception of calls, ARCEP issued an opinion[1] on three draft orders on call interception tariffs – one in application of Articles R. 213-1 and R. 213-2 of the Code of Criminal Procedure (*code de procédure pénale*) and the other two in application of Articles D. 98-7 and R. 10-21 of the French Postal and electronic communications code (CPCE).

1.2. Postal operators

Postal operators are subject to an ARCEP-controlled authorisation system. ARCEP has issued 38 authorisations since June 2006. There are two types of authorisations, related to :

- domestic delivery of items of correspondence (18 operators active today);
- outbound cross-border mail (10 operators active today).

La Poste holds an authorisation for both the domestic delivery of items of correspondence and outbound cross-border mail. As of 31 December 2011, the marketplace was therefore populated by 29 operators.

Six new authorisations for the delivery of items of correspondence in France were issued in 2011, and no operator put an end to its activities.

In the international market, one independent private operator was issued an authorisation for outbound cross-border mail.

Alongside La Poste, the main domestic operator is Adrexo which has its roots in the delivery of unaddressed advertising and free newspapers, and which covers virtually all of Metropolitan France. The other operators are small and medium enterprises established in a town or region that offer various postal services, including the delivery of items of correspondence.

In the outbound cross-border mail market, the main operators aside from La Poste are subsidiaries of foreign postal companies (Germany, the Netherlands, Switzerland, the UK and Belgium), or the postal company itself, such as Austrian Post. Also present in the market are two private French operators, IMX-France and Optimail-Solutions.

ARCEP maintains regular contact with all postal service providers. The investigation of authorisation requests involves on-the-spot inspections, and operators' progress is also monitored, in particular through the Statistical Observatory on Postal Activities that ARCEP publishes annually.

2. Equipment manufacturers

ARCEP believes firmly in maintaining strong, ongoing relations with equipment manufacturers, whether they be from France, Europe or around the world, and with the trade associations that represent them. In 2011, the Authority also established ties with universities whose research could influence the way that networks are deployed and used in future.

As it does every year, in 2011 and 2012 ARCEP attended the *Mobile World Congress* hosted by the GSM Association in Barcelona, to meet with mobile equipment makers. The Congress provided a chance to measure the maturity of the industrial ecosystem for LTE, the scale of pioneer rollouts around the world, and the outlook for future generations of mobile technologies, and particularly LTE-Advanced. The Authority was represented by Executive Board member, Daniel-Georges Courtois.

In March, ARCEP staff met with Maurice Gagnaire's research team. Gagnaire is the head of the Optimization and networking cluster (ONC) working group at Telecom ParisTech, which designs new mobile network architectures wherein a portion of the equipment is moved to the network core and shared, thanks to WDM optical fibre links[2].

1 - Opinion No. 2011-1517 of 22 December 2011 on draft orders on the pricing of legal requisitions, call interception for security purposes and electronic communications operators' supply of information, JO of 3 April 2012.

2 - WDM, which stands for wavelength-division multiplexing, is a method for sending multiple wavelengths of laser light along a single optical fibre, which helps increase speed.

Mobile World Congress in Barcelona (27 February to 1 March 2012)

In May, ARCEP Chairman, Jean-Ludovic Silicani, met with representatives of equipment makers Alcatel-Lucent and Huawei at the e-G8 forum devoted to the Internet, held during the run-up to G8 debates over Net neutrality and Internet traffic management.

In June, ARCEP was invited to speak at the *Broadband for all* international seminar for regulators that was hosted by the manufacturer Ericsson.

ARCEP staff travelled to Poitiers to attend the presentation of the results of the LTE trial performed by equipment manufacturer ZTE. The Authority also attended the annual symposium hosted by the French Federation of electrical, electronic and communication industries, FIEEC (*fédération des industries électriques, électroniques et de communication*).

In July, ARCEP staff visited Alcatel-Lucent's R&D centre in Villarceaux and watched a demonstration of a video call made from a car using an LTE system.

In September, members of ARCEP met with Mérouane Debbah, Head of the Alcatel-Lucent Chair on Flexible Radio at Supélec, whose team designs small cell networks and which conducted an experiment, authorised by ARCEP, that allowed a user to receive signals coming from several LTE base stations simultaneously.

ARCEP staff also attended the Broadband World Forum in Paris in September to hear equipment manufacturer Nokia Siemens Networks' views on the evolution of optical fibre transmission technologies.

In preparation for a public consultation that will be carried out in 2012, ARCEP worked throughout 2011 on tracking the development of the PMR (Private mobile radio) market. Lastly, Authority representatives spoke at the National union of wireless system installers, SNIR (*syndicat national des installateurs en radiocommunications*) conference in February 2011 and took part in working meetings of the PMR Permanent Board, GPRP (*groupement permanent de la radio professionnelle*).

ARCEP Chairman, Jean-Ludovic Silicani, meets with union representatives

On 10 February, 2011 ARCEP Chairman, Jean-Ludovic Silicani, met with Sébastien Crozier, President of the France Telecom – Orange CFE-CGC and UNSA trade union confederation. During the meeting, Mr Silicani detailed the coverage obligations to which Free Mobile is subject under the terms of the licence it was issued in January 2010, and the terms governing ARCEP's verification of this coverage. He also underscored the distinction that needs to be made between these coverage obligations, which are monitored by ARCEP, and the terms and conditions contained in the roaming agreement between Free Mobile and Orange France.

On 14 February 2012, the Chairman of ARCEP met with Alcatel-Lucent CFDT (*Confédération française démocratique du travail*/French democratic confederation of labour) union representatives and with representatives of the CFDT federation of mines and metallurgy (representing telecom equipment manufacturing workers).

Discussions focused on the conditions governing ARCEP's performance of its duties as regulator. It was recalled that the Authority is mandated by law to pursue several objectives at once: ensuring sufficient competition in the marketplace, of course, but also balanced regional digital development, as well as stimulating innovation and investment. This momentum is needed to create new growth outlets and to ensure the future sustainability of the sector's businesses and jobs.

The meeting also provided an opportunity to talk about two core areas of endeavour, namely fourth generation mobile and fibre-to-the-home (FTTH) wireline networks. The massive investments made in these systems will be a source of growth and job creation for equipment manufacturers and sub-contractors, and will also require substantial spending on training qualified personnel.
Lastly, on 23 April 2012, Jean-Ludovic Silicani met with representatives of the Force Ouvrière union to listen to their concerns about the state of employment in electronic communications sector businesses.

After making clear that he understands these concerns, the Chairman of ARCEP pointed out that investments in networks and the development of innovative services – stimulated by fair and regulated competition – contribute to increasing production and jobs.

Telecommunications are a central part of the digital economy and a sector where jobs have doubled in 15 years, and expected to continue to enjoy significant growth in the coming years.

ARCEP is determined to do its utmost to ensure that its mandate as regulator achieves all of its objectives in terms of competition, regional development, innovation and jobs.

3. Relationship with content, applications and service providers

As part of its work on Internet and network neutrality, ARCEP has strengthened its dealings with content, application and service providers[3] (CAP) and with the organisations that represent them[4].

3 - e.g.: Dailymotion, Google, Vidéo futur, France Télévision, Voyages-SNCF …

4 - e.g.:ASIC (association des services Internet communautaires/ social media organisation working to"promote a new Internet"), Association for the digital economy, ACSEL (association de l'économie numérique) and online service operators' group, GESTE (groupement des éditeurs de services en ligne)

To properly fulfil the mandates assigned to it by Law, ARCEP needs to analyse the relationships between all Internet stakeholders – including content and application providers (CAP) which have become core players.

This overarching approach has become especially important within the new legal framework that gives the Authority the responsibility of ensuring "End users' ability to access and distribute information, and to access the applications and services of their choice" and "that no discrimination exists, under analogous circumstances, in the relationship between the operators and providers of public online electronic communication services in traffic routing and access to these services."[5]

The Authority's power to settle disputes and gather information have also been expanded to include undertakings that provide the public with online communication services.

ARCEP therefore took these imperatives into account when working on interconnection (see page 132), and particularly on its planned scheme for gathering information from market players on interconnection and routing on a regular basis[6].

Moreover, content and application providers are affected by the work being done on implementing a system for monitoring the quality of Internet access services (see pages 120 and 132). It is indeed important to them that the quality of service (QoS) being supplied by Internet service providers (ISP) be sufficiently high and not diminish.

This is why various QoS indicators will be measured periodically. Some may be rely on CAPs' servers. ASIC (*Association des services Internet communautaires*), a social media organisation working to "promote a new Internet", the Association for the digital economy, ACSEL (*Association de l'économie numérique*) and online service operators' group, GESTE (*groupement des éditeurs de services en ligne*) were invited to participate in the working meetings that were held prior to submitting guidelines[7] on the quality of Internet access services to consultation. This collaborative approach has continued on through 2012.

5 - *Article L.32-1, Para. II – 4b and 15 of the French Postal and electronic communications code.*

6 - *ARCEP Decision No. 2012-0366 of 29 March 2012 on the implementation of a quarterly campaign for gathering information on the technical and pricing terms governing interconnection and routing*

7 - *http://www.arcep.fr/uploads/tx_gspublication/consult-qs-acces-internet-fixe-dec2011.pdf*

PART TWO

ARCEP's main areas of focus

A more competitive mobile market

1. Main developments in the marketplace

1.1. Free Mobile opens its network

The commercial launch of Free Mobile was a major event in France's mobile communication services market.

The Authority and the Government had supported the arrival of a fourth 3G operator, which led to a call for applications from new entrants for a 3G mobile licence being issued in August 2009.

There were two main motives behind this choice. First, the gradual convergence of wireline and wireless markets justified giving the four national operators the ability to be present in both markets. Second, the diminished competitive intensity in both the mobile and fixed market, and the fact that retail market prices were among the highest in OECD countries, led authorities to reserve the 3G licence that had remained unassigned since 2000 for a new entrant. Having the French market structured around four mobile network operators is also in line with the state of this market in the other major European countries.

On 12 January 2010, ARCEP awarded Free Mobile – the sole applicant for the fourth 3G licence – an authorisation to use frequencies to establish and operate a third generation, publicly available wireless network in Metropolitan France.
The terms of the licence include the commitments that Free Mobile made in its application. In particular, the new 3G operator committed to begin marketing 3G services within two years, i.e. by 12 January 2012, and to have achieved coverage of 27% of the population by that time. Subsequent targets include 75% coverage by 12 January 2015 and 90% coverage by 12 January 2018.

In November 2011, Free Mobile reported to ARCEP that its 3G network was covering more than 27% of the population and that it had therefore reached the first coverage deadline set in the terms of its licence. ARCEP performed a verification of the information submitted by Free Mobile, notably through a series of field measurements. Once these measurements carried out in December 2011, and again February 2012, were complete, ARCEP announced that Free Mobile had indeed complied with the obligation listed in its licence to cover at least 27% of the population of Metropolitan France within two years of having been issued that licence.

On 10 January 2012 Free Mobile opened for business. The arrival of this new operator appears to have already had a significant impact on market competition, which has been positive for consumers.

As to the quality of the Free Mobile network, ARCEP issued a reminder that it has been performing annual quality of service measurements on mobile operators' calling services since 1997, and on their data services for the past two years. Free Mobile will of course be part of the surveys performed in 2012, whose results will be made public late in the year. As to the 2G and 3G roaming agreement that Free Mobile signed with Orange, this is a private contract whose terms the Authority has no reason to be privy to, unless it is called upon to settle a dispute between these two parties.

Furthermore, as stipulated in its licence, ARCEP will meet with Free Mobile in June 2012 to review its commitments, and particularly the rate of deployment for its network, to ensure that it achieves its obligation of covering 75% of the population by January 2015.

Marie-Laure Denis, ARCEP Board Member

« *"Regulators are sometimes mistakenly seen only as police officers whereas, in truth, their duty is to be facilitators, helping make market players more dynamic.".* »
Les cahiers de l'ARCEP,15th Anniversary issue (January 2012)

1.2. Increased market share for MVNOs and the emergence of full-MVNOs

Mobile virtual network operators' (MVNO) market share in mainland France grew by around 50% in 2011. It has nearly doubled in two years to reach 11.3% in the market as a whole, and 13.33% in the residential market alone. As of 29 March 2012, there were 59 MVNOs operating in France, and four brand licensing agreements being exploited directly by operators.

Since the first MVNOs began doing business in France, the predominant architecture has been what is referred to as a "light-MVNO" which means the undertaking owns no network elements of its own and so relies entirely on its host operator.

The first full MVNOs entered the market in 2011: Oméa Telecom (Virgin Mobile), NRJ Mobile and Lycamobile. These are operators that have their own SIM cards and their own Home Location Register[1], as well as core network elements. They complete their network by purchasing wireless local loop (WLL) access from a mobile network operator – SFR for Virgin Mobile and NRJ Mobile, Bouygues Telecom for Lycamobile – to relay calls made and received by their customers.

These virtual operators, which were already present in the market as light-MVNOs, began commercial operations using their new technical configurations in 2012.

Full MVNOs' investment in a network infrastructure allows them to enjoy greater independence from their host operators. This means more flexibility in customer management, in creating new services and in pricing their products. In the wholesale solutions market (i.e. inter-operator supply) a full-MVNO architecture allows for greater autonomy when negotiating interconnection agreements, and allows the virtual operator to take advantage of competition between suppliers.

This virtual operator model could become very successful in the coming years, thanks to the commitments that Free Mobile – the country's fourth 3G mobile network operator – made to host up to four full-MVNOs on its network, combined with the obligations imposed on all undertakings with a 4G spectrum licence in the 800 MHz and 2.6 GHz bands to grant all reasonable request for access from full-MVNOs.

1 - Home Location Register (HLR): central database of information on all subscribers authorised to use a mobile network.

1.3. Mobile call termination

Working to sustain the ongoing decrease in mobile termination rates, and to comply with the European Commission Recommendation of 7 May 2009[2], ARCEP decided[3] to align the mobile termination rates charged on the Bouygues Telecom, Orange France and SFR networks with long-run incremental costs, or at 0.8 eurocents a minute, starting on 1 January 2013. This alignment of call termination rates and long-run incremental costs will help stem the effects of competition distortions between operators, while continuing to encourage the development of high-volume offers that benefit consumers.

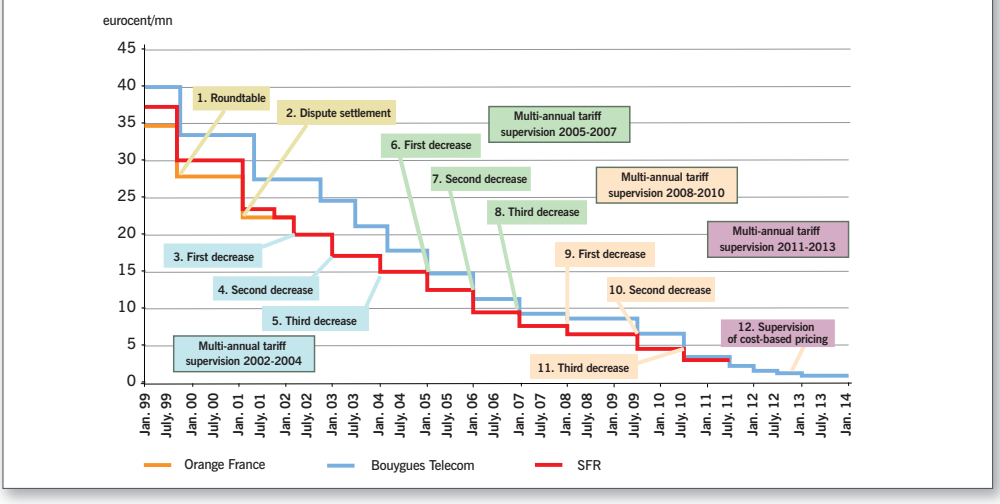
Moreover, with the advent of Free Mobile and full MVNOs in the mobile market in 2012, ARCEP launched a market analysis of wholesale mobile call termination on these operators' networks, to regulate the prices that would be charged for this service ex ante. In its draft analysis, which was submitted to consultation in September 2011, the Authority concluded that these three new operators enjoy significant market power (SMP) in their respective markets, and therefore considered it necessary to impose access, non-discrimination, transparency and tariff supervision obligations on them.

In its Opinion No. 1 1-A-19[4], the French Competition Authority shared ARCEP's analysis, and stated that, "*on the matter of implementing the regulation, although the sector's regulator must continue to work towards achieving an ongoing decrease in call termination rates, temporarily allowing asymmetrical termination rates for new entrants – notably Free Mobile – could help re-establish a state of fair competition between the different players*."

In eurocents	2002	2003	2004	2005	2006	2007	2008	As of 1 july 2009	As of 1 july 2010	As of 1 july 2011 to 31 december 2011	As of 1 january 2012 to 30 june 2012	As of 1 july 2012 to 30 december 2012	As of 1 january 2013
Orange	20.12	17.07	14.94	12.5	9.5	7.5	6.5	4.5	3				
SFR	20.12	17.07	14.94	12.5	9.5	7.5	6.5	4.5	3	2	1.5	1	0.8
Bouygues Telecom	27.49	24.67	17.89	14.79	11.24	9.24	8.5	6	3.4				

Source : ARCEP.

Mobile call termination timeline, by operator (1999-2010)



2 - Commission Recommendation of 7 May 2009 on The Regulatory Treatment of Fixed and Mobile Termination Rates in the EU

3 - Decision No. 2011-0483 of 5 May 2011 on the definition of tariff supervision for Orange France, SFR and Bouygues Telecom's mobile call termination

4 - Opinion No. 11-A-19 of 9 December 2011 on a request for the Electronic communications and postal regulatory authority's opinion, in application of Article L. 37-1 of the French Postal and electronic communications code (CPCE), concerning market analysis of wholesale mobile voice call termination for Free Mobile, Lycamobile and Oméa Telecom

2. Introduction of a mobile price index

The mobile services market has evolved tremendously over the past decade. In the span of only a few years, a great many services other than (voice) calling solutions have developed – the most significant ones being SMS and mobile internet access. These developments have been enabled by the growing adoption of new handsets, i.e. smartphones, which are better suited to these applications and which make it possible to sell related services such as GPS, VoIP, etc., and by the increase in the content and services available online. These changes have resulted in a growing disparity in the way users employ their handsets. Some use their mobile phone only for calls, while others have switched almost entirely to data services and still others make use of all the services available to them, i.e. voice, SMS and data.

Despite this growing use of mobile services, customers' monthly bill has changed very little over time, and has hovered around €25, excl. VAT, for several years now. The average monthly invoice offers a good assessment of customers' monthly spending, but does not make it possible to distinguish between changes in monthly spending that are to due to changes in customers' consumption and those that are due to price variations. An indicator of the market's development, tracking the price of mobile services makes it possible to some extent to measure the degree of competition in the marketplace.

ARCEP's goal in introducing a price index for this market was to be able to measure changes in price – using a methodology adapted to the French market and common to all the stakeholders – and so ensure greater transparency in the mobile market by making the index publicly available.

The chosen methodology is based on one devised by INSEE[5] for its consumer price index, and is based on the notion of "minimum spending" – in other words the amount that rational, informed consumers with a freedom of choice spend in current euros, including VAT, during the year. The mobile price index is therefore calculated based on this minimum spending.

In July 2011, ARCEP published a first application of the methodology for tracking changes in mobile service prices from 2006 to 2009. A second publication, covering 2006 to 2010, was released in January 2012: it provided more comprehensive monitoring of the market of mainland France by incorporating the two main virtual network operators, as well as mobile data consumption.

For the third exercise, which will also cover 2011, ARCEP worked to fine tune its modelling of mobile service users' behaviour profiles. Consumption habits are no longer defined primarily by whether users are light, average or heavy users of calling services, but now also take account, first, of the fact that data services are tending to replace calling services more and more and, second, of how heavily users consume the different types of service. For instance, there is now a consumption profile for people who make few phone calls and little use of the mobile internet but make heavy use of texting, which could correspond to a young consumer with a capped plan. As a result, there are now 18 consumption profiles for each carrier, compared to the previous nine.

Mobile service prices decreased by an average 1% annually in 2011. Flat rate plan customers were the prime beneficiaries with the price of their plans decreasing by 1.5%, compared to a 0.2% increase for customers who use prepaid cards. This decrease was concentrated chiefly in offers that do not include a handset subsidy, and particularly those sold only online – of which there were still relatively few in 2011.

5 - *INSEE: France's National Institute of Statistics and Economic Studies (Institut National de la Statistique et des Études Économiques)*

Achieving nationwide fixed and mobile broadband coverage

1. Status of mobile networks

At the end of 2011, with the 2G coverage expansion programme completed, 99.9% of the population of mainland France was covered by at least one mobile operator. 3G coverage continued to increase, following the notices to comply that ARCEP sent to Orange France and SFR, requiring them to meet their coverage obligations.
ARCEP will be publishing an updated report on mobile coverage before the end of 2012.

1.1 1.1 2G coverage

Coverage obligations: what does ARCEP check?

The purpose of the coverage obligations that were defined for all mobile operators in the licences that ARCEP awarded them some ten years ago is to ensure that the operator is building out its network and using its frequencies. They are long-term obligations and correspond to a reasonable deployment roadmap. The purpose of the measurements performed by ARCEP is to check the reality of these rollouts, and not to assess the quality of the service being provided to customers or of the constructed network.

The quality of the network itself, and the resulting services, which are shaped by the choices made by each operator, constitute an important factor of differentiation between them in the retail market since as will influence consumers' choices. ARCEP produces a dedicated annual report on the topic.

a) 99.9% of the population covered for 2G by at least one operator as of 1 January 2012

98.7% of the population of France are located in regions covered by all three GSM operators. These "black areas" represent 86.5% of the country's surface area.

2G coverage of the population	
Orange France	99.9%
SFR	99.5%
Bouygues Telecom	99%

The remaining areas are referred to as either "grey areas" or "dead zones": grey areas are covered by only one or two of the country's three operators.

They represent 1.3% of the population and 12% of the country's surface area.

Last are dead zones which are not covered by any mobile operator. These areas now represent 0.02% of the population and 1.52% of the surface area of France.

What do we mean by coverage?

The notion of coverage derives from the licences awarded to operators and from ARCEP Decision No. 2007-0178. It can be defined as a the ability of a user in a static situation to access the operator's network and maintain a call during at least one minute, outdoors and using an ordinary handset.

There are two coverage indicators used:

- the rate of coverage in Metropolitan France measures the proportion of the surface area of Metropolitan France where coverage by the operator in question is available;
- the rate of coverage of the population measures the percentage of the population of mainland France covered by the operator in question. This rate is calculated using a geolocated database of the population.

b) Dedicated programmes for expanding 2G coverage continued in 2011

Operators continued to invest in covering the entire country with GSM, especially as part of the "dead zone" programme whose goal is to achieve complete mobile coverage nationwide. Over the course of 2011 more than 120 town centres were covered thanks to the programme, bringing the total to 3,078. There are still 228 town centres left to cover before the programme's completion. This national programme is being overseen by the Inter-ministerial land planning and regional action delegation, DATAR *(Délégation interministérielle à l'aménagement du territoire et à l'attractivité régionale).*

Progress is also being made in providing 2G coverage on major transportation arteries[1], which is helping to reduce the number of dead zones. At the start of 2012, ARCEP was able to ascertain that Orange France and SFR had only some ten or so kilometres and Bouygues Telecom several hundred of these 58,000 km of roadway left to cover. All three are being called on to complete this coverage as quickly as possible.

c) Operators publish mobile coverage information

Under the terms of their licences, operators are required to publish maps of their mobile coverage and to update them at least once a year. They must also ensure that these maps are consistent with the reality in the field, based on a set technical protocol set by ARCEP Decision No. 2007-0178[2].

ARCEP uses this protocol when performing its annual field surveys to verify the accuracy of the published maps.

To this end, surveys were performed in 286 districts/municipalities in 2011 – the results of which revealed that the coverage maps published by the three operators are over 98% accurate when compared to measurements taken in the field[3].

Furthermore, because the protocol is publicly available anyone who so desires can use it to complete the annual field surveys.

1.2. 3G coverage

Percentage of the population with 3G coverage as of 1 January 2012	
Orange France	98%
SFR	98%
Bouygues Telecom	93%
Free Mobile	27%

1 - Roads and motorways where traffic exceeds an average 5,000 vehicles a day, and on the roadways in each department that connect the prefecture (i.e. the department's administrative capital) to the sub-prefectures (secondary administrative centres). This represents 58,000 km of roadway, as defined by the national agreement for providing mobile telephone coverage on the country's major transportation arteries, of 27 February 2007..

2 - ARCEP Decision No. 2007-0178 of 20 February 2007 specifying the rules for publishing information on coverage and setting the protocol for mobile network coverage surveys.

3 - For different reasons which are detailed in the reports on coverage that ARCEP published in 2009, notably uncontrollable variations in radio propagation, it is very difficult to achieve 100% accuracy.

a) Verifying operators' compliance with 3G rollout obligations

ARCEP performed field measurement on all four mobile network operators' 3G coverage: Free Mobile, Orange France, SFR and Bouygues Telecom.

Free Mobile

Under the terms of its licence, Free Mobile was required to have achieved coverage of 27% of the population of Metropolitan France with its own network within two years of having been issued that licence, i.e. by 12 January 2012, and to be able to open its network commercially by that time.

This obligation pertains to its own network, and so excludes the additional coverage achieved through roaming on another mobile operator's network. Here, it should be stressed that the fact of meeting rollout obligations needs to be distinguished from the issue of quality of service – which constitutes an element of differentiation between operators, and for which ARCEP publishes an annual scorecard. It should also be distinguished from the issue of what percentage of customers' traffic is being relayed thanks to a roaming solution that one operator contracts from another operator, whose technical and financial terms are governed exclusively by contractual relations between these two undertakings.

In a letter dated 10 November 2011, Free Mobile informed ARCEP that it had achieved its first 3G coverage obligation, and asked that the Authority verify this.

ARCEP then made a careful check of the information supplied by Free Mobile, using the same procedure as the one used to verify all mobile network operators' obligations. This consisted of field checks to ascertain the accuracy of the coverage map supplied by Free Mobile, and of calculating the percentage of the population covered based on that map.

On 13 December 2011, having completed its verifications, ARCEP ascertained that Free Mobile had indeed achieved the level of 3G coverage set for its 12 January 2012 deadline.

On 10 January 2012, Free Mobile launched its mobile service commercially. The service is available in mainland France, on the one hand through Free Mobile's own 3G network and, on the other, through a 3G and 2G roaming access solution that Free Mobile purchases from Orange, and which is governed by a private contract signed on 3 March 2011.

As stipulated in the terms of its licence, Free Mobile is now required to be providing 75% of the population with 3G coverage by January 2015 and 90% by January 2018.

ARCEP decided to perform a second round of field measurements, which it did in February 2012 and, once again, concluded that Free had met the coverage obligations listed in its licence, namely 27% of the population.

Orange France and SFR

Verifications were performed on the Orange France and SFR networks, using the same method as the one used for Free Mobile. The purpose was to verify that the operators had met the targets set in the notices to comply they were sent on 30 November 2009, after they had failed to meet the rollout targets for 21 August 2009 listed in the terms of their licences. At the time, Orange France was covering 84% of the population instead of the 98% to which it had committed, and SFR 74% instead of 99.3%.

Notices to comply: target coverage obligations		
30 June 2010	SFR	84%
31 December 2010	SFR	88%
	Orange	91%
31 December 2011	SFR and Orange	98%
31 December 2013	SFR	99.3%

Orange France and SFR had been ordered to be providing 98% of the population with 3G coverage by 31 December 2011. In January and February 2012, ARCEP performed checks on this interim deadline and ascertained that each of the two operators had achieved their rollout obligation. The Director-General of ARCEP therefore concluded that there were no grounds to pursue the notice to comply against Orange France concerning its second and third deadline, or against SFR concerning its third interim deadline.

SFR will need to make up for the time lost in meeting the obligations listed in its licence by achieving 99.3% coverage of the population by the end of 2013 – as stipulated in the notice to comply.

Bouygues Telecom

As concerns Bouygues Telecom, the third and final rollout deadline set in its 3G licence, and which fell on 12 December 2010, stipulates that it must cover 75% of the population.

On 1 April 2011, ARCEP ascertained that Bouygues Telecom had reached the target rollout obligation set in the 3G licence it was awarded in 2002.

Outside the realm of any obligation, and with the agreement of Bouygues Telecom, ARCEP also verified this operator's 3G network coverage as of 31 December 2011. The Authority was able to ascertain that Bouygues Telecom has continued to invest in its 3G network rollouts, and that it is now covering more than 93% of the population of mainland France.

b) Mobile network sharing agreements

As all of the market's operators continue to deploy their third generation network, we can expect consumers to soon enjoy 3G coverage that is equivalent to what they currently have in 2G.

Having the option of implementing 3G network sharing schemes[4] is helping operators to reach these coverage levels.

On 11 February 2010, Orange France, SFR and Bouygues Telecom signed an agreement to share their mobile network infrastructure in a bid to extend 3G coverage in Metropolitan France. On 23 July 2010, this scheme was expanded to include Free Mobile. The agreement, which concerns the carriers' deployment of a shared 3G radio access network (RAN sharing), plans on upgrading the 2G sites that are listed in the national "dead zone" programme (i.e. for bringing mobile access to uncovered areas) to 3G, and on deploying an additional 300 transmission sites outside the areas covered by this programme. Free Mobile will join the shared network on a different timetable than the other three carriers.

2. Status of fixed broadband networks

2.1. Fixed broadband coverage

Properly introduced in the early 2000s, broadband technologies significantly increased the connection speeds available to users. For fixed access, the "last mile" of users' connection is generally based on an existing wireline local loop solution – i.e. the public switched telephony network or cable operators' networks – but it can also be supplied over a wireless link by either a terrestrial or satellite system. By "broadband" ARCEP means retail market offers that allow users to access the internet at speeds equal to or above 512 kbps.

Most broadband coverage in France today is supplied by DSL technologies over the France Telecom telephone network, which constitutes the copper local loop.

The copper local loop is made up of around 33 million lines deployed across the whole of France

4 - ARCEP Decision No. 2009-0328 of 9 April 200, introducing the measure and setting the terms governing the implementation of shared 3G mobile network installations in Metropolitan France.

through some 15,000 subscriber connection points[5] called NRA (*nœuds de raccordement d'abonnées*). If all of these connection points house equipment that deliver DSL services – namely the DSLAMs (digital subscriber line access multiplexer) – it does not necessarily mean that all of the lines that it serves will be eligible for these services.

In fact, close to 265,000 lines were still unable to deliver broadband services via DSL as of 31 December 2011 (France Telecom figures), or just under 1% of the total number of lines.

This ineligibility is due primarily to:

- the length of the lines and the resulting weakening of the DSL signal (211,000 lines): the customer premises (both residential and business) are too far from the exchange or neighbourhood cabinet where the ADSL signal originates. DSL technology is subject to the technical constraint of signal loss which depends on the length of copper line and the diameter of the wires that make up that line. Beyond a certain threshold, the DSL signal coming from the DSLAM becomes too weak to ensure a sufficiently high quality link;

- the presence of multiplexing equipment (55,000 lines). Multiplexing is a technical solution which consists of having several subscribers' telephone signals carried over a single copper pair – the result being that the multiplexed lines are unable to supply DSL services. France Telecom has begun a three-year plan for neutralising multiplexers across the whole of France.

The fact that a digital subscriber line (DSL) is able to deliver broadband access does not necessarily mean that it can also supply all of the services delivered over DSL technologies, particularly video and TV services.

Whether the lines are able to deliver these services depends on several parameters, including the minimum bandwidth that their operation requires. The variety of services available therefore depends, first, on the length of the copper lines. The next criterion is whether or not there are alternative operators selling these different services and have therefore invested in the proper equipment to do so.

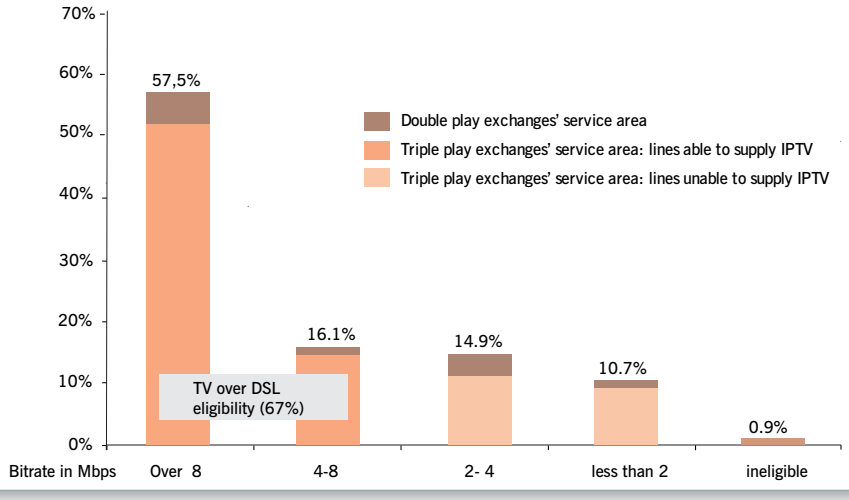
Here, we can distinguish two situations:

- on the one hand, a potential DSL triple play situation where the lines are theoretically able to deliver TV over ADSL. By "triple play" we mean a bundle of three services supplied over DSL, namely telephony, internet access and television. It is defined by a combination of technical elements – subscriber connection points with optical fibre backhaul – and competition elements which, theoretically, enable customers to have access to a TV over ADSL service. Eighty eight percent of lines in France currently have access to a triple play bundle, which represents around 7,000 exchanges. As mentioned earlier, roughly two thirds of lines are now theoretically capable of supplying TV over ADSL, with the remaining third being unable to deliver enough bandwidth to do so. This estimate is based on the length of the copper lines which makes it possible to determine their theoretical throughput;

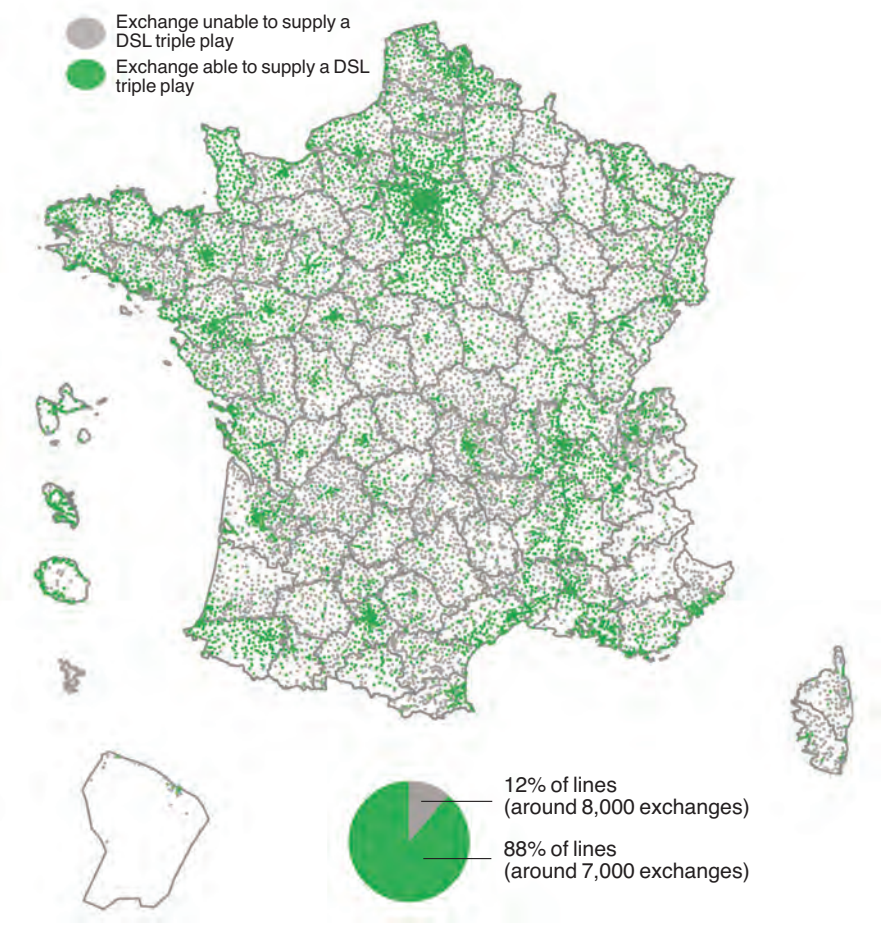
- on the other hand is the situation of the DSL double play bundle that includes telephony and internet access services, and so no IPTV access. Around 8,000 exchanges, representing 12% of all lines, can deliver only double play bundles as they are currently without the equipment needed to supply television over ADSL services.

5 - For the sake of brevity, we use the term "exchange" interchangeably when referring to these "NRA" subscriber connection points.

Line eligibility according to theoretical throughput (end of 2011)



Status of the service area of DSL triple play exchanges at the end of 2011

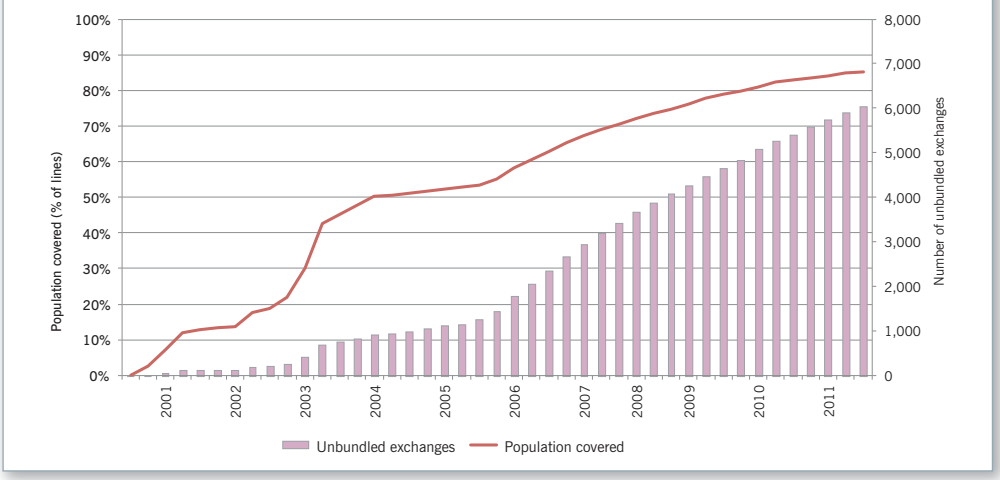


2.2. State of competition across France

Although France Telecom has installed activated equipment in all of the exchanges that make up the network's mesh across the country, such is not yet systematically the case for all of the market's main operators. When a new operator joins an exchange through the unbundling process, competition between the products and services available in a given region automatically increases, in terms of prices, devices on offer, available TV and video services, etc.

An exchange is deemed "unbundled" when at least one alternative operator installs its DSL equipment in the exchange and accesses France Telecom's local loop with the purpose of serving its own customers directly.

Development of unbundling



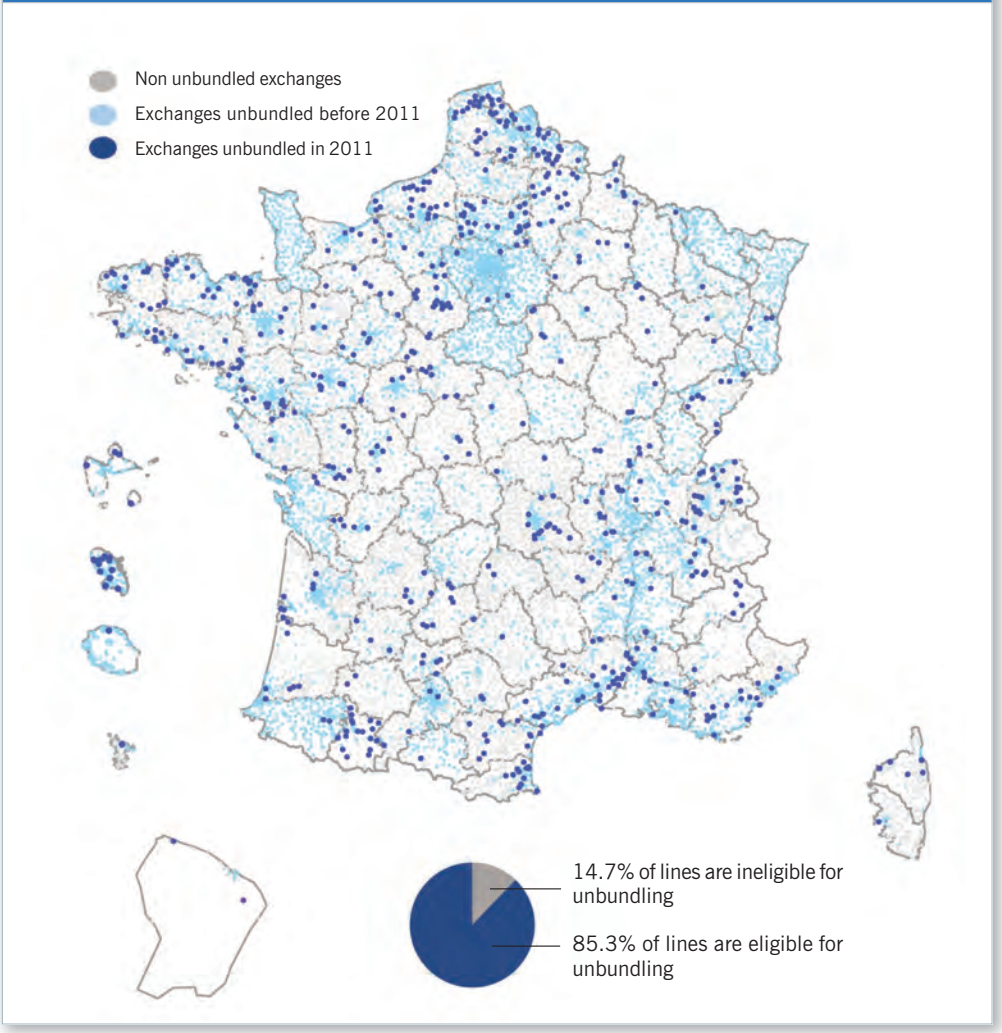
As of 31 December 2011, 85.3% of existing lines were unbundled. This represents close to 6,050 unbundled exchanges out of the 15,000 in existence – each serving an average of 5,000 lines.

The unbundling momentum continues apace, and is now moving into smaller exchanges. As a result, more than 600 exchanges were unbundled in 2011, with an average size of 1,200 lines, and so contributing directly to the spread of competitive services throughout the country.

This development of unbundling, hence of competition, has been sustained primarily by the actions and investments of two types of undertaking: alternative operators which continue to invest and are now targeting smaller exchanges, and local authorities via their public-initiative networks (PIN). 2011 also saw a decrease in the price of France Telecom's local loop unbundling (LLU) reference offer, and notably the monthly rate for a copper pair, which decreased from €9 to €8.80 on 1 January 2012. By the same token, the creation of a new type of location for housing alternative operators' equipment in France Telecom's smaller exchanges – referred to as HPS for "hyper petit site" or hyper small site, made it possible to introduce a special rate for exchanges with fewer than 1,500 lines, and so help further vitalise unbundling.

In addition, changes in the pricing and technical terms of France Telecom's "LFO" wholesale optical fibre link offer improved alternative operators' ability to create their backhaul network using dark fibre, and so making it possible to bring unbundling to smaller and smaller exchanges.

Status of optical fibre rollouts

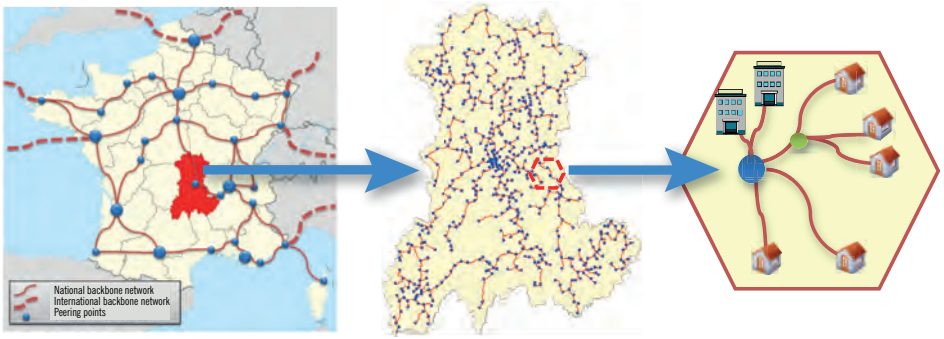


2.3. Why backhaul networks matter

Electronic communications networks have a hierarchical structure which is broken down into three levels: the backbone or core network, the backhaul network and the access network.

Backhaul networks, which are established at the regional or departmental level, provide the link between the backbone network and the access network by allowing traffic to be relayed up to the access points where operators' activated distribution equipment is installed. In the case of broadband via DSL, the backhaul networks that operators have deployed allow them to connect the exchanges/cabinets in the copper local loop network where their activated equipment is located, to deliver DSL broadband or ultra-fast broadband access over fibre. In other words, they can be seen as akin to subsidiary roads.

The three different network levels



Backbone network | Backhaul network | Access network

The bandwidth on a backhaul network's links needs to be high enough to relay all of the traffic to the access points in the target area. The bandwidth imposes restrictions, in terms of connection speed and service range, on the types of offer available to customers being served by a given access point, and this regardless of the technology being employed – e.g. DSL, FTTH, etc.

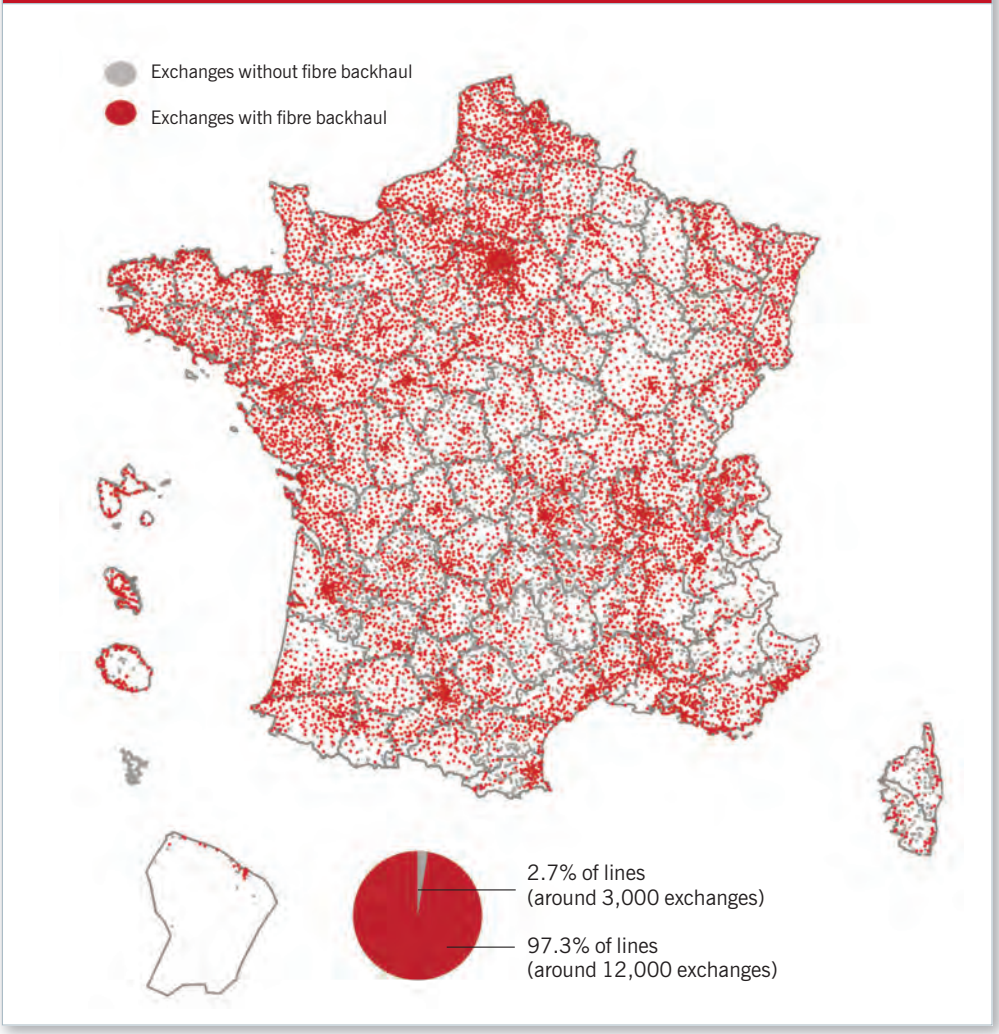
On the matter of the copper local loop, the ubiquity of DSL technologies and the growing use of the high-speed internet meant that backhaul networks had to gradually adapt to be able to handle an ever-increasing amount of traffic. The development of TV over DSL services in particular, which are sold as part of triple play bundles, along with video on demand (VoD) products, which were first available in big cities but are now found in a large percentage the country, was made possible by the deployment of optical fibre backhaul networks that could transport streams of several hundred Mbps (a package of 200 channels typically corresponds to a bandwidth of around 700 Mbps).

Introduced onto backbone networks in the late 1980s, optical fibre is now the most suitable and most future-proof technology – in terms of capacity and from an operational standpoint – for building backhaul networks. An optical fibre backhaul link makes it possible to achieve bandwidth ranging from 1 Gbps to several hundred Gbps (using the most advanced multiplexing technologies) whereas using copper cables for symmetrical links of n x 2 Mbps (with n parallel copper pairs) limits the backhaul network's bandwidth. These cables are still employed in the France Telecom backhaul network to connect to the smallest exchanges. But, because of the limited capacity of these links, the DSL access supplied by exchanges with a copper-based backhaul system provides end users with relatively slow connection speeds.

Because it is the incumbent carrier, France Telecom owns the main backhaul network, which is completed locally by public-initiative networks (PIN).

Now that new fibre to the home (FTTH) network rollouts are underway in all of the main cities in France, bandwidth requirements in the backhaul segment are expected to increase rapidly.

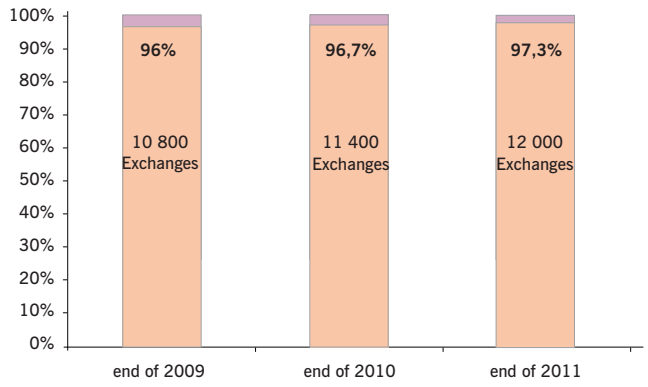
Status of optical fibre rollouts



Achieving nationwide coverage with optical fibre backhaul networks is a major issue for operators wanting to deliver robust, high-performance electronic communications services across the country, in addition to being vital to the success of FTTH and 4G mobile network rollouts in rural areas. However, there is currently a lack of fibre backhaul networks in the most rural areas.

And it is in these areas in particular that the incumbent carrier's many copper local loops are still not connected to backhaul networks that have been provisioned in such a way as to enable several operators to supply robust and varied services. Today, there are around 3,000 exchanges, representing 2.7% of all lines in France, that do not have a fibre backhaul system. Upgrading these backhaul networks would make it possible, among other things, to offer substantially faster connections to a greater number of people, along with TV over DSL services, and would allow alternative operators to improve the quality and range of the products they sell, through expanded unbundling. Even though it has been analysed as essential, the European Commission has not yet included the backhaul segment in the list of relevant markets for national

Growth of the percentage of exchanges/lines with optical fibre backhaul



regulators' market analysis. ARCEP has therefore not, at this stage and within this framework, performed a specific market analysis of the backhaul segment.

As part of its analysis of the unbundling market (wholesale physical network infrastructure access, at a fixed location), back in 2005 ARCEP did, however, address the issue of alternative operators' access to existing optical fibre links in the backhaul segment, which is vital to expanding LLU coverage. At the time, ARCEP had concluded that it was not economically viable for an alternative operator to deploy optical fibre cables to establish its own backhaul network with a view to unbundling new exchanges, and that France Telecom should market a reasonable wholesale optical fibre link solution on its own backhaul network.

As a result, France Telecom introduced its "LFO" wholesale optical fibre link rental solution in 2006. It allows alternative operators to expand their unbundling coverage by connecting exchanges that had previously not been unbundled to their backhaul networks.

The market analyses performed in 2008 and 2011 confirmed France Telecom's obligation to maintain its LFO offer, while bring changes to its pricing and technical terms to make it possible to expand unbundling to smaller and smaller (in terms of the number of copper lines) exchanges.

In particular, by virtue of the market analysis performed in 2011, France Telecom is required to provide maps of its optical fibre backhaul networks to facilitate alternative operators' planning and research, and to help local authorities better plan their own investments in backhaul networks.

Furthermore, existing optical fibre backhaul networks are physically constrained by the number of links between each exchange. As a result, some links may be overloaded and therefore unavailable, even though they are theoretically eligible for the France Telecom LFO solution.

The announced rollouts of FTTH local loops only make sense if the data streams from these networks can be backhauled higher up the system, by networks that have been sufficiently provisioned and are open to the competition. In more rural areas, massive investments in the deployment of new backhaul networks are therefore a sine qua non of the future success of FTTH.

Based on these conclusions, ARCEP initiated two new series of actions on the backhaul issue in 2011. The first aim is to improve access to existing optical fibre backhaul networks that are currently saturated, and the second is to establish targeted actions for those rarer areas that are currently without a fibre backhaul system.

3. Increasing bandwidth on fixed networks

3.1. Increasing bandwidth on wireline networks through access to the copper sub-loop

a) Preparing for adjustments to the current scheme

In late 2008, several local authorities raised the question of increasing bandwidth by gaining access to France Telecom's copper sub-loop. One major advantage of this solution is that it can be put into place relatively quickly in those areas and regions where it would be a welcome solution. Under certain conditions, it can also constitute the first stage of an FTTH network rollout.

This solution has raised a number of competition, operational and technical questions that ARCEP has been careful to take into consideration in the work it has been doing with operators and local authorities since 2009. Regulatory measures indeed proved crucial to ensuring that the process of reengineering France Telecom's local loop, particularly as part of the project for increasing bandwidth, did not hamper operators' future investments or reduce competition in the marketplace – which would be detrimental to consumers.

The Competition Authority has expressed its concerns on several occasions over the process of increasing bandwidth on the incumbent carrier's local loop[6].

The work performed in 2010 and 2011 allowed ARCEP to ascertain that a great many local authorities were eager for a process that produced fast and concrete results, along with a need to guarantee alternative operators' ability to stimulate competition by offering consumers a more diverse range of services. These observations led ARCEP to favour a solution that could be implemented in an "industrialised" fashion nationwide, while preserving competition in the broadband market.

b) Implementing bandwidth boosting schemes

The review of its analysis of the wholesale market for accessing the physical infrastructure that comprises the local loop (market 4) allowed ARCEP to bring changes to the LLU obligations imposed on France Telecom, and particularly to specify the rules for implementing a system for increasing bandwidth on existing networks.

On this occasion, ARCEP paid particularly close attention to the provisions and obligations that enabled operators who had already invested in "NRAs"[7] to make a smooth transition to the sub-loop, and thereby guarantee that competition would not suffer.

Here, ARCEP was able to respond to the concerns raised earlier by the Competition Authority which, in its Opinion of 8 March 2011[8], concluded that, *"on the question of increasing bandwidth, the Competition Authority welcomes the work done by ARCEP to enable local authorities to quickly increase the access speeds available in their districts, and in accordance with competition regulation. It appears that the scheme being planned by the regulator could, in principle, satisfy the competition-related concerns formulated by the [Competition] Authority […]".*

The draft analysis Decision on market 4 was notified on 27 April 2011 to the European Commission,

6 - *Competition Authority Opinion No. 09-A-57 of 22 December 2009 concerning a request from ARCEP for an opinion on increasing access rates*

7 - *Subscriber connection point, referred to as NRA (nœud de raccordement d'abonnées): concentration points in the France Telecom copper local loop network which house the activated equipment (DSLAM) that alternative operators use to activate their subscribers' DSL access*

8 - *Competition Authority Opinion No. 11-A-05 of 8 March 2011 concerning a request from ARCEP for an opinion on the third cycle of analysis of broadband and ultra-fast broadband wholesale markets*

which sent back its observations to ARCEP on 26 May 2011. ARCEP adopted and published the final decision on 14 June 2011[9].

In concrete terms, in its decision ARCEP imposed a set of obligations on France Telecom when it undertakes a reconfiguration of the local loop with a view to implementing a "mono injection" scheme for increasing bandwidth[10]:

- first, France Telecom must offer LLU operators collocation and optical fibre backhaul solutions for their active equipment installed in the new supply points in the sub-loop, and at prices that provide enough of an incentive to allow alternative carriers to deliver unbundled access from the new location;
- second, France Telecom must compensate for the negative impact that this reconfiguration of the original exchange has on LLU operators, particularly with respect to compensating the partial loss of sunk costs.

In light of the obligations being planned as part of the reconfiguration of the local loop, France Telecom needs to be in a position to offer alternative carriers collocation and optical fibre backhaul solutions when it grants a request for access to the local sub-loop, through "mono injection," particularly when part of a project for increasing bandwidth instigated by a local authority.

c) France Telecom wholesale solutions to meet its obligations

In addition to an "offer of prior information" on the local copper sub-loop that allows operators and local authorities to plan their bandwidth increase projects, which has been in available since 2010, on 5 August 2011, pursuant to the ARCEP market analysis decision, France Telecom introduced a solution for implementing "mono-injection" access to the copper sub-loop. This solution is aimed at carriers, and especially at local authorities and their partner operators wanting to order the solution directly[11]. This price of this shared access point solution, called PRM (*Point de Raccordement Mutualisé*) is based on the costs shouldered by the incumbent carrier, and enables the new shared delivery point at the sub-loop level to be fully outfitted. In practice, this solution will be adopted chiefly by local authorities and their partner operators.

In concrete terms, this shared access point solution includes the supply and installation of a shared cabinet, the migration of all the broadband connections from the original exchange, along with financial measures for offsetting the economic impact of the reconfiguration process on the operators involved. These are necessary to ensuring that France Telecom can meet its obligations with respect to LLU operators, particularly in terms of the quality and future sustainability of its service. In addition, the portion of the reconfiguration process that falls strictly within the scope of France Telecom's copper local loop is not included the cost of the "PRM" offer but rather incorporated, logically, into the cost of the France Telecom copper pair which is shouldered by all of the operators.

This "PRM" shared access point offer can only be supplied when market analysis considers the demand for access to the France Telecom copper sub-loop to be reasonable, in terms of the obligations imposed on the incumbent carrier – notably with respect to the other operators. From a concrete standpoint, this supposes that demand for increased bandwidth is confined to only the most relevant situations, and involves France Telecom making available all of the infrastructure elements needed to comply with its regulatory obligations.

9 - Decision No. 2011-0668 of 14 June 2011 on the definition of the relevant market for wholesale access to the physical infrastructure that comprise the wireline local loop, the designation of an operator enjoying significant market power and the obligations imposed on it as a result

10 - In the context of a reconfiguration of the local loop, the method referred to as "mono-injection" consists of sending DSL signals to the sub-loop for all of the lines in the neighbourhood cabinet in question, with no particular technical restrictions. In this instance, activating the DSL connection for all of the subscribers downstream from the cabinet is no longer performed at the original exchange, but entirely at the neighbourhood cabinet level.

11 - In such a case, the local authority must declare itself to ARCEP and, if it is responsible for awarding rights of way on public land, must create a dedicated entity to run the operator business, to comply with the stipulations of Article L.1425-1 of the Local authorities' general code (CGCT).

d) A recommendation for local authorities

Alongside this market analysis Decision, on 14 June 2011 ARCEP published a recommendation on increasing bandwidth on existing systems[12] which is aimed chiefly at local authorities, who will be the main instigators and financiers of these projects.

This recommendation was submitted to public consultation from 24 January to 7 March 2011. Its purpose was to reiterate the competition, operational, economic and technical issues surrounding schemes for increasing bandwidth through access to France Telecom's copper sub-loop, and to present ARCEP's recommendations on the rules governing local authorities' and their partner operators' implementation of such projects.

After having provided a general overview of bandwidth increase schemes, and France Telecom's wholesale offers for enabling them, ARCEP sets out its recommendations for local authorities wanting to put these schemes into practice. The document invites local authorities to plan their bandwidth increase schemes as part of a consistent process that furthers the cause of digital regional development.

3.2. Alternatives to copper: WiMAX and the wireless local loop

As of 1 January 2012, twenty four undertakings in France held a wireless local loop (WLL) licence in the 3.4–3.6 GHz frequency band. These licences result primarily from a call for applications that was issued in 2005, and which led to two licences been awarded per region in the 3.4–3.6 GHz frequency band, and from the sale of licences in the secondary market. Some licences had also been awarded prior to the 2005 call for applications. WLL licences allow undertakings to introduce wireless high-speed services for either fixed or roaming use. They carry WLL rollout obligations which, for licences resulting from the call for applications, correspond to the commitments the licence-holders made in their application. In accordance with the terms of their licence, a compliance check was performed on 31 December 2010. This process required licence-holders to provide ARCEP with several pieces of information, notably on their transmission site deployments, their geographical coordinates, their products and customer numbers.

a) ARCEP's 2011 verification of rollout obligations

The findings of this verification process included rollout levels that, by and large, fell short of the licence-holders' original commitments. Most of the deployments performed have been part of public-initiative rollout projects aimed at bringing fixed broadband services to areas that are still not covered by wireline networks.

From 23 May to 23 June 2011, ARCEP ran a public consultation that allowed it to take stock of the current status and future outlook for the development of wireless local loop systems. The aim of the public consultation was to obtain an updated view of the WLL market and its development possibilities, on progress made on the technological front and the frequency requirements for this type of rollout. There were 26 responses to the consultation from a wide variety of stakeholders, including local authorities, operators, service providers, state administrations, etc., which ARCEP made public on 25 July 2011.

In their responses to the consultation, Some players stated that they were satisfied with WiMAX technology and wanted to continue to deploy wireless local loop networks as a short and medium-term solution for supplying fixed broadband access. Certain licence-holders expressed a desire to have spectrum made available to them under less precarious terms than the ones currently afforded them. Some responses also contained requests for

12 - http://www.arcep.fr/uploads/tx_gspublication/guide-fibre-collectivites-juillet2011.pdf

additional spectrum for deployed networks, to be able to supply users with faster connections.

Meanwhile, other players confirmed their plans for large-scale network rollouts for supplying roaming access, but stated that they are part of more long-term projects that include the deployment of the LTE standard.

b) Launch of procedures against certain operators, provided for in CPCE Article L. 36-11

On 21 July 2011, ARCEP's Director of Legal Affairs notified 16 holders of WLL licences in the 3.4 – 3.6 GHz band of a procedure provided for in Article L. 36-11 of the French Postal and electronic communications code (CPCE), concerning their compliance with the obligations listed in the terms of their licences.

Following an investigation, the Authority made public the decisions of the Director-General of ARCEP, which included serving a notice to comply to seven licence-holders in Metropolitan France on 23 November 2011, and to four licence-holders in the overseas markets on 23 December 2011, ordering them to comply with their rollout obligations and, for some, to make actual use of their spectrum according to a revised timetable. As per the terms of certain undertakings' notice to comply, the first interim check will be carried out on 30 June 2012.

The licence-holders can satisfy their rollout obligations by deploying transmission sites equipped with base stations. They can also meet these obligations by making their frequencies available to other operators, notably local authorities, provided these other operators are able to employ the wireless local loop in a secure and lasting fashion. If applicable, this can be achieved through network or spectrum-sharing agreements.

ARCEP will pay close attention to ensuring that each stage is achieved by these deadlines. Should the licence-holders fail to do so, they are liable to face to the penalties provided for in CPCE Article L. 36-11.

4. Local authorities' role in furthering fixed broadband coverage

4.1. Location authorities' actions: backhaul, dead zones, increasing bandwidth on existing systems

At the end of 2011, around 265,000 lines were still incapable of supplying DSL services, or around 9% of all lines – compared to 434,000 lines in September 2010. These DSL dead zones are not necessarily broadband dead zones. Indeed, a distinction must be made between DSL dead zones, i.e. where it is impossible to have high-speed internet access via the France Telecom copper network – and broadband dead zones where, taking account of all broadband-capable technologies such as wireless and satellite, there is no high-speed access at all.

Local authorities have been working assiduously since 2004 to eradicate dead zones in their districts. To this end, their efforts to develop public-initiative networks (PIN) have been vital to improving broadband coverage in France.

Several PIN have included local loop reconfiguration projects. The solution in these instances consists of shortening the distance between the subscriber and the source of the DSL signal. Up until now, local authorities have achieved this by using France Telecom's "NRA-ZO" broadband dead zone subscriber connection point solution, either directly themselves or indirectly through operators' public-initiative networks. This solution was replaced in August 2011 by the "PRM" shared access point solution which emerged from the actions devoted to increasing bandwidth on existing systems (see above). The information gathered from local authorities indicates that some 46,000 Wi-Fi lines were made xDSL-capable in 2010 and 2011 thanks to this solution.

When wireline solutions are either technically or economically impossible for a PIN, wireless solutions can be used to complete regional broadband coverage.

WiMAX and Wi-Fi are two solutions that are regularly used in public-initiative networks. These technologies make it possible to supply access speeds of 2 Mbits and up, and so providing an alternative to wireline solutions.

The information furnished by local authorities reveals that close to 120,000 homes (or businesses) are now able to receive broadband access via WiMAX or Wi-Fi. In actuality, this figure does not reflect the number of actual connections supplied by these technologies. For instance: the 1,371 WiMAX sites inventoried as of 31 July 2011 were serving 24,600 residential customers and 1,500 enterprise customers.

In addition to WiMAX and Wi-Fi, satellite too can offer an alternative solution for covering broadband dead zones.

Satellite is often considered as a subsidiary or back-up solution for public-initiative networks, due to the restrictions that can be experienced by end users. Some public authorities also plan for subsidies of between €200 and €500 to finance the purchase and installation of satellite connection kits.

4.2. Public-initiative network projects

Local authorities must declare their public-initiative network projects[13] to ARCEP at least two months before they are actually put into action. ARCEP was therefore able to inventory 260 officially declared projects.

At the end of 2011, of those declared projects there were 135 covering more than 60,000 people each, of which 12 were managed by the regions, 58 by the departments and 65 by public inter-departmental cooperative establishment, or EPCI (Etablissement Public de Coopération Inter-departmentale).

Of these 135 projects, 105 supply access services commercially. These 105 projects represent a total investment of €3 billion and the deployment of close to 36,000 km of optical fibre network. Based on the information transmitted to ARCEP, public financing accounts for close to 60% of this investment.

General information on PIN (October 2011)

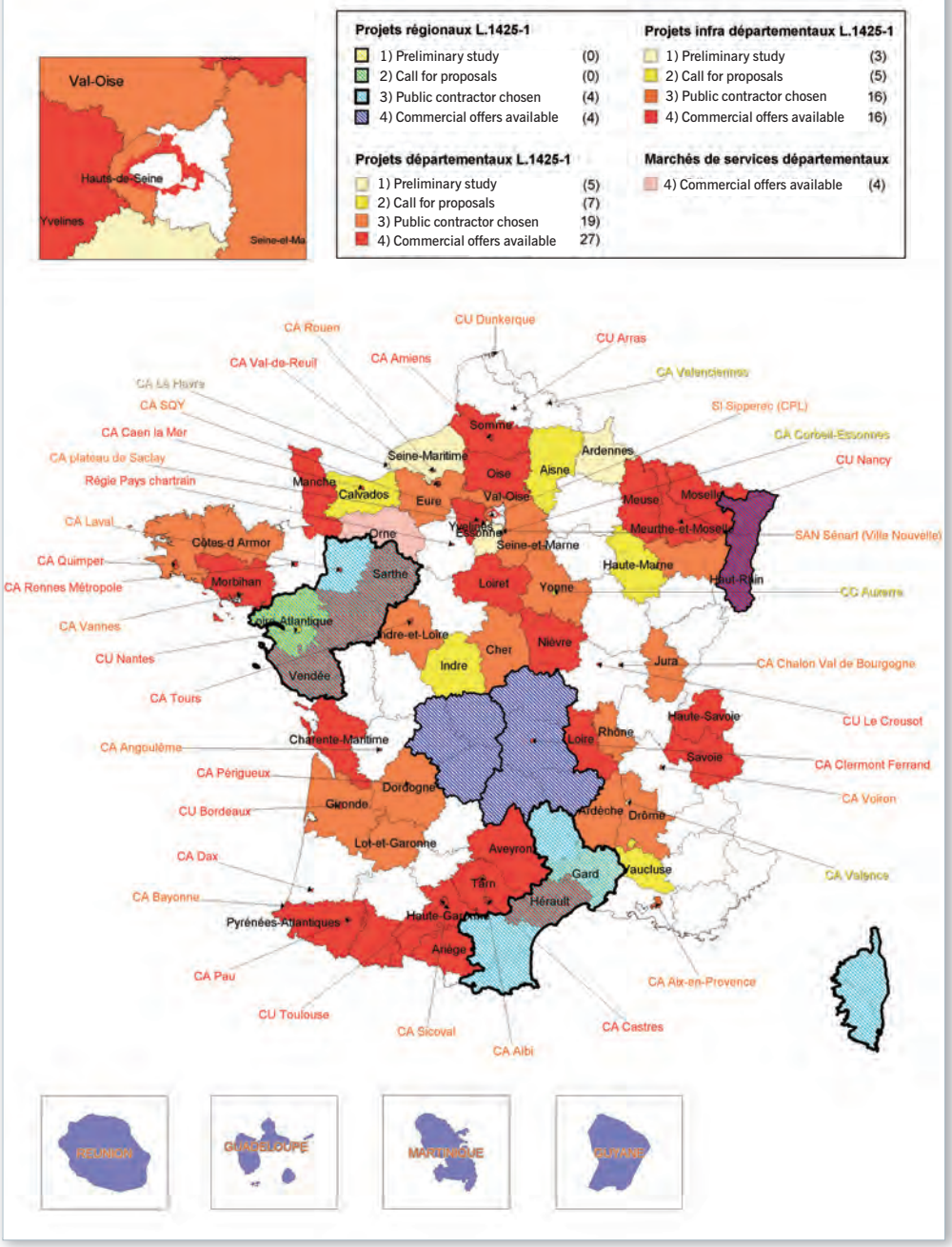
Breakdown of operational PIN by type of local authority and their characteristics

Type of local authority	Number of projects	Cost (M€)	Average cost (M€)	Length of deployed networks (km)*	Average length of deployed networks (km)*	Number of business affected by the project
Region	11	367	33,36	5 525	614	298
Department	45	2 002	44,49	27 500	600	1 587
Township/other	49	422	8,61	3 702	148	536
TOTAL	105	2 791	NA	36 727	NA	2 421

Source : ARCEP.
* does not concern all projects

13 - Article L. 1425-1 of the Local authorities' general code (CGCT)

Public-initiative networks as of October 2011 (projects covering more than 60,000 people)



5. The French overseas markets

5.1. Mobile services

• 3G

From 28 July to 30 September 2010, ARCEP held a public consultation on a document concerning the reuse of the 900 MHz frequency band by third generation (3G) mobile networks, and the future spectrum requirements of the French overseas departments and territories. On 27 January 2011 it published a summary of the contributions received to this public consultations, along with the guidelines to emerge as a result.

These guidelines include the ability to use the 900 MHz and 1800 MHz bands for UMTS, according to the particular situation in each department or collectivity. This framework is expected to help further the development and improvement of high-speed mobile services in a way that is beneficial to users in those overseas markets.

On the matter of assigning new frequency bands to mobile and ultra high-speed mobile services in the overseas territories, including the 800 MHz band from the digital dividend – i.e. spectrum that became available after the switchover from analogue to digital broadcasting – work on the issue could begin in 2012 depending on the requests made by stakeholders.

• Mobile call termination

On the matter of mobile call termination in the French overseas departments and territories, the ARCEP Decision of 2 November 2010[14] set new ceiling tariffs for 2011 and 2012, which carry on the steady decrease towards cost-based pricing. Work on updating the technical-economic cost models for a mobile operator in the overseas markets – one for the Antilles-Guyana region and one for the Reunion-Mayotte region – began in 2011 and will be completed in 2012. These models will provide ARCEP with the basis for setting the ceiling tariffs for 2013, through a decision that will be issued in 2012, in accordance with the European Commission Recommendation of May 2009 which recommends achieving symmetrical ceiling tariffs based on long-run incremental costs by 1 January 2013 at the latest (*cf.* page 170).

5.2. Fixed broadband and wireline telephony services

a) Fixed broadband

In its report to Parliament and the Government on the electronic communications sector in the overseas markets, ARCEP invited, *"alternative operators to make greater use of available wholesale offers to benefit from more competitive cost structures: although unbundling coverage is equal to that of Metropolitan France (76 % of lines), in actuality operators are using it for only 50% of their base, with the balance being covered through bitstream offers"*.

ARCEP notes that there has been real progress in the number of lines eligible for unbundling, which has increased from 67% of lines in 2009 to 91%, on average, in all of the overseas territories as of Q4 2011. **This means that most exchanges in the overseas territories are now LLU-capable**. In addition, unbundling is now the most widely used wholesale solution, and accounted for an average 78% of alternative operators' wholesale connections in the overseas markets in final quarter of 2011. Alternative operators' share of these markets nevertheless remains well below what we find in mainland France.

Furthermore, to be able to monitor the quality of service of wholesale solutions in overseas departments, ARCEP asked France Telecom to *"make quality of service indicators for wholesale offers available periodically, by department or collectivity, which correspond in scale to the overseas markets"*. .

14 - Decision No. 2010-1149 of 2 November 2010 on determining the relevant mobile call termination markets in Metropolitan France and the French overseas markets, designating the operators with significant power in these markets and the obligations imposed on them as a result, for 2011-2013

The commitments that France Telecom has made to increased interaction and greater transparency at the local level are a topic of special focus during meetings of the Committee for monitoring overseas markets (*cf.* page 32) created by ARCEP. Alternative operators in each overseas department have thus been able to obtain quality of service indicators from France Telecom on a departmental scale, and to track them on a monthly basis.

ARCEP also requested that France Telecom hold an annual meeting with local operators and local authority representatives in each overseas department. The first meetings took place in October 2011 and were an opportunity to provide participants with relevant indicators on the quality of wholesale solutions in each overseas department.

b) Changes in France Telecom offerings

The new France Telecom wholesale offers and solutions to result from the analysis decisions on markets 4 and 5, published on 14 June 2011, apply fully to overseas departments. All of these offers are described in detail in this report (*cf.* pages 81 and 167).

Fixed ultra-fast broadband

On 14 December 2010, ARCEP issued a decision specifying the rules governing access to optical fibre ultra-fast broadband lines in the whole of France, with the exception of very high-density areas. It therefore applies to all the overseas departments.

This means that overseas departments will be concerned by FTTH network rollouts in the short and medium term:

- within the context of the national broadband programme, operators stated their FTTH rollout plans for the next five years in several municipalities in the overseas departments, including Basse-Terre, Fort-de-France, Cayenne and Saint-Denis;
- public authorities are preparing or have already begun FTTH rollout projects, including the Reunion prefecture and region which have drafted an ambitious "strategy for consistent digital regional development" (SCORAN)[20], and the city of Sainte-Anne in Guadeloupe.

5.3. Fixed and mobile number portability

The introduction of a mobile number portability scheme has had a real impact on the information systems of all overseas operators. It demands substantial efforts to automate inter-operator communications, to verify the eligibility of the number porting requests, and to perform a complete review of existing processes.

Operators in French overseas markets have approved a number retention process for customers of a maximum three working days, and which will come into effect in July 2012.

The shorter process has also gone hand in hand with several other developments, such as the implementation of an operator identity statement, or RIO (*Relevé d'Identité Opérateur*) in the departments of Guadeloupe, Martinique and Guyana, to help improve authentication of the undertaking responsible for the number, and to enable more reliable interaction between operators and access to a mobile portability voice server through a single number: 3179[16] or #3179#[17]. The information provided by this voice server will also be reviewed and the information made available to subscribers increased.

15 - SCORAN (Stratégie de cohérence régionale d'aménagement numérique): the main objectives set for public-initiatives aimed at stimulating fixed and mobile broadband and ultra-fast broadband rollouts, established by a regional decision-making body. It details the technical specifications and scale of the rollout that will then be used to draft a regional digital development blueprint (cf. Prime Minister's Circular Letter of 31 July 2009)

16 - SVI: interactive voice service

17 - USSD: Unstructured Supplementary Service Data. In GSM technology, a communication procedure that allows a mobile phone to exchange information with a server in real time, without it being logged as a text message. Used for instance for instant messaging, payment or tracking consumption.

5.4. Undersea cables

As an adjunct to its market analysis work on the supply of undersea cable capacity, in 2011 ARCEP devoted efforts to monitoring the activities of undersea cable operators, and particularly the deployment of new infrastructure and changes to the rate schedules of operators servicing the different overseas markets, i.e. Antilles, Guyana, Reunion, Mayotte.

It thereby helped set the technical and economic criteria for connecting Mayotte to the global network via the LION 2 undersea cable by lending its expertise to the various Government departments managing the dossier.

The Authority also devoted itself to the project of revising the rate schedule of the public service delegation for the Guadeloupe region, which operates the Global Caribbean Network cable that connects the Antilles islands.

Also, from a more general perspective, to ensure the supply of international connectivity to all overseas departments, ARCEP keeps a close watch over the terms extended to third-party operators for accessing the undersea cables of the Antilles, Guyana and the Indian Ocean.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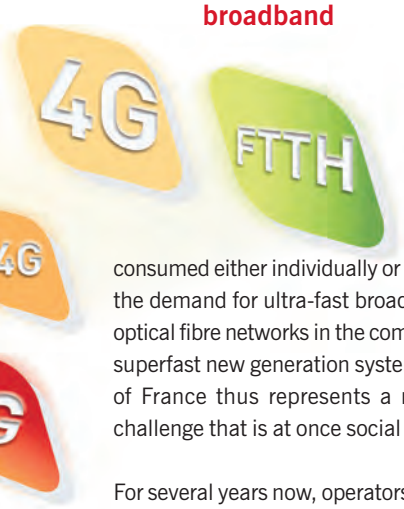
Making the transition to fixed and mobile ultra high-speed access

1. Status of ultra-fast broadband rollouts

1.1. Making the transition from broadband to ultra-fast broadband



The surge in internet traffic, the development of audiovisual content and the emergence of new services that are consumed either individually or collectively will drive the demand for ultra-fast broadband solutions over optical fibre networks in the coming years. Deploying superfast new generation systems across the whole of France thus represents a major development challenge that is at once social and economic.

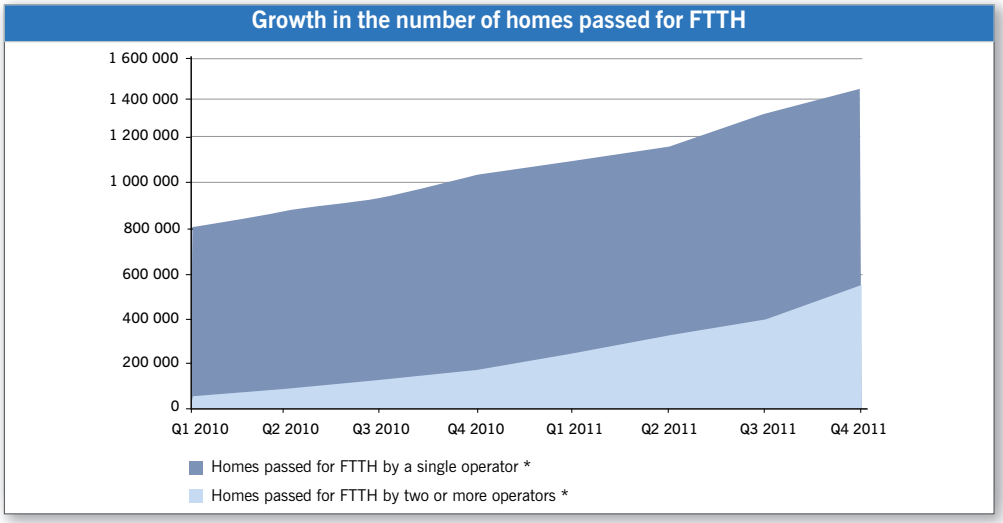
For several years now, operators have been engaged in large-scale rollouts of fibre to the home (FTTH) networks in the country's biggest cities. Other technologies will also supply superfast access – which is defined as a download speed over 50 Mbps and an upload speed of more than 5 Mbps – notably cable networks that are currently being upgraded. These upgrades involve deploying fibre in the horizontal portion of the networks while keeping coaxial cable in the last metres. Upgrades are also being made to the legacy copper network that will enable the introduction of technologies such as VDSL2.

Meanwhile, wireless networks such as mobile 4G systems and those using WiMAX or Wi-Fi are currently able to achieve bitrates of around 10 Mbps.

1.2. The ultra-fast broadband observatory

In 2011, the number of premises passed for FTTH increased by 38%: up to 1,475,000 by year-end. Thirty nine percent of these premises are passed by at least two operators, thanks to the use of a passive access solution at the concentration point[1] – compared to 15% in 2010.

1 - Homes that are considered to be passed for FTTH are those which require only connection of the last metres from the optical branching unit to be supplied by an operator for the home's occupant to have access to an FTTH service. To ensure non-discrimination between the operators, regulation allows three months between the construction of the network and the moment when an operator can actually market the service. At least one operator must have connected the concentration point to the optical branching unit where it activates its connections.



Source: ARCEP
(*) using a passive solution at a concentration point

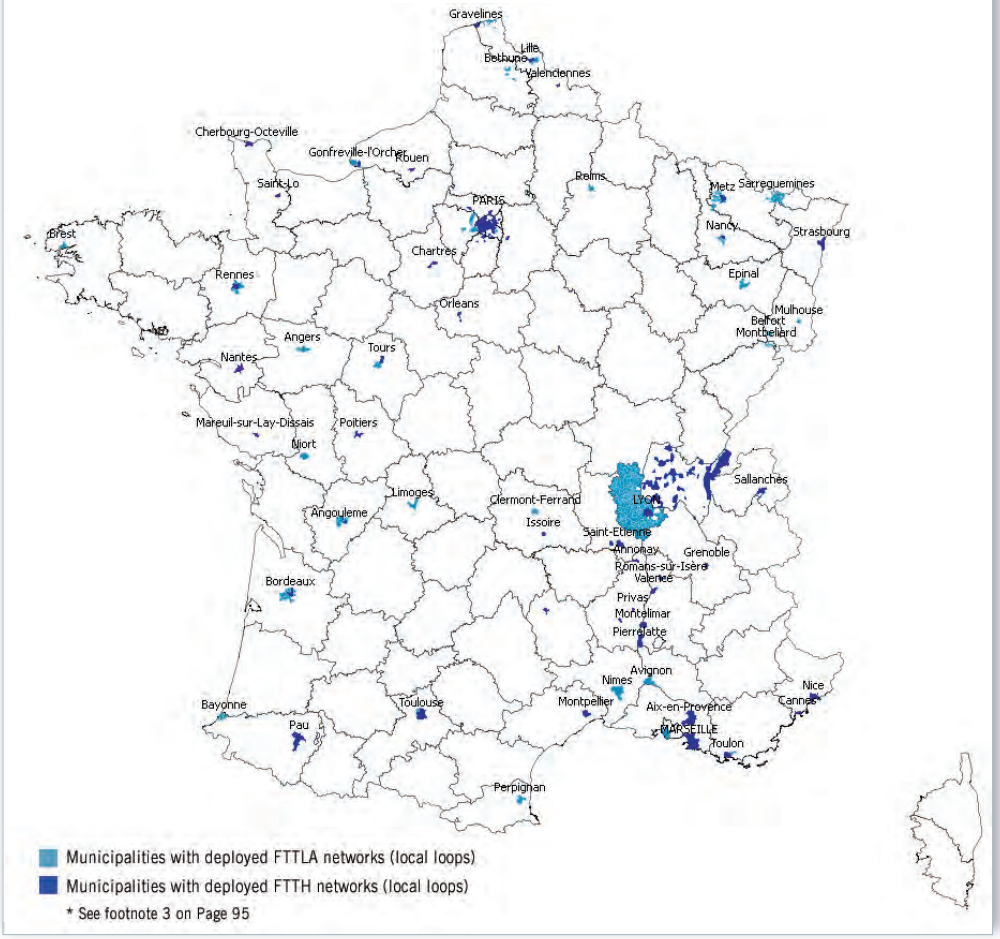
88.2% of these rollouts cover municipalities located in very high-density areas[2] – a figure that remains unchanged from 2010. The vast majority of deployments outside of very high-density areas are the result of public-initiative network projects.

This progress in FTTH rollouts has gone hand in hand with the heavy use of existing civil engineering, and particularly France Telecom's: the linear length of civil engineering leased from the incumbent carrier in fact doubled from the year before, increasing from 2,690 km to 6,050 km.

Meanwhile cable networks, and particularly the Numericable system, now covers around 4,300,000 homes with ultra-fast broadband using an optical fibre network with coaxial cable in the last metres. Seventy one percent of these homes are located in a very high-density area. Several operators employ the Numericable network via activated solutions.

2 - List of the 148 municipalities defined by ARCEP in its Decision No. 2009-1106 of 22 December 2009 stipulating, pursuant to CPCE Articles L. 34-8 and L. 34-8-3, the rules governing access to optical fibre ultra-fast broadband lines, and those instances where the concentration point can be located on private property.

Fixed ultra-fast broadband in France



1.3. FTTH public-initiative network projects

In accordance with the terms set by Article L. 1425 of Local and regional collectivity code, CGCT (*Code général des collectivités territoriales*), local authorities are permitted to establish and operate FTTH electronic communications infrastructure and networks in their district.

Local authorities' projects can be regional, departmental[3] or inter-departmental in scale. The authority backing the project may be a region, a department or a group of local authorities working together as part of a digital regional development blueprint (*schéma directeur territorial d'aménagement numérique or SDTAN*), as is the case with the Auvergne region, the Manche Numérique joint union and the department of the Loiret. Another example, the Hauts-de-Seine department awarded the firm Sequalum a public contract to deploy an FTTH network that covers the department's entire population.

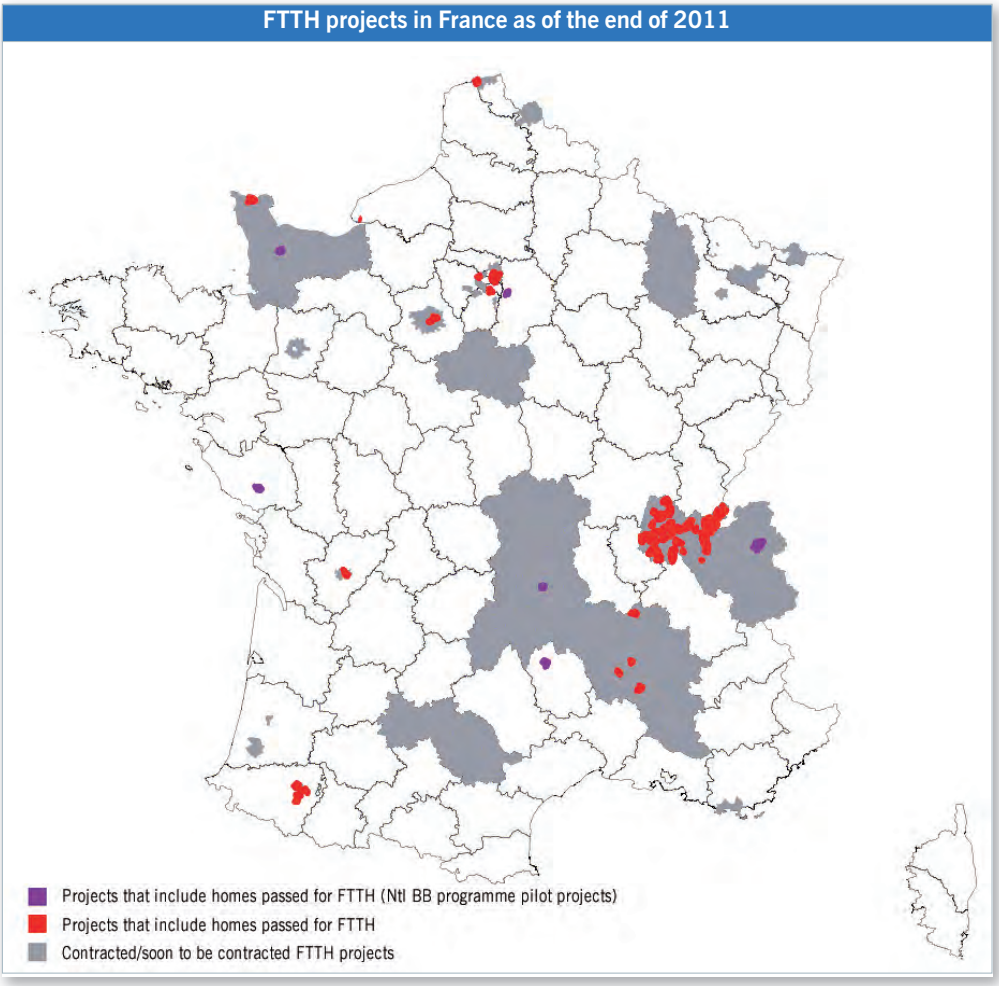
Projects can also be instigated by municipalities or a public inter-departmental cooperative establishment (*Etablissement Public de Coopération Inter-départementale or EPCI*), a community of municipalities or combined district councils. Here again, a number of FTTH rollout schemes are in the

3 - France is divided into 101 departments, which are roughly comparable to small provinces.

planning stage or already underway in locations such as the greater Laval area, and the combined district of Plateau de Saclay, both of which have awarded their public service contract to France Telecom. Also worth citing is the combined district of Coeur Côte Fleurie (Deauville-Trouville) which awarded a public service contract to the firm Tutor. During a plenary meeting of GRACO in December 2011, ARCEP announced that it had inventoried 31 such projects in all, representing a total 1.5 million premises scheduled to be passed for FTTH. As of 31 December 2011, 183,500 premises had been passed thanks to public initiative networks, or 12.4% of the national total (depicted in red and purple on the map below).

The following map illustrates all of the FTTH projects that have already been or an in the process of being contracted out (in grey) and those which have already passed homes/businesses for FTTH (in red). Homes/businesses passed under the national broadband programme's six pilot projects are depicted in purple.

FTTH projects in France as of the end of 2011



Several more projects from local authorities are currently in the planning stage, but no call for proposal has been issued, so they are not depicted on the map.

The overseas departments are also not yet displayed on the map as ultra-fast broadband rollouts there are still only nascent. An FTTH deployment has, however, begun in the city of Sainte-Anne in Guadeloupe.

Editorial by Jean-Ludovic Silicani

There is no single model for FTTH rollouts. The main models we see in today's marketplace include the construction a national publicly-funded network, like in Australia; the creation of a private national consortium charged by the operators with managing deployments; a "municipal" model where only city authorities are involved, as is the case in several Scandinavian countries and, lastly, a model wherein competition alone guides operators' rollout choices – the United States being a prime example. These models cover a wide array of approaches, from strongly centralised under government control to fully liberalised.

Each of these models has its own set of advantages and disadvantages, but none has taken the median path between competition and monopoly sought by public authorities (Parliament, Government, regulator) in France: working to stimulate competition – the guarantor of economic efficiency and innovation that is beneficial to businesses and consumers – but also to enabling a high degree of FTTH network sharing, and giving operators the ability to pool their investments to lighten the financial burden of a progressive nationwide rollout.

(Weekly newsletter of 17 June 2011)

2. Providing access to France Telecom civil engineering

France Telecom's obligation to provide access to its civil engineering for FTTx[4] network rollouts is stipulated in the market analysis decision of 24 July 2008[5]. It resulted in the incumbent carrier's introduction of a wholesale access solution for accessing only the local loop's underground ducts. As the chief aim of this solution was to develop a mesh of residential FTTH rollouts, at ARCEP's request France Telecom later expanded its offer to include a dedicated agreement for connecting business customers, which involves bespoke processes but using identical engineering rules.

The new analysis decision on market 4[6], adopted on 14 June 2011[7], by and large confirmed the existing framework, but imposed several changes to the existing scheme for accessing civil engineering to take into account FTTH network sharing and the increased scope of the infrastructures concerned, which now include France Telecom's overhead systems.

2.1. Changes to the terms governing access to ducts

The analysis decision on market 4 of 14 June 2011 demands, first, that France Telecom introduce engineering rules that are consistent with the regulatory framework governing schemes for sharing the last metres of FTTH networks, regardless of the rollout location – i.e. very high-density or more sparsely populated areas.

The regulatory framework is in fact built around three different rollout situations for operators, depending on whether it concerns the deployment of a shared or unshared network, an unshared network for connecting to a concentration point, or a system that is not part of a network sharing scheme, e.g. for

4 - FTTx (fibre to the...) consists of bringing optical fibre as close to end users as possible, to increase quality of service and especially connection speeds. The "x" can refer to the neighbourhood, (FTTN: Fibre to the Neighbourhood) the building (FTTB), the home (FTTH) or the last amplifier before the customer's premises (FTTLA).

5 - ARCEP Decision No. 2008-0835 of 24 July 2008 on the definition of the relevant wholesale market for physical network infrastructure access at a fixed location, the designation of the operator with significant power in this market and the obligations imposed on it as a result

6 - Wholesale (physical) network infrastructure access at a fixed location

7 - This Decision No. 2011-0668 is explored in greater detail in Part 3 Chapter II (cf. pages 167 to 169)

connecting business customers or network elements. The new regulations governing access to civil engineering must satisfy two objectives:

- **when deploying a shared network**, the aim is to implement regulation that enables optical fibre network rollouts with minimum restrictions;
- **when performing other types of rollout**, a distinction needs to be made between networks for connecting concentration points and other types of rollouts, such as those performed to connect business customers or network elements.
  - The goal in the first instance is to enable operators who market their services thanks to shared network schemes to connect to concentration points as efficiently as possible, using technology-agnostic solutions. Here, France Telecom has been asked to make changes to the 1+1 occupancy rule (an operator must leave in its wake as much room as it has occupied) so that restrictions on the use of civil engineering can be adapted once available resources no longer constitute an obstacle to deployments;
  - In the second instances, which constitute reasonable requests to access civil engineering, in terms of the use of resources priority is to given to shared network rollouts or rollouts for connecting concentration points. As a result, engineering rules may create more stringent restrictions on these other requirements, particularly regarding the spaces that must be systematically maintained.

The new regulations also concern lightening the load on civil engineering. Whereas offloading charges had previously been billed to operators that encountered load issues during their rollouts, it is France Telecom which is now been asked to shoulder these costs under certain circumstances, defined by the market analysis decision as instances of "*objective excess load on the civil engineering*". This refers chiefly to a situation where the operator deploys a shared network or, under certain circumstances, when civil engineering resources are unable to satisfy the needs of several operators deploying parallel networks, with a view to connecting to concentration points.

The market analysis decision provides for a six-month window for its actual implementation, which is to occur once the work being done with operators in multilateral meetings hosted by ARCEP has been completed. These multilateral efforts, which began in summer 2011, confirmed that the planned changes would have a significant impact. All of the operators thereby requested more time to be able to conduct an in-depth analysis of the operational impact that the new engineering rules would have on their deployments, and of the rules governing their implementation, particularly those relating to their sub-contractors. This work on the new engineering rules and their implementation are due to be officially complete before summer 2012.

2.2. Network expansion through overhead deployments

- AWhen performing the latest analysis of market 4, which covers 2011 to 2014, the Authority considered overhead civil engineering infrastructures to constitute an indispensible complement to underground civil engineering infrastructure, to ensure the continuous deployment of optical fibre cables within the local loop. This overhead infrastructure has therefore been incorporated into the wholesale solution that France Telecom is obligated to make available. The Decision of 14 June 2011 thus stipulates that France Telecom must now grant requests for access to its underground but also its overhead (power poles, service poles, on building facades) civil engineering to allow competing operators to deploy their own fibre local loop networks under transparent, non-discriminatory conditions and at a cost-based price.

Access to overhead infrastructure is subject to its own set of engineering rules resulting from the inevitable restrictions created by existing networks, and from what each structural element can sustain in the deployment of new optical fibre cables. It therefore appears that, in their current state, existing overhead supports will not all be capable of carrying several optical fibre networks. This is why reasonable requests for access to overhead infrastructure will be granted in priority to a shared network rollout between several operators.

A first version of the France Telecom offer for accessing its overhead infrastructure is due to be published by mid-2012. It will be the follow-up to the trial version of this solution that France Telecom has been offering alternative operators since 2011.

- Other overhead infrastructures could be employed for the deployment of new optical local loops. This would include the use of electricity networks. As a result, certain supports, referred to as "common supports" host several types of network: cable, electrical, legacy telephone and, soon, optical fibre as well. They are typically owned by local authorities or groups of local authorities, which together contract the sale of the public electrical distribution service franchise – most of which have been awarded to ERDF in France. These supports are not covered directly by the regulation governing market 4.

To be able to access these additional supports and deploy their own fibre optic cables, operators will therefore need to establish agreements directly with the owners and administrators in question. If it is the responsibility of the local authorities that control the franchise and/or ERDF to specify the rules for using and sharing these resources between operators, should the need arise ARCEP will work to encourage consistency between the rules that apply to these supports and those that apply to France Telecom supports – these latter being directly subject to restrictions contained in the regulation governing market 4. In particular, because France Telecom is present on a significant number of shared supports, the Authority will work to ensure that the incumbent carrier does not use the copper local loop's cross-arms to deploy its own optical fibre cables unless it also allows other operators to access them.

3. Implementing FTTH network sharing

The Law on modernising the economy of 4 August 2008[8] sets the legal framework for regulating the last mile of fibre networks. It instils the principle of having operators share the last metres of the networks, thereby reducing the amount of work that needs to be done on the private property, while ensuring that property owners and tenants can choose their operator freely. It defines regulations aimed at facilitating fibre deployments on private property and pre-equipping new buildings. And, finally, it gives ARCEP the responsibility of implementing the network sharing scheme, and allows the Authority to define those instances when the concentration point – i.e. the point where third-party operators can access the indoor network deployed by the operator hired to do so by the property owner(s) – can be located on private property.

Since the adoption of the Law on modernising the economy, greater detail has been steadily brought to the regulatory framework to furnish operators with the financial and legal clarity they need to invest, and particularly with a view to:

- enabling efficient rollouts and creating incentives for private investment;
- sustaining the degree of competition achieved on the copper network thanks to the development of unbundling, and preventing the creation of a *de facto* monopoly;
- satisfying the growing demand for content and enabling innovation and the development of new applications.

ARCEP has therefore encouraged the principle of infrastructure-based competition up to a certain point, beyond which it is no longer reasonable to duplicate the network, namely the concentration

8 - Law No. 2008-776 of 4 August 2008 on modernising the economy, published in the JO of 5 August 2008

point. In some parts of the country it is possible to have facilities-based competition up to the customer premises, in other words in those areas where it is economically viable for several operators to deploy their own optical fibre network to, or close to, customer premises. These are referred to as very high-density areas[9]. However, outside of the largest cities where the population density is at its highest it is much more difficult, if not impossible, economically speaking, for all operators to perform fibre-to-the-premises rollouts. ARCEP therefore adopted a set of decisions and recommendations governing the deployment of the new optical fibre local loop, with elements that are specific to very high-density areas and other elements that apply only outside these areas

3.1. FTTH network rollouts in very high-density areas

a) The main guiding principles

After having consulted with the Competition Authority and the European Commission, ARCEP adopted a decision[10] and a recommendation[11] on 22 December 2009. The decision, which pertains primarily to very high-density areas in France but also contains certain provisions that apply nationwide, was approved by the Minister responsible for electronic communications[12]. It defines very high-density areas as being heavily populated areas where it is economically viable, in a large percentage of that area, for several operators to deploy their own optical networks to, or close to, the customer premises. This definition applies to 148 municipalities in France.

The decision contains the following obligations that apply nationwide:

- provide an offer of passive access to the concentration point, which is a guarantor of competition and innovation;
- all building operators must publish an access offer, specifying the terms governing installation, and access to the optical fibre lines and associated resources;
- the building operator must provide prior information on its planned indoor fibre deployments and concentration points;
- the pricing applied to this access must be reasonable, non-discriminatory, relevant and efficient.

The decision also contains the following stipulations for the country's very high-density areas:

- location of the concentration point: it can be situated on private property when the building is connected to a visitable public sewage network, or when the building has more than 12 residential or office units;
- the building operator must grant all reasonable requests for a dedicated fibre or cross-connect system which are submitted prior to the fibre installation in the building.

The architecture deployed by the building operator therefore takes into account reasonable access requests from other operators, particularly those made before the buildings have been passed for fibre. These requests are generally made during prior consultations in the shape of an application form for third-party operators that contains the list of the municipalities in question, the corresponding maximum investment, along with questions that allow the operators to stipulate their requests and specific requirements – such as a dedicated fibre, cross-connect space, etc. Depending on how many operators request a dedicated fibre during this consultation process, the deployed system will be either single fibre or multi-fibre, as illustrated in the following diagram.

In very high-density areas, then, the structural profitability of rollout projects and the regulatory framework allow each operator to have a dedicated

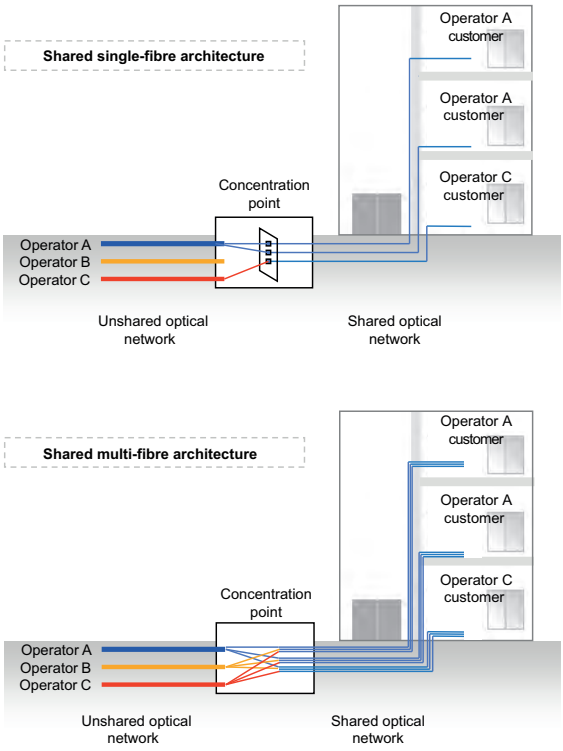
9 - The 148 municipalities considered as very high-density are listed here: http://www.arcep.fr/fileadmin/reprise/dossiers/fibre/annexe-09-1106-listes-communes-ztd.pdf

10 - ARCEP Decision No. 2009-1106 of 22 December 20099

11 - Recommendation on the rules for accessing optical fibre ultra-fast broadband electronic communication lines

12 - This decision was approved by an Order dated 15 January 2010, published in the JO of 17 January 2010

Fibre sharing: single and multi-fibre architectures



network end-to-end based on its configuration of choice (point-to-point or point-to-multipoint).

This model guarantees a state of lasting competition between the operators.

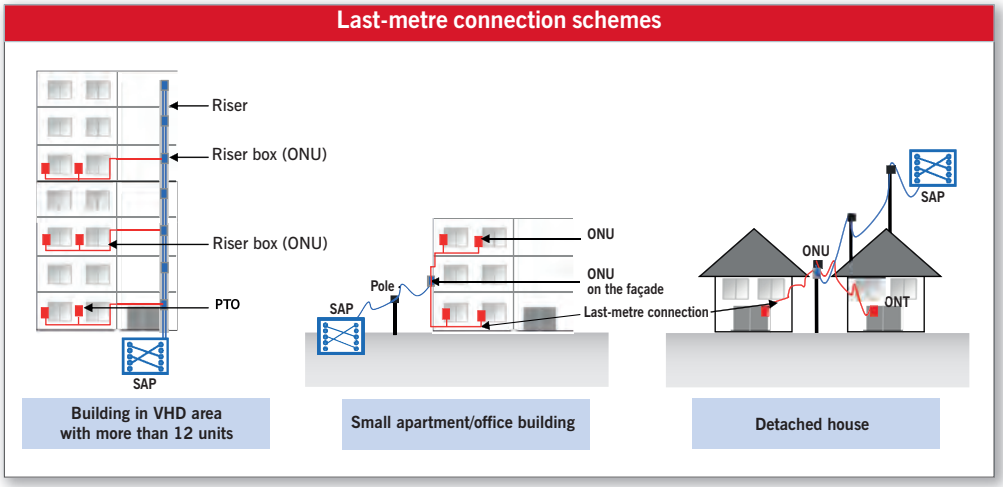
b) Performing and financing last metre rollouts

- In July 2011 ARCEP issued two decisions on disputes that it was called upon to settle on 25 March and 1 April 2011[13], respectively. The disputes were between France Telecom and Free Infrastructure – each of which requested that ARCEP demand certain changes be made to the other party's FTTH access and network sharing solutions in very high-density areas.

For both carriers, these decisions specify the terms governing the application of the existing regulatory framework, particularly for branching units (riser box or cable) on the floors of apartment/office buildings and the pricing terms and conditions of network-sharing offers.

Deploying a branching unit involves installing an optical network unit (ONU) inside the customer premises and connecting it to a riser (box or cable) which is generally installed on the same floor. In most instances, this operation takes place when a customer subscribes to an ultra-fast broadband service after the indoor cabling has been performed in the building.

13 - ARCEP Decision No. 2011-0846 of 21 July 2011 and ARCEP Decision No. 2011-0893 of 26 July 2011



- The requests made by Free Infrastructure and France Telecom concerned the terms governing the installation of this connection to the riser. ARCEP concluded that, given the configuration of each scenario and depending on the choices made by the third-party operator to which a customer has subscribed to receive an ultra-fast broadband service, the building operator – i.e. the operator who installed the internal cabling in the building – must:
  - either ensure the third-party operator's customer's connection to the branching unit (riser), as requested by Free Infrastructure[14];
  - or allow the third-party operator to install its customer's connection to the branching unit (riser), as requested by France Telecom[15].

  In its Decision No. 2011-0846, ARCEP partially grants the request submitted by Free Infrastructure concerning the prices charged by France Telecom for access to FTTH lines in very high-density areas in France, by ordering a limited adjustment to the prices in the France Telecom offer, and in accordance with the principles of objectivity, relevance, non-discrimination and efficiency.

- Lastly, through an order dated 19 January 2012, the Paris Court of Appeals rejected France Telecom's appeal of a decision issued by ARCEP on 16 November 2010 concerning a dispute between Bouygues Telecom and France Telecom[16]. The dispute was over the France Telecom offer for accessing the last metres of optical fibre lines (i.e. installed indoors) and purchased by Bouygues Telecom in very high-density areas in France.

Second, the Court maintained that ARCEP could require France Telecom to agree to a posteriori co-financing of its network which would lessen the carrier's property rights, provided it was justified by public economics and the incumbent carrier receive fair financial compensation in exchange. On the matter of sharing the cost of "branching units", the Court confirmed that it was essential that the process not result in a barrier to entry for a new entrant operator with a small market share, and that the cost-sharing scheme imposed by ARCEP (i.e. the operator providing the service is to assume 90% of the costs) adequately reconciles the interests of the different parties.

The rules of application for the regulatory framework governing co-financing offers and for deploying branching units have thus been validated.

14 - ARCEP Decision No. 2011-0893 of 26 July 2011
15 - ARCEP Decision No. 2011-0846 of 21 July 2011
16 - ARCEP Decision No. 2010-1232 of 16 November 2010 on the dispute between Bouygues Telecom and France Telecom

c) ARCEP's information campaigns aimed at property owners, property managers and lessors

For users to have access to FTTH, the deployment of horizontal networks in the streets must be extended to the customer's premises. This stage in the rollout requires an agreement between (co) property owners and an operator. Under the terms of this agreement, the operator will be responsible for performing the work that needs to be done on the private property. This operator, referred to as the "building operator", will be chosen either by the (co) property owners during a general assembly or by the sole owner of the building, and is separate from the subsequent choice of "commercial vendor" by each of the end users of the deployed network.

The support work being done by ARCEP began with a practical guide[17] for property owners, lessors, tenants and trustees, of which an updated version was published in May 2011. The aim of this handbook is to provide the interested parties with clear and instructive information on the terms governing FTTH rollouts in buildings – e.g. role of the building operator, terms governing its work on the property, sharing the installed network, etc. This same objective to provide stakeholders with information led to ARCEP's production of a sample contract[18] between (co) property owners and building operators in 2009, which was updated in 2011.

The issues surrounding FTTH deployments in new buildings are not covered explicitly in this pedagogical material, but are nonetheless being monitored by ARCEP departments in an ongoing bid to raise awareness amongst stakeholders and provide them with (especially technical) information that will help further optical fibre rollouts.

3.2. The case of buildings in very high-density areas with fewer than 12 units

a) Background

Decision No. 2009-1106[19] specifies that the concentration point can be located inside buildings in very high-density areas if they are served by the visitable tunnel of a public sewage network or if they have at least 12 units. The decision does not set any specific regulation for buildings with fewer than 12 units.

Because operators had not reached a consensus on common operational solutions at the start of 2011, ARCEP considered it necessary to specify the terms governing optical fibre network rollouts in small shared buildings and detached houses in very high-density areas, so that operators could perform rollouts across their entirety of their target areas. These terms were set out in a recommendation published on 14 June 2011.

Taking account of the disparities that exist in these very-high areas allowed the Authority to ascertain that it would be necessary to address the question of buildings with fewer than 12 units according to the "pockets" in which they are located, and so defining the regulatory framework using not a building-based approach but rather one based on residential pockets or sub-areas.

An analysis of INSEE (National Institute for Statistics and Economic Studies) statistical data on the geographical distribution of housing made it possible to pinpoint more sparsely populated pockets inside of very high-density areas, and particularly ones containing a large number of small buildings where reasonable technical and economic conditions for supplying access could only be achieved through a high degree of network sharing. These pockets are referred to as "low-density pockets" and its is the

17 - This guidebook (in French) can be downloaded at: http://www.arcep.fr/fileadmin/reprise/dossiers/fibre/guide-fibre-immeubles-2011.pdf
18 - This sample agreement (in French) can be downloaded at: http://www.arcep.fr/fileadmin/reprise/dossiers/fibre/conven
19 - ARCEP Decision No. 2009-1106 of 22 December 2009

IRIS system that is used for defining the pockets that make up the mesh.

On first analysis, to characterise the IRIS[20] units in low-density pockets, the recommendation sets the thresholds for density and for the percentage of units in individual buildings.

b) Putting actions into effect and work performed by the technical advisory committee

The recommendation does not call into question the vertical and horizontal rollouts performed prior to its publication, in other words since Decision No. 2009-1106 came into effect. It also provides for a certain flexibility in the way the borders of low-density pockets are treated. ARCEP has chosen a pragmatic approach by creating a technical advisory committed comprised of operators, representatives of the affected municipalities and the CETE[21] of western France, to define the perimeter of low-density pockets. The committee completed its work in late 2011 with the publication of a map of low-density pockets, classifying the IRIS units according to two types of architecture:

- first, the IRIS units covered by a network configuration containing concentration points located close to the buildings, or at the curb. The fact that networks have been deployed in these IRIS units proves that the economic equation there is such that operators can rely on a lower degree of infrastructure sharing in these locations. In accordance with the recommendation, these areas are referred to as IRIS units outside low-density pockets.
- second, IRIS units that are covered by a network configuration typical of lower density areas, with complete and consistent concentration points serving the entire service area containing at least 300 residential or business premises. These IRIS are qualified as low-density pockets.

c) Work on new access offers in very high-density areas

Once the regulatory uncertainty weighing on the terms of access for small buildings had been lifted, ARCEP invited operators to publish access offers for all types of housing in very high-density areas, and has been working closely with them since 2011 on drafting these offers. In January 2012 France Telecom thus published its access offers for concentration points inside buildings with more than 12 units; outdoor concentration points serving buildings outside low-density pockets with fewer than 12 units and for outdoor concentration points serving all of the homes in low-density pockets.

3.3. Onset of FTTH rollouts in more sparsely populated areas

a) Finalising the regulatory framework for rollouts outside of very high-density areas

Outside of very high-density areas, fibre-to-the-home rollouts are subject to a different set of economic and technical constraints that demand a greater degree of infrastructure-sharing. Because of the low population density in these areas, more extensive sharing schemes will, first, make it possible to provide third-party operators with access to the concentration point under reasonable economic conditions and, second, to eventually achieve complete and consistent optical fibre coverage nationwide.

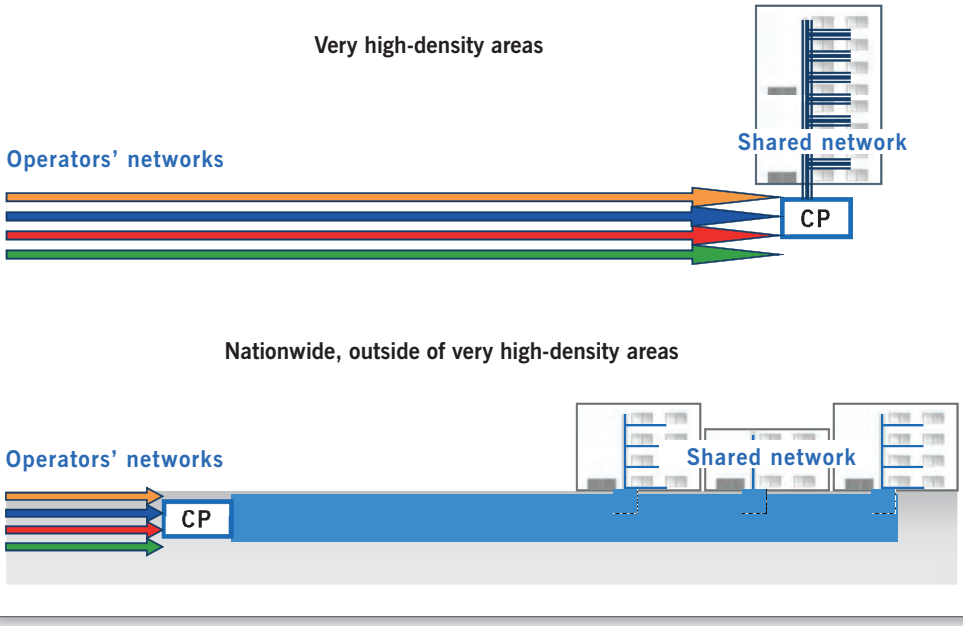
The Decision of 14 December 2010[22] concerning FTTH rollouts outside of very high-density areas comes as the result of work that was performed through GRACO in concert with the parties involved in these rollouts, notably local authorities. It takes into account the opinions of the Competition Authority and the European Commission which helped amend and complete the draft version.

20 - IRIS (Ilots regroupés pour des indicateurs statistiques) = aggregated units for statistical information. A breakdown of neighbouring municipalities with a population of less than 5,000 established by the INSEE for performing censuses with a view to mapping out the perimeter for the distribution of inter-city data. The IRIS units group together relatively homogeneous types of housing.

21 - CETE = Centre d'études techniques de l'équipement (Centre for technical design and planning): decentralised State-run departments of the Ministry of Ecology, Energy, Sustainable development and Oceans, providing infrastructure-related engineering solutions.

22 - Decision No. 2010-1312 of 14 December 2010 specifying the terms for accessing optical fibre ultra-fast broadband electronic communication lines nationwide, with the exception of very high-density areas.

Network-sharing schemes according to population density



Approved on 10 January 2011, like Decision No. 2009-1106 (see above) this decision applies to all building operators, whether they are private sector operators or operators of public-initiative networks.

The Decision contains the following provisions which apply nationwide, except in very high-density areas:

- the concentration point must serve at least 1,000 homes or offices, to reduce rollout costs while preserving a lasting state of competition and consumers' freedom to choose their operator;
- allowance for an exception in instances where the building operator supplies a qualified distant connection solution – in which case the concentration point can be smaller, provided it serves at least 300 residential or office units;
- the building operator must define the concentration point's service area over a broader geographical expanse, and must partition off this grid into potential concentration point service areas on behalf of other undertakings. The aim here is to avoid having several operators perform spontaneous and unilateral rollouts that result in lasting dead zones, or in the existence of inefficient overlapping rollouts in the concentration points' service areas.

The building operator who installs the concentration point must deploy a horizontal network, within two to five years, which runs from the concentration point to the immediate vicinity of the residences in the service area, and scaled in such a way as to be capable of connecting all residential and office buildings.

b) Publication of access offers and co-financing agreements

Pursuant to the ARCEP Decision of 14 December 2010[23], in July 2011 France Telecom published its offer for accessing optical fibre lines outside of very

23 - Decision No. 2010-1312 of 14 December 2010 specifying the terms for accessing optical fibre ultra-fast broadband electronic communication lines nationwide, with the exception of very high-density areas.

high-density areas. This offer sets the terms of access and particularly the rules governing other operators' co-investment in these new optical local loops.

SFR and Free Infrastructure also published their wholesale solutions – in September and October 2011, respectively – for allowing other undertakings from both the public and private sector to access their networks.

These offers contain the following terms for co-investment:

- **sales method:** the solutions offer indefeasible rights of use, sold in blocks – of which several can be acquired simultaneously – of around 5% of the constructed or to be constructed lines. This model is more beneficial to third-party operators with smaller investment capabilities than the model designed for very high-density areas – under which costs are shared equally by the co-investors[24] – and than the coverage area-based model where an operator can only subscribe to all of the lines;
- **duration of rights:** the indefeasible rights of use described in these offers are generally awarded for a period of 20 to 30 years, and carry terms of renewal that depend on the amount invested and on the operational terms being intact at the end of that period, notably in cases of major maintenance or upgrades.

On 21 July 2011, France Telecom and Free announced, first, that they had signed a co-investment deal for around 1,300 municipalities outside of very high-density areas, representing some 5 million homes, and that work would begin before the end of 2011. This agreement was followed by a second one between France Telecom and SFR on 15 November 2011, which concerned optical fibre deployments to 11 million homes located in some 3,500 municipalities across France outside of very high-density areas, to be performed by 2020 at the latest.

In addition, the first offers for accessing public-initiative networks have also been published, notably those by the administrators for the Pays Chartrain region (Eure-et-Loir department), Laval THD[25] (Mayenne department) and the combined district council of Plateau de Saclay in the Seine-et-Marne department.

Lastly, on 21 March 2012, the *Manche numérique* joint union and France Telecom signed a co-financing agreement whereby France Telecom has committed – in response to a co-financing offer made by *Manche numérique* – to buy blocks of rights of use on the networks that Manche numérique has deployed in Saint-Lô and Cherbourg.

Excerpt from a talk by ARCEP Executive Board member, Jérôme Coutant

The challenge in France comes in particular from the fact that, because of our geography and our history, it can be more expense to deploy access networks here than in other countries. We are not only one of the largest countries in the European Union but also one with among the lowest population densities, due to having no less than six mountain ranges! […]

The question of choosing between improving broadband in the short term and deploying ultra-fast broadband is still a sensitive one in certain parts of the country. ARCEP has not wavered in its conviction that we need to deploy optical fibre into the last mile of the network as quickly as possible. Regulating unbundling of the copper sub-loop could be an intermediate step, and we have designed it so that it can be implemented in an identical fashion on millions of connections in only a few years. But we need to keep our eye on the ultimate goal of FTTH rollouts as it means building a network that will be used for many decades to come, and possibly even for the next century.

Overall status of public-initiative networks, Deauville, 12 March 2012

24 - The differences in the costs shouldered by the co-investors reflect only the cost of the specific equipment requested by certain co-investing operators, or possibly a risk premium

25 - THD = Très haut débit, i.e. ultra-fast broadband

These shared investment schemes will help build a wholesale market in these areas, which will stimulate competition in a way that is beneficial to consumers.

c) Work in progress

ARCEP continues to work in tandem with stakeholders on defining some of the modalities for implementing the regulatory framework.

• Information systems

Very early on in the process, ARCEP identified the vital role that information systems would play in FTTH network rollouts, and made standardising the file sharing processes and formats for operators' network-sharing schemes a priority. A dedicated working group is already engaged in designing these processes and interfaces, in accordance with the regulatory framework. The first documents to emerge from these efforts were published on the ARCEP website in spring 2011, to allow all stakeholders to employ compatible processes and formats.

A first seminar for exchanging information on FTTH network sharing was held in October 2011. It provided an opportunity for the working group devoted to designing the data sharing processes and formats for rollouts outside very high-density areas to share their work with interested local authorities. It also revealed a growing need for support. ARCEP will therefore ensure that the work performed by this group is widely disseminated, to enable local authorities to create robust and reliable information systems. Regular meetings for sharing work and discussing the latest developments will be held between members of the group and interested local authorities.

• Rules governing the last metres to detached houses and small buildings

Lastly, in the second half of 2011 ARCEP investigated the technical, legal and financial methods and terms for deploying the last metres of FTTH networks to detached houses and small buildings.

The resulting report proposed a set of different connection configurations (underground, overhead, façade) along with an analysis of the associated costs, suggested technical solutions and ways to optimise rollout processes. It also underscored the legal issues that arise in the planning and financing of host infrastructure and lines in the various situations (single or shared dwelling, old or new building). ARCEP has continued its work on this topic into 2012, in tandem with all stakeholders and particularly operators and local authorities. To this end, on 13 April 2012, the Authority launched two public consultations on implementing the obligation to complete FTTH network rollouts to isolated residences, and on the legal issues raised by the deployment of the last metres of FTTH networks.

4. Advent of ultra high-speed mobile (4G)

Mobile communication services are currently on the same development path as fixed services, in other words an accelerated shift to high-speed and ultra high-speed services. More and more, mobile access is becoming an extension of fixed broadband and superfast broadband services – providing users, both consumers and businesses, with continuous and ubiquitous individual access to internet services over a broad range of devices, when outside the home or office. These services should soon be available anywhere, anytime, offering the same ease of use and wealth of applications as fixed services at home.

The success of the mobile internet is altering mobile consumption habits as a new generation of services, such as internet access and multimedia content, is gradually being added to existing voice and messaging services. It is also opening up new vistas in the area of entertainment, in how users consume digital content and access culture. The new devices that are available in the marketplace, and particularly smartphones and tablets, enable access to richer multimedia content and alter users' behaviour as they consume more and more data services.

The development of mobile access is also having a significant impact on the economy. It is helping to stimulate economic growth, especially for carriers and manufacturers. It is contributing to sustainable regional development by directly or indirectly helping to create jobs and improve businesses' competitiveness and productivity.

The new mobile technologies that will make it possible to deliver performances that match market demand already exist, and particularly LTE, or Long Term Evolution. These technologies supply connection speeds of several dozen Mbps, and even in excess of 100 Mbps thanks to the use of broad channels of up to 20 MHz, which are non existent with 3G, and which offer latency that is low enough to enable the development of high-speed interactive applications.

To help usher in these new-generation technologies and handle the surge in data traffic, two new frequency bands have been identified in Europe and, in France, are being allocated by ARCEP:

- the 790 – 862 MHz frequency band (referred to as the "800 MHz" band) from the digital dividend resulting from the switchover from analogue to terrestrial broadcasting, assigned to mobile services starting on 1 December 2011;
- the 2500 – 2690 MHz frequency band (referred to as the "2.6 GHz" band) which is being freed up by the Ministry of Defence, region by region, between 2010 and 2014.

4.1. Frequency allocation

a) Launch of calls for applications

After two years of preparatory work performed in tandem with all of the sector's stakeholders, on 31 May 2011 ARCEP adopted its decisions[26] providing the Minister responsible for electronic communications with its proposed rules and terms for the procedures for awarding licences to use spectrum in the 800 MHz and 2.6 GHz FDD frequency bands[27]. After having received a positive response from the Parliamentary committee on the digital dividend (*commission parlementaire du dividende numérique*), the call for applications was made official by the publication of the ministerial order approving the Authority's proposed rules and terms in the *Journal officiel* (Official journal) of 15 June 2011.

The procedures designed by ARCEP constituted an overall scheme for allocating frequencies to ultra high-speed mobile systems in Metropolitan France, taking account of the respective specificities of the 2.6 GHz and 800 MHz band frequencies.

The system provides for two separate procedures, with a view to a sequential allocation of the frequencies: first of the 2.6 GHz FDD band and then of the 800 MHz band.

The simultaneous launch of two calls for applications allowed the undertakings interested in these frequencies to have all of the rules for both procedures at their disposal from the outset and, if applicable, to then create a coordinated strategy for these two bands. The deadline for applications for 800 MHz band spectrum was therefore set for after the results of the allocation of 2.6 GHz FDD band spectrum had been made public – and so allowing the candidates to adjust their second applications in kind.

b) Examination and results of the 2.6 GHz band allocation procedure

The deadline set for applications for 2.6 GHz FDD band spectrum was 15 September 2011[28].

ARCEP received four applications within the set timeframe, from Bouygues Telecom, Free Mobile, Orange France and SFR. ARCEP then performed its

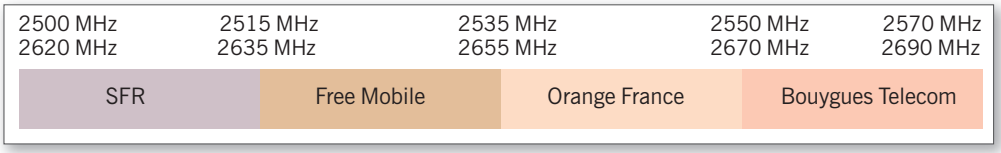
26 - *In the 2.6 GHz band, ARCEP Decision No. 2011-0598 of 31 May 2011; in the 800 MHz band, ARCEP Decision No. 2011-0600 of 30 May 2011*

27 - *The 2.6 GHz FDD band (i.e. frequency division duplex: transmission and reception on different frequencies) corresponds to the 2500 – 2570 MHz and 2620 – 2690 MHz frequencies. The rest of the 2.6 GHz band, i.e. the 2570 – 2620 MHz frequencies, employed in TDD mode (time division duplex: transmission and reception on the same frequencies but at different times) will be allocated at a later date.*

28 - *ARCEP announced the results of the procedure on 22 September 2011 and issued the licences to the winning applicants on 10 October 2011*

selection based on the criteria listed in the call for applications: the financial amount bid for the frequencies and a commitment (or lack of commitment) to host mobile virtual network operators (MVNOs), which made it possible to obtain a multiplicative coefficient of the financial bid.

The examination of the dossiers resulted in the Authority accepting the applications all four of the applicant companies. These four operators were each awarded different quantities of spectrum: Free Mobile and Orange France were awarded a duplex frequency block of 20 MHz and Bouygues Telecom and SFR a duplex frequency block of 15 MHz.



All of the 2.6 GHz-band frequencies were thus allocated, for a total sum of €936 million, compared to the reserve price of €700 million.

c) Examination and results of the 800 MHz band allocation procedure

The deadline set for applications for 800 MHz band spectrum was 15 December 2011[29].

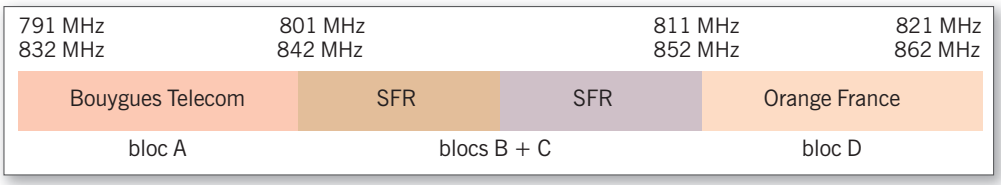
ARCEP received applications from four undertakings within the set timeframe, from Bouygues Telecom, Free Fréquences, Orange France and SFR. ARCEP performed its selection based on the three criteria listed in the call for applications:

- the financial amount bid for the frequencies;
- a commitment (or not) to host mobile virtual network operators (MVNOs);
- a regional development commitment at the departmental level.

The examination of the dossiers resulted in the Authority accepting the applications of three of the applicant companies: Bouygues Telecom, Orange France and SFR, each of which was awarded a duplex frequency block of 10 MHz.

Free Fréquences was not awarded any spectrum but, having submitted an eligible application, will enjoy roaming rights in the 800 MHz band, to be able to cover a priority rollout area made up of the most sparsely populated parts of France (see Part 3).

The allocation of 800 MHz-band spectrum enabled a good monetisation of the public asset that is radio spectrum, bringing in a total €2,639 million, compared to the reserve price of €1.8 billion. The following table provides details on the allocations to each of the successful bidders:



29 - *ARCEP announced the results of the procedure on 22 December 2011 and issued the licences to the winning applicants on 17 January 2012*

License recipient	Spectrum awarded	Financial bid	Commitment to host MVNOs	Regional development commitment
Bouygues Telecom	Block A (10 MHz duplex)	€683 087 000	Yes	Yes
SFR	Blocks B+C (10 MHz duplex)	€1 065 000 000	Yes	Yes
Orange France	Block D (10 MHz duplex)	€891 000 005	Yes	Yes

Source: ARCEP.

4.2. Objectives set for the 4G spectrum award procedure

Three core objectives were set for the award of 2.6 GHz FDD and 800 MHz frequency band spectrum: digital regional development, effective and lasting competition in the mobile market and monetising the State's intangible assets.

a) Chief imperative: digital regional development

As provided for in the Law of 17 December 2009 on bridging the digital divide, referred to as the Pintat Act[30], digital regional development was a top priority in the allocation of the 800 MHz band. This objective is specific to 800 MHz frequency bands that are part of the digital dividend, and whose propagation properties enable broad coverage.

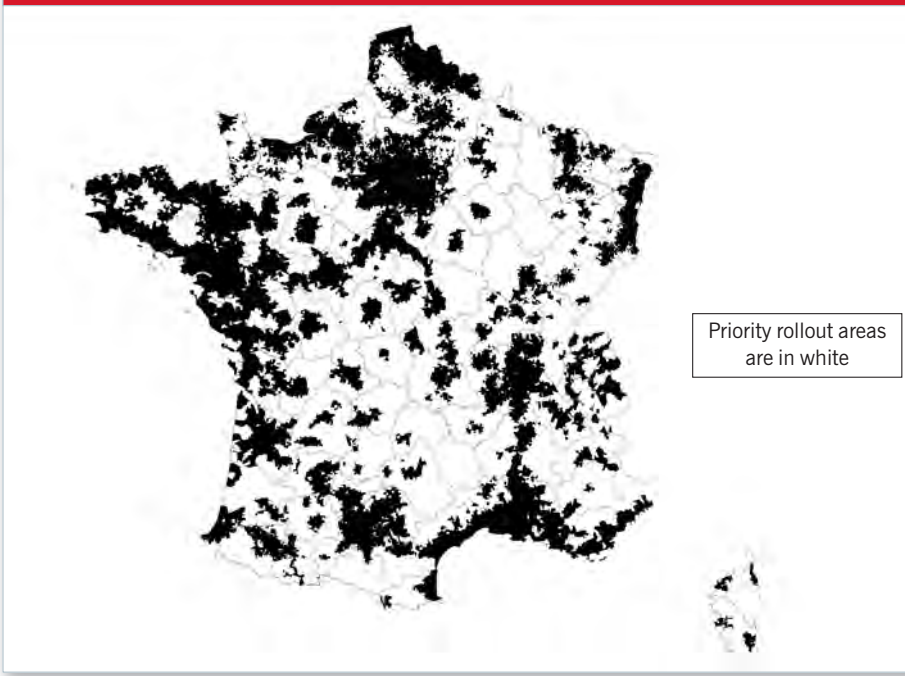
The Authority designed the following scheme to satisfy this digital regional development imperative:

- first, ambitious coverage targets, both nationwide and at the departmental level. The rate of coverage of the French population that must be reached within 15 years is set at 99.6%. For mobile networks, and for the first time, these terms also include a coverage target of 90% of the population of each department. Operators must also cover major transport arteries;
- second, an obligation to conduct deployments in priority rollout areas first, which correspond to the more sparsely populated parts of France – representing around 18% of its population and 63% of its surface area[31] – and which that are hard to cover with high frequencies. Specific deployment obligations are attached to these areas to ensure that coverage there progresses apace with the rollouts being performed in more urban areas. Undertakings with an 800 MHz band licence are therefore required to perform rollouts in these areas according to a faster geographical trajectory than they would do based on their own technical-economic criteria.

30 - Law No. 2009-1572 of 17 December 2009 on bridging the digital divide, published in the JO of 18 December 2009

31 - The list of municipalities located in priority rollout areas and dead zones can be downloaded from the ARCEP website: http://www.arcep.fr/fileadmin/reprise/dossiers/4G/annx-11-0600-liste-communes-4G-juin2011.zip

4G priority rollout areas



- The system also includes **measures for encouraging operators to share their network** and their frequencies in these areas to allow them to reduce their rollout costs, and therefore make it easier to achieve their coverage targets but also to supply high-speed connections thanks to the use of broad channels.
- Lastly, in their licence application, candidates had the option of **committing to covering 95% of the population of each department within 15 years**. Making such a commitment improved the applicant's scores during the selection stage. The three winning applicants all made such a commitment, which is listed in the terms of each of their licences.

b) Mobile market competition

The second core objective in the frequency allocations was ensuring mobile market competition that is beneficial to consumers.

The approach that ARCEP took to the award of 4G licences was in keeping with the competition analysis that resulted in issuing a licence to a fourth 3G mobile operator in early 2010.

For the FDD portion of the 2.6 GHz band, there were provisions for guaranteeing the number of winning candidates and the minimum amount of spectrum that could be allocated to each: if there were at least four candidates, each would obtain at least a duplex frequency block of 15 MHz (provided they had applied for that amount of spectrum).

The 800 MHz band, meanwhile, was divided into four blocks of frequencies which made it possible to issue four licences in that band. The ability to combine blocks in the 800 MHz band carried the stipulation that an operator who was awarded two blocks must provide roaming in the 800 MHz band to an operator who had only been awarded 2.6 GHz band spectrum. This meant that at the outcome of the two procedures, each of the four mobile operators had access to spectrum (a duplex frequency block of 20, 25 or 30 MHz) that enabled it to deploy 4G and improve the capacity and quality of its network.

Each of these four existing mobile operators also gains direct or indirect – i.e. via roaming – access to the 800 MHz band frequencies which are needed to achieve broader coverage nationwide.

In a bid to sustain a state of balanced competition, there is a condition attached to the combination of blocks in the 800 MHz band: an operator who is awarded two blocks must provide roaming in the 800 MHz band to an operator who has only been awarded spectrum in the 2.6 GHz band, in other words who was not awarded spectrum in the 800 MHz band. This roaming solution would therefore allow that second operator to gain indirect access to the 800 MHz band frequencies which are needed to achieve broader coverage nationwide. Because Free Mobile satisfied the terms laid out in the call for applications for 800 MHz band spectrum, it was able to apply for roaming rights from SFR whose licence includes two blocks of spectrum in that frequency band.

In both allocation procedures, applicants were also invited to make commitments to host mobile virtual network operators (MVNO). All of the applicants made major commitments towards MVNOs which will enable the development of the full-MVNO model on all 4G systems.

c) Monetising publicly-owned radio spectrum

The final core objective in the allocation procedures was monetising the frequencies which are a State asset. Given the value of this spectrum, and particularly the low frequencies, their monetisation represented a considerable stake.

The procedures resulted in a total monetisation of the two bands of close to €3.6 billion, compared to the reserve price of €2.5 billion – which, to date, is one of the highest in Europe.

Price paid for 800 MHz spectrum in Europe

Country	Proceeds	Type of duplexing	Quantity of spectrum (en MHz)	Population	Price in eurocent/MHz per capita	Equivalent in France for duplex block of 30 MHz	Equivalent in France for duplex block of 5 MHz
France	€2,639,087,005	FDD	2x30	63 460 768	69		
Germany	€3,567,000,000	FDD	2x30	82 210 000	72	€2,724,821,798	€454,136,966
Sweden (1)	€197,000,000	FDD	2x30	9 142 817	36	€1,353,149,691	€225,524,949
USA (700 MHz band) (2)	€11,965,398,735	FDD	2x23	308 745 538	84	€3,174,530,823	€529,088,470
Spain	€1,305,328,589	FDD	2x30	45 957 671	47	€1,793,247,111	€298,874,519
Italy	€2,965,300,000	FDD	2x30	61 016 804	81	€3,068,297,621	€511,382,937

Source: ARCEP.

(1) The proceeds for the auction in Sweden do not include the €34 million investment commitment made by one of the winners to cover dead zones
(2) Some of the American licences were only regional

Price paid for 2.6 GHz FDD spectrum in Europe

Country	Proceeds	Type of duplexing	Quantity of spectrum (en MHz)	Population	Price in eurocent/MHz per capita	Equivalent in France for duplex block of 30 MHz	Equivalent in France for duplex block of 5 MHz
France	€936 129 513	FDD	2x70	63 460 768	11		
Austria	€39 527 109	Mix of FDD and TDD	2x95	8 364 095	2.5	€218 680 558	€15 620 040
Denmark	€135 351 792	Mix of FDD and TDD	2x100 (1)	5 493 621	12.3	€1 083 086 142	€77 363 296
Sweden	€209 000 000	FDD	2x70	9 142 817	16.3	€1 435 575 053	€102 541 075
Norway	€10 082 620	FDD	2x40	4 799 300	2.6	€230 883 665	€16 491 690
Germany	€257 777 000	FDD	2x70	82 210 000	2.2	€196 915 164	€14 065 369
Finland	€2 329 600	FDD	2x70	5 279 228	0.3	€27 712 173	€1 979 441
The nedrlands	€2 600 000	FDD	2x65	16 357 992	0.1	€10 749 486	€767 820
Spain	€172 685 538	FDD	2X70	45 957 671	2.7	€237 233 632	€16 945 259
Italy	€431 960 000	FDD	2x60	61 016 804	5.9	€521 457 800	€37 246 986

Source: ARCEP.

(1) The proceeds from the Danish auction include the sale of 10 MHz of TDD spectrum in the 2.1 GHz band

Actions on behalf of consumers

1. ARCEP's responsibilities and objectives

1.1. ARCEP's responsibilities in the area of consumer affairs

The Authority's goals in the area of consumer protection include ensuring that operators are able to develop innovative and quality offers at an affordable cost thanks to fair and effective competition between them. The Authority must also work in concert with the administrations that are responsible specifically for consumer protection, to ensure that end users – i.e. consumers and businesses – are able to choose between available products thanks to transparent information and good market liquidity.

ARCEP devoted the November 2011 issue of its *Cahiers de l'ARCEP* newsletter to this very topic, reiterating that consumers were its central source of concern.

a) In the electronic communications sector

ARCEP works to ensure the existence of fair and effective competition between network operators and the providers of electronic communication services, which is beneficial to the users of electronic communication services – as stipulated in Article L. 32-1 of the French Postal and electronic communications code (CPCE). ARCEP must also ensure *"a high level of consumer protection, notably thanks to the supply of clear information, and particularly through transparency in the pricing and terms and conditions of use for publicly available electronic communication services"*.

If, initially, asymmetrical regulation was introduced to manage the market's being opened up to competition, the growing number of competing undertakings led ARCEP to develop symmetrical regulatory tools, in other words ones that apply equally to all operators. ARCEP therefore monitors the quality of service of all operators supplying the public with fixed electronic communication services, and no longer just France Telecom for the sake of the universal service. In the area of number portability, ARCEP has introduced a fast, flexible and simple process that allows customers to switch operators without changing their telephone number.

ARCEP's role was strengthened in 2011 when the European directives of December 2009 – i.e. the third Telecoms Package – were transposed into French Law. The Authority now has the power to set minimum quality of service requirements to prevent a degradation of service and the blocking or throttling of traffic on the networks. The European directives also strengthen the rights of consumers and users. To protect the rights of disabled users, operators are now obliged to guarantee that the disabled have access to electronic communication services that are equivalent to those available to other users, at an affordable price and including emergency services. ARCEP is also required to include a scorecard of the measures taken to this end in its annual report.

Committed to its dialogue with consumers, in 2007 ARCEP set up a system for consulting with consumer associations. The Consumer affairs committee enables ARCEP to interact more effectively with consumer associations and to consult with them. In addition, the *www.telecom-infoconso.fr* website was designed to provide consumers with detailed information on the electronic communication services available to them. The Authority has also created a "Consumer relations" unit to provide users with support on a day-to-day basis by answering their questions and helping them to understand electronic communication services, and by working in tandem with operators, consumer associations and the State on consumer affairs policy.

b) In the postal sector

• Ensure compliance with the universal service

In the postal sector, ARCEP ensures that the universal service provider (La Poste) and authorised operators comply with their obligations in terms of delivering the universal service and executing postal operations (Article L. 5-2 of the Post and Electronic Communications Code (CPCE)).

In particular, ARCEP is charged with monitoring changes to the range of universal services and with setting the multi-year tariff framework for universal service activities.

ARCEP attaches great importance to transparent universal postal service quality, ensuring the clarity, intelligibility and comparability over time of information about it. Providing consumers with clear information about the universal service's standard of quality facilitates their product choices. The provider is thus encouraged to deliver a service as advertised.

• Serve as final appeals body for user complaints

Since 1 January 2011 (cf. page 22), postal service users can submit to ARCEP complaints that could not be satisfactorily resolved within the framework of the procedures put in place by postal service providers.

ARCEP makes sure that authorised postal providers put appropriate complaint-handling procedures in place. ARCEP can also look into complaints which have not been properly dealt with under these procedures or complaints that were indeed processed but where the complainant found the outcome unsatisfactory.

Consequently, ARCEP's remit offers an avenue of appeal for users who have exhausted all options offered by provider procedures.

ARCEP published the complaint-submission procedure on its website to provide consumers with full

information about the options offered by an appeal to ARCEP. This possibility and the criteria for applying to ARCEP are also set out in the documents of and letters of reply from authorised postal service providers and, in some cases, in their general terms and conditions of sale.

1.2. Review of the impact of ARCEP's 30 proposals

a) Publication in February 2011 of ARCEP's proposals and recommendations for improving the offers made available to consumers

The work performed in 2010 – and particularly the production of the scorecard on electronic communications market transparency and liquidity as provided for in the Chatel Act of 3 January 2008 – led ARCEP to conclude that consumers are not always able to make an informed choice when subscribing to a service, due to a lack of information on the nature, quality and price of the products being sold, and because they do not have an accurate measure of their consumption.

Following a broad consultation that began in early 2010 with the various stakeholders – i.e. the general directorate for fair trade, consumer affairs and fraud control, DGCCRF (*Direction Générale de la Concurrence, de la Consommation et de la Répression des Fraudes*), consumer associations, operators and the associations that represent them – on 18 February 2011, ARCEP published 30 proposals for improving the offers being sold to the users of electronic communications and postal services. Twenty three of these proposals concerned electronic communications and seven concerned postal communications.

Some of the proposals constitute a reiteration, an interpretation or the enforcement of existing provisions, so were put into effect immediately. Others were intended to follow through on or instigate work performed in tandem with public and private sector players, while the final category constitute recommendations aimed at operators or public authorities, namely Parliament, the federal Government and administrations. This document marked the start of a cycle of work and monitoring of the players' practices, in concert with all of the stakeholders, and will be assessed in the form of a scorecard in 2012.

> Proposals relating to electronic communications

The aim of the first 23 proposals is to improve the offers available to consumers of electronic communications. They cover five areas: the transparency of the offers, market liquidity, the quality and availability of services, the operation of value-added services, and providing the disabled with access to electronic communications services.

Transparency

To be able to make a free and informed choice, consumers need to have access to the most transparent information possible. Having ascertained a lack of transparency, ARCEP concluded that market practices needed to be improved quickly.

In its proposals, ARCEP considered that, to be transparent, information on available products and services needs to be accessible, accurate, understandable, thorough and presented objectively. To this end, operators must provide all of their customers with a dedicated space on their website where they can view the contractual terms that apply to them. This information must also be sent to them by the post.

By the same token, when a customer subscribes to an offer or a paid option that will affect the length of their contractual commitment, or which requires them to make a new commitment, they must give their express consent to these terms, after the operator has duly informed them of any changes to their contractual commitment that will result from this new subscription. Lastly, the terms of their listing in the universal directory must also be specified.

Market liquidity

Electronic communications markets are characterised by the persistent, and possibly growing, presence of impediments to switching providers, which hinders consumers' ability to take full advantage of market competition. To improve market liquidity, ARCEP has reiterated that consumers need to be better informed of the provisions contained in the Chatel Act, notably the fees they will be charged if they cancel their contract before it expires. Consumers must always be able to choose whether or not to make a contractual commitment, and to subscribe to a service with or without the device bundled with the service. To allow consumers to switch operators while keeping their device, ARCEP recommends lifting any restrictions on the use of devices on other operators' networks. Customer loyalty programmes also continue to detract from market liquidity. The Authority will therefore continue to work on the issues of contractual commitments, separating the price of the device and the price of services on customers' invoice, and of customer loyalty programmes to achieve a more liquid market.

Quality and availability of services

For several years now, ARCEP has been engaged in a global action plan devoted to the availability and quality of the services marketed by operators, and which seeks to improve consumer information in this area.

ARCEP's proposals aim to step up these actions by coordinating the publication of the various surveys, harmonising QoS indicators for fixed and mobile services, and improving the comparability of fixed service QoS indicators. The Authority is also working to ensure that universal service providers satisfy quality of service objectives and the reliability of the indicators used to measure this quality. The same applies to the quality of internet access services.

Value-added services (VAS)

The VAS market has given rise to new practices that are causing growing discontent among consumers. This dissatisfaction concerns transparency and the clarity of the prices, but also the development of certain fraudulent practices to which consumers may fall prey and which raise questions over the legitimacy of the use of these numbers.

ARCEP's proposals on value-added services are aimed at restoring consumers confidence thanks to greater transparency, clearer pricing and the development of a code of practices for VAS providers – under the supervision of an existing body of which all of the sector's stakeholders are members. ARCEP also invites the Government to continue and step up the efforts being made to enforce existing legal measures governing the terms for accessing after-sales and technical support lines.

Providing disabled persons with access to services

ARCEP's proposals call for work to be performed with stakeholders on the commitments that operators should make to distribute devices adapted to the disabled, and the creation of relay centres for the deaf and hard of hearing.

The Authority has also created a working group dedicated to the accessibility of electronic communications services with a view to formalising common commitments from market players.

> Les propositions relatives aux communications postales

Seven proposals concerning postal communications, focusing on four topics, were put forward.

Complaint-handling procedures

By law, authorised postal service providers must put in place internal procedures that allow their customers to lodge complaints.

Moreover, under its new powers in effect since 1 January 2011, ARCEP laid down procedures for introducing measures for handling user complaints lodged with postal providers but not resolved to the customer's satisfaction.

The universal service and obligations pertaining to postal operations

ARCEP recalled the legal obligation to provide users with affordable, accessible universal-service products of a specific quality that meet their requirements.

In addition, ARCEP sees to it that users have all the information they need about service characteristics, and that La Poste's general terms and conditions of sale comply with CPCE consumer-protection provisions.

The role of the postmark

ARCEP specified the markings that must feature on the postal items delivered by authorised postal providers, bearing in mind the importance of these markings for establishing time frames.

The principle of registered-letter equivalence

Authorised postal service providers, as well as certain companies like express couriers, provide services with similar characteristics to those of La Poste's registered items. ARCEP recalls that these items carry the same probative weight, in particular in courts of law.

b) Consumer protection bill that echoes several ARCEP proposals

The bill on "consumer protection and information" seeks to increase consumer protection in the main sectors of everyday life, and particularly electronic communications. Certain provisions draw directly from the proposals that ARCEP published in February 2011.

Consulted on the bill, ARCEP issued an opinion on its contents on 10 May 2011[1]. After having been passed by the Council of Ministers, the bill was adopted by the National Assembly on first reading on 11 October 2011, and by the Senate on 22 December 2011. The original text was expanded, notably in the Senate, with amendments that reprise the ARCEP recommendations and proposals. Parliamentary work on the bill was suspended in the run-up to the latest elections.

This bill improves the degree of transparency in the electronic communications market: when a customer subscribes or re-subscribes to a service, their operator must obtain their express confirmation, and stricter terms apply to handset locking. To improve the information available to consumers, a mechanism for systematic alerts and information on blocked services must be put into place for all electronic communications services. One article in the bill gives ARCEP the power to certify price comparison websites. Lastly, operators must provide consumers with information on their consumption and the ability to calculate their cancellation fees.

The bill also improves the liquidity of electronic communications markets. Prior notice for cancelling a contract has been reduced to three days, which makes it possible to harmonise the cancellation periods listed in the Postal and electronic communications code (Art. L.44) with those listed in the Consumer code (Art. L.121-82-2). Operators are required to sell pay-as-you-go mobile services under non-prohibitive commercial terms defined by order. The bill also gives consumers the ability to use their loyalty points without having to extend their contractual commitment, unless these points are used to buy a handset that is fully or partially financed by their subscription.

Other provisions include an obligation to list the percentage of the monthly fee that corresponds to the price of the handset/device and the percentage that corresponds to the prices of the services on customers' invoice.

Lastly, the bill suggests capping contractual commitments at 12 months.

1 - ARCEP Opinion No. 2011-0524 of 10 May 2011 on a draft order relating to electronic communications

c) Results of implementation of ARCEP proposals

In the course of 2012, ARCEP will review implementation of its proposals for improving the electronic communication and postal services provided to consumers.

2. Quality of fixed, mobile and internet services

2.1. 2011 survey of mobile network QoS

On 4 November 2011, ARCEP released the results of its thirteenth consecutive annual assessment of the quality of service provided on the second and third generation mobile networks operated by Bouygues Telecom, Orange France and SFR in mainland France. The goal of the survey is to assess the quality of calling, SMS, MMS and WAP browsing services provided to consumers, and the data rates that can be achieved on mobile networks. The quality of Web browsing services was also measured for the first time. Its purpose is not to obtain subscribers' views of the end-to-end quality of these services – through a customer survey, for instance. The user experience will depend on each individual's consumption habits, the network, and the device and the applications they use.

a) Quality of voice call services still high

The survey performed in 2011 confirms that the quality of voice calls over these telephone networks continues to be as high as it has for the past several years. The service was tested in 52 towns and cities with a population of more than 10,000 – both indoors and outdoors and in a moving vehicle. The results of the tests revealed that the success rates for setting up and holding a call for two minutes and five minutes continue to very high – 97.3% and 96.2%, respectively – as they have been in previous years. The tests also revealed a perfect audio quality of the successfully completed calls that was virtually consistent.

The quality of the phone service when travelling was also measured on the main TGV (high-speed train) lines, in commuter trains for the four largest cities in France and on the most heavily used motorways. The success rate for setting up and holding a call on the motorways stands at 92.9%, which is around 2% lower than in the previous survey, but the rate of calls of perfect quality has risen by 2% to 91.1%.

The success rate for setting up and holding a call for two minutes on the TGV has decreased by 3% compared to the previous survey, to 72.2%. The results also reveal sizeable disparities in QoS levels between the carriers. Lastly, the rate of acceptable and perfect quality calls made on commuter trains and trams has increased by 2% and 4% respectively, compared to previous survey – up to 84.7% and 82.8%, respectively.

b) Connection speeds on mobile networks continue to rise, on average, but gaps between carriers are widening

File transfer tests were performed in the 12 largest metropolitan areas in France and in 20 towns and cities with a population of between 50,000 and 400,000, using 3G dongles plugged into a laptop computer, and taking into consideration each operator's fastest service. The results of these tests reveal file downloads speeds on 3G networks of up to 9.2 Mbps for the fastest services and, for sending files, upload speeds of more than 3 Mbps for the fastest services. The average download speed of 3 Mbps is 40% faster than the average speed measured during the previous survey, while for file uploads an average upload speed of 1.3 Mbps was measured – which is slightly faster than the average 1.2 Mbps of the previous survey.

The survey also found an increased disparity in the connection speeds being supplied by the different carriers, both for downloading and uploading files. Median speeds stood at 4.8 Mbps for Orange France, 2.8 Mbps for SFR and 1.2 Mbps for Bouygues Telecom.

These bitrates are comparable to those supplied by certain entry-level ADSL offers on wireline networks.

c) Quality of the SMS service still very satisfactory, and MMS service quality improving

The quality of SMS and MMS services was tested in the 12 largest metropolitan areas in France, and in 20 towns and cities with a population of between 50,000 and 400,000. The results for SMS (i.e. texting) services reveal the same high level of overall quality provided by these services for several years, with a success rate of over 99%. There has also been a significant improvement in the quality of services for sending a photo via multimedia message (MMS): the success rate for receiving an MMS in less than three minutes has increased by 2.4% in cities with a population of more than 50,000. WAP services achieved a 95% success rate for connecting to the portal, and a 99.8% success rate for five minutes of sustained browsing.

d) Quality of internet access services measured for the first time

The quality of services for accessing the Web using a 3G dongle was measured for the first time in 2011. The two indicators that were tested were the success rate for connecting to the internet in less than 50 seconds – which was achieved in 97.5% of cases, on average – and the rate of success for achieving and holding a connection for five minutes, which stands at roughly 96%.

e) First experimental findings for smartphones

Experimental measurements were also taken with smartphones for the first time in 2011, in the 12 largest cities in Metropolitan France. Although fewer in number, these tests made it possible to check that the measurement protocols defined for file transfers and Web browsing on these devices could be fully implemented. As with other indicators, however, they do not enable individual results for each carrier, but do nonetheless provide some useful information. The average download speed reached on a smartphone is 2.4 Mbps, which is slower than what is achieved using a 3G dongle in the 12 biggest cities. For file transfers, the average speed of 1.4 Mbps is slightly faster than the average with a 3G key. Differences in download speeds compared to 3G dongles may be attributable in part to smartphones' maximum performance levels which are below those of 3G dongles, and do not appear to be due to carriers' networks.

2.2. Quality of the wireline telephone service

In 2008, the Authority published a decision obliging wireline telephone carriers to publish several quality of service indicators on a quarterly basis[2]. The work performed by ARCEP since then, in tandem with the sector's stakeholders, resulted in the publication of the first QoS indicators on wireline services in 2010. The aim is to provide end users with simple, individual and regularly updated information to complete their perception of the quality of the main operators' residential fixed access services. A user's perception of the quality of service supplied is indeed complicated and often subjective.

Several indicators have been chosen to retrace the objective elements of the user experience as well as possible. They cover:

- access quality (connection supply time, fault rate, fault repair time, customer service response time, accuracy of the responses provided by the customer service department, etc.);
- the quality of telephone calls (speech quality, unsuccessful call ratio, call set-up time).

The first quarterly publications made it possible to stabilise the system used to produce the indicators and to bring more detail or adjust some of them, while fine-tuning understanding of the measured results. Providing a complement to the data published by each operator, in October 2011 ARCEP

2 - ARCEP Decision No. 2008-1362 of 4 December 2008 on operators' publication of QoS indicators for their fixed telephone services

published a scorecard for the system which includes a summary of the measurements published by the operators during the year, as a way to improve consumers' access to the information and its legibility[3].

2.3. Assessing the quality of internet access services

As part of its work on internet and network neutrality, and in application of the provisions in the European directives that were transposed into national Law by Order No. 2011-1012 of 24 August 2011[4] (*cf. page 132*), ARCEP is preparing to introduce QoS mechanism for internet access.

Designed in concert with the sector's stakeholders – i.e. operators, service providers, consumer associations, etc. – ARCEP's planned guidelines were submitted to public consultation in late 2011[5].

3. Guaranteeing the quality of the universal service[6]

The universal electronic communications service guarantees that all consumers throughout France have access to a set of basic services and to at least a set minimum quality of service.

3.1. Universal service components

The universal telecommunications service is one of the three public telecommunications service components which also include the provision of complementary[7] electronic communications services and general interest missions.

It corresponds to a set of basic services that are essential for allowing users taking part in social and economic life, and which are already accessible to most of the population.

Public electronic communications service			
	Universal service	**Complementary service**	**General interest missions**
Content	Three components: fixed telephony service (tariff balancing and social tariffs), directories and directory assistance, public payphones	Leased line service, ISDN, packet switching service, advanced call services	Involvement in national defence and national security Development of research and training
Financing	Financed by the sectoral fund to which all operators contribute	Shouldered by the operator designated to provide the "telephone service" component	Included in operators' terms and conditions

3 - In application of proposal No. 13 of the document entitled, "30 proposals for improving the offers made available to consumers of electronic communications and postal services" which seeks a progressive harmonisation of the calendar for and content of the various published surveys and QoS indicators for fixed and mobile services.
4 - Order No. 2011-1012 of 24 August 2011 on electronic communications, published in the JO of 26 August 2011
5 - http://www.arcep.fr/uploads/tx_gspublication/consult-qs-acces-internet-fixe-dec2011.pdf
6 - The universal service is addressed on page 141.
7 - Term taken from the transposition, corresponding to what had previously been called mandatory services

Through its two dimensions – i.e. geographical (a single balanced tariff) and social (a preferential tariff for the most deprived) – the universal service makes it possible to ensure that the components are available nationwide and can be accessed by even the most underprivileged members of society. It is financed by a sectoral fund to which all electronic communications operators contribute.

The universal service components include an affordably-priced wireline telephone service, a printed directory and directory assistance services, and the deployment of public payphones.

a) Details of the universal service components

The three components of the universal service are available throughout the French territory – i.e. Metropolitan France, the overseas departments and the territorial collectivity of Saint-Pierre and Miquelon – and include:

- **the telephone service:** this covers the installation and connection to the fixed public network and the provision of a quality telephone service over this connection. The designated operator is required to supply telephone services (currently subscription and calls) at the same price nationwide, and commonly referred to as geographically balanced.

  The telephone service also covers special pricing and technical provisions for low-income users and those with disabilities. The beneficiaries of this social tariff are people who receive the earned income supplement, or RSA (*revenu de solidarité active*)[8] – a specific solidarity allowance, or ASS (*allocation de solidarité spécifique*), the disabled adult allowance, or AAH (*allocation aux adultes handicapés*) or the allowance given to disabled ex-servicemen;

- **a printed universal directory** is made available for free to all those who subscribe to a public telephone service, fixed or mobile. In the latest call for proposals, the Minister responsible for electronic communications considered that there was no need to designate an universal service provider for an electronic directory or for directory services as competition was such that it guaranteed the availability of these services at an affordable price;

- **the public payphone service** which covers the installation and maintenance of public payphones (at least one public payphone in each municipality, and two in those with a population of more than 1,000) in the public thoroughfare, and the provision of a quality and reasonably-priced telephone service over these payphones.

The supply of the telephone service and the supply of complementary services[9] are bound by a law[10] which specifies that all of the services included in the universal service must include measures in that take account of the needs of people with disabilities.

b) The service providers

The designation of the operator(s) in charge of universal service is performed by the Minister responsible for electronic communications, following calls for applications (one per component or per service element) relating to the technical and tariff conditions and, if necessary, to the net cost of providing these services.

The service provider designated in 2009 to supply the telephone service for the next three years is France Telecom.

8 - The transitional measures in place during the implementation of the RSA scheme, which include the social tariff reduction for telephone services, were extended by Decree No. 2010-760 of 6 July 2010, with a view to extending the scheme to the overseas territories.

9 - Unlike universal service components, no financial compensation is given for the supply of mandatory services.

10 - Law No. 2003-1365 dated 31 December 2003 concerning public service obligations in the electronic communications sector, published in the JO of 1 January 2004

Designation period									
	2005-2009			2009-2012			2012-2015		
Components	Provider	Duration	Period ends	Provider	Duration	Period ends	Provider	Duration	Period ends
Telephone to 5 service	France Telecom	4 years	3 March 2009	France Telecom	3 years	13 December 2012	Public consultation from 10 April May 2012 on the provisions for future CFPs		
Public payphones	France Telecom	4 years	3 March 2009	France Telecom	2 years	25 November 2011	France Telecom	2 years	24 February 2012
Printed directory	France Telecom	2 years	29 March 2009	Pages Jaunes	2 years	27 November 2011	Designation process underway		
Directory information services	France Telecom	2 years	29 March 2009	Pages Jaunes	2 years	10 December 2011	Designation process underway		

Following the call for proposals issued with a view to designating the providers for the public payphone and directory and directory services component[11] for 2011 to 2013, the Minister responsible for electronic communications renewed France Telecom's mandate as the provider of the public payphone component for a period of two years, through an order issued on 14 February 2012[12].

The provider of print directories, which had been Pages Jaunes from 2009 to 2011, has not yet been designated for 2012-2014.

3.2. . The Authority's role in monitoring the quality and price of the universal service

a) Monitoring quality of service

The operators responsible for providing the universal service must comply with several quality of service obligations and publish QoS indicators for the universal service component(s) they have been designated to provide.

These indicators, which concern turnaround time for supplying the initial connection, for fault repairs and unsuccessful call ratios[13], can be viewed on the France Telecom[14] website.

New quality of service obligations have been added to universal service providers' terms and conditions since 2009. In addition to annual national and regional data, operators now provide ARCEP with a detailed quarterly status report on the most extreme situations concerning connection and fault repair turnaround times, on both the regional and national level[15].

Obligations with respect to publication have also been strengthened. An obligation to publish quarterly indicators has been to the annual one – with quarterly data to be released by the end of the month following the end of the quarter in question. The aim is to allows public authorities to react quickly to any potential decline in QoS indicators.

The publication of these quarterly and annual regional indicators allows ARCEP to have access to more detailed information on problems in the field.

11 - Published in the JO of 29 October 2011
12 - Published in the JO of 23 February 2012
13 - Indicators listed in Annex 3 of the Universal Service Directive of 7 March 2002 (Directive 2002/22/EC), and restated in the Orders of 12 December 2009 and 24 November 2009 which designate France Telecom as the universal service provider.
14 - At the following URL: http://www.orange.com/fr_FR/groupe/reseau/documentation/#
15 - Indicating the number of connections installed or pending more than 30 days after the request was made, and the number of faults that had yet to be repaired two weeks after having been reported.

QoS indicators for the telephone service, 2009-2011				
Indicator	**Target**	**2009**	**2010**	**2011**
Average time to supply an initial connection, in days		5.86	6.10	6.10
Connection turnaround time for the fastest 95%	8 days	NA	14	14
Connection fail rate (% of base)	7.50%	7.87%	6.84%	5.72%
Rate of failure to detect of a telephone service fault within 48 hours	15%	21.1%	21.50%	16.50%
Repair time for the 85% most quickly detected faults	48 h	ND	70	50
Call failure rate (national calls)	0.70%	0.3%	0.28%*	0.32%
Call establishment time (national calls) in seconds s	2.90	1,36	2.29 **	2.2
Billing accuracy (billing complaint rate)	0.08%	0.06%	0.06%	0.05%
Customer complaint response time: - for 80% of the most quickly processed complaints t - for 95% of the most quickly processed complaints	 5 days 15 days	 NA NA	 4.66 NA	 4.2 17
Complaint rate, per user	7.0%		5.76%	5.60%

NA: Not available
• 0.29% in Q1 then 0.28% in the following quarters
*** 1.35 in Q1 then 2.29 in the following quarters*

QoS indicators for the public payphone service, 2009-2011				
	Target	**2009**	**2010**	**2011**
Percentage of public payphones that are out of order				
- For more than 24 hours	0.60%	0.59%	0.53%	0.48%
- For more than 12 hours	3%	ND	0.83%	0.74%

NA: Not available

b) Monitoring universal service tariffs

The Authority has the power of supervision over all universal service tariffs.

As it was during the previous period of attribution[16], ARCEP has opted for a system of multi-annual price cap supervision up until the end of 2012, rather than individual a priori supervision of universal service tariffs, and this for most of the tariffs applying to calls made from a fixed telephone line which corresponds to the universal service offering.

Tariff supervision allows universal service customers to benefit from a regular decrease in France Telecom calling prices. This decrease reflects both decreases in call termination charges, notably for fixed- to-mobile calls, imposed by the Authority and France Telecom productivity gains. France Telecom's alignment of its long distance calling prices with local calling prices on 21 October 2010 had brought down the average per-minute price of long distance calls by around 50%, both in mainland France and in the French overseas territories. Applying these pricing changes to the baskets for mainland France and the overseas markets corresponded to a roughly 12% decrease. Other price changes followed in 2011, including a decrease in the price of fixed-to-mobile calls in Metropolitan France – of an average 11% to 24% per call, depending on the mobile operator – and of calls originating in the overseas departments, decreasing the basket by 17% between 2010 and 2011.

For the other services – such as subscriptions, calls to special numbers and fixed line calls to international destinations, the price of calls made

16 - ARCEP Decision No. 2011- 0074 of 20 January 2011 on tariff supervision for electronic communications offers, as provided for in CPCE Article L. 35-2

from public payphones and the price of calls to the directory information service – the Authority has an a priori power to veto the universal service tariff.

3.3. Possible upcoming changes

Several regulatory developments are likely to alter the universal service system.

a) Transposition of the 2009 Directive into national law

The universal service directive was transposed into national law through Order No. 2011-1012 of 24 August 2011 on electronic communications[17], completed by Decree No. 2012-436 of 30 March 2012[18]. As concerns the universal service, the order now provides for a separation between access and the telephone service for operators designated as universal service providers. It also adds technological and service neutrality to the guiding principles of sectoral regulation (Para. II, 17 of CPCE Article L. 32-1).

b) Adding broadband access to the universal service components

The European Commission launched a public consultation, which ended on 7 May 2010, whose aim was to trigger an in-depth examination of broadband and the universal service to determine "*the best approach to ensure that basic telecoms services are available for all EU citizens*". Based on the results of the consultation, and an assessment of how the use of information technologies has evolved, the Commission was to issue a communication on the opportunity to revise Directive 2002/22/EC.

On 23 November 2011, the Commission published the results of the consultation. It concluded that there was no need to alter the directive's basic concept or scope of application, recommending that mobile calls and broadband access not be included in the universal service at the European Union level. Concerned with enabling the homogenous application of the directive, and with minimising any detrimental effects on competition, the Commission introduced recommendations that aim to circumscribe the introduction of broadband access to only the connection enabling a functional access to the internet, depending on broadband coverage targets, and setting limits on electronic communications operators' contributions to the sectoral compensation fund.

c) Can we expect to see a social triple play bundle?

In its clauses, Directive 2009/140/EC, amending Directive 2002/22/EC, no longer contains a minimum data rate figure. The Directive now refers only to "*functional Internet access […] taking due account of specific circumstances in national markets, for instance the prevailing bandwidth used by the majority of subscribers in that Member State*". This new text reiterates the conclusions of the European Commission communication of September 2008[19]. As a result, if they so desire, Member States can now include broadband within the scope of universal service.

Ongoing discussions on the topic of broadband and the geographical component of the universal service must not overshadow the social component which constitutes a very effective means for decreasing the number of people who are deprived of broadband access.

The extension of the social tariff – which is currently confined to the telephone service – to triple play solutions could help to increase the social accessibility of the universal service from year to year, and at a much lower cost than would be incurred by including

17 - Published in the JO of 26 August 2011 and put into effect on 27 August 2011
18 - Published in the JO of 31 March 2012
19 - Communication de la Commission au Parlement européen, au conseil, au comité économique et social européen et au comité des régions, en date du 25 septembre 2008. Dans sa communication, la Commission invitait les ARN (notamment) à « prendre part à un débat » pour parvenir à la diffusion du haut débit en étudiant les différents mécanismes de promotion du haut débit.

broadband in the universal service. The number of beneficiaries of the social tariff has decreased substantially since 2004, going from close to 700,000 households in 2004 to 254,000 in 2011 – which represents less than 11% of potential beneficiaries for this last year.

4. Mobile and fixed number portability

4.1. Mobile number portability

Major efforts have been made since September 2010 in tandem with mobile carriers and the unit in charge of mobile number retention within the Economic interest group, GIE EGP (*Groupement d'intérêt économique Entité de gestion de la portabilité*), under the aegis of ARCEP. These efforts have made it possible to adjust communication procedures between operators to reduce the time it takes to process a mobile number portability request, to simplify the process for customers and to increase the information available to subscribers. A new mobile number portability system thus came into effect on 7 November 2011 in Metropolitan France, and will be extended to the overseas markets in July 2012.

As a result, the overall waiting period for mobile number portability has been shortened from 10 calendar days to a maximum three working days – unless expressly requested otherwise by the customer, provided access is possible (actual availability of the SIM card) and depending on the legal retraction period in instances where customers do not subscribe in person (i.e. over the phone or the Web).

The new system also requires that voice servers supplying the operator identity statement, or RIO (*Relevé d'Identité Opérateur*) – which is crucial to requesting retention of a mobile number – be available 24/7.

These servers can be accessed from the customer's mobile line through a new, freephone number shared by all carriers: 3179. Subscribers are now given clearer instructions when consulting this voice server. A recorded message informs them of the exact dates of their contractual commitment, which are needed to calculate any early cancellation fees they might incur, along with the general principles of the one-step procedure whereby customers wanting to switch carriers do not address themselves to their old carrier but rather to their new provider. Thanks to this mechanism, a customer's old subscription is cancelled the moment their number is actually ported. The system also includes a series of text messages (SMS) that guide the customer through the different stages in the process, from obtaining their operator identity statement right up to the actual porting of the number, by way of confirmation that their request has been received. It is stipulated that any delays or mishandling of a number portability request will result in compensation for the subscriber – in response to a request that effect from the customer and once verified by the carrier.

3.347 million mobile numbers were ported in 2011, or 45% more than in 2010.

4.2. Fixed number portability

ARCEP acts as an observer in the fixed number portability association, APNF (Association de la portabilité des numéros fixes), which provides carriers with the technical tools for informing one another of porting operations carried out on behalf of their customers, along with a common inter-operator exchange protocol for processing fixed number portability requests.

The objectives of the efforts undertaken in 2011 to improve the system were:

- to make fixed number portability possible regardless of the type of phone number, the operator or the technology used to supply the electronic communications product;
- to reduce the maximum service interruption to only a few hours on the day the porting operation occurs, starting on 1 January 2012.

2,502,702 fixed numbers were ported in 2011, which is as many as in 2010.


Ouverture
Liberté de choix
Ouverture
Services gérés
Neutralité
Accès non discriminatoire
Transparence
Investissement
Interconnexio internet
Bien collectif stratégique
Neutralité
Bien collectif
Gestion de trafic
Investissement
Innovation

Net neutrality

1. Background and core issues

The net neutrality debate underscores the growing role that the internet plays in society, and how important it is to the development of a modern and competitive economy. In this era of rapidly increasing usage, the role of the regulator is to encourage investment in the networks while working to maintain a digital environment that protects freedom and innovation.

ARCEP began to devote itself to the net neutrality issue back in 2009 – beginning a cycle of investigation and broad consultation with the sector's players and the public. This resulted in the publication of ten "proposals and recommendations" in September 2010 that lay out the rules for internet access providers, and detail the Authority's actions to put them into effect.

This work is part of the regulatory framework amended in 2011 by the transposition of the the Telecoms Package.

1.1. What is at stake?

In 2011, three quarters of the people of France had an internet connection at home[1], while 45% of mobile customers use their handset to access data services[2] which continue to grow at a steady pace. The internet has thus become a shared asset whose development is now of strategic importance for today's economies.

The principle of neutrality implies that the networks that make up the internet ("lower layer") must relay information ("upper layer") without discriminating according to the nature of this information, its sender or recipient.

This principle has largely underpinned the internet's trajectory up until now, and has allowed a host of services and applications to develop. "Innovation without permission" has thus been able to flourish, enabled by the low entry costs and the guarantee of immediate and unconditional access to the rest of the connected world, without having to enter into negotiations with the various intermediaries involved in relaying traffic to end users. For internet users, the principle of neutrality guarantees access to all services and the ability to interact with anyone who is online.

Massive investments are now needed to increase the networks' capacity and keep up with ongoing changes in the way the internet is used. Some operators believe that traffic management techniques need to be employed, both to contain their costs and protect revenue from services offering priority routing for online traffic. If it does seem legitimate for these

1 - CREDOC "Standard of living and aspirations" surveys, 2011

2 - ARCEP Observatory of electronic communications markets in France, Q3 2011. Included are multimedia services such as the internet, WAP, MMS, e-mail, and this regardless of the supporting tech. Sending an SMS does not fall within the scope of this definition.

operators to actively manage internet traffic, for instance to protect against DOS attacks, worms, hackers, etc. other practices are more questionable, such as those that involve throttling or blocking data streams coming from the competition. The internet may also be a source of conflict between content providers and network operators over the terms of their interconnection.

Recognising the importance of these issues, ARCEP proposed a framework whose purpose was to define the conditions for sustaining the internet's development over time, and which respect its primary nature as a space of freedom of expression and global interaction.

1.2. The core principles

In this framework, ARCEP stressed the essential part that competition plays in ensuring that users have the broadest possible choice, and encouraged operators to market high quality products. The Authority intends for its actions to create the state of effective competition in the broadband and ultra-fast broadband markets by seeing to their liquidity and to the transparency of the players' practices.

The Authority recognizes that it is legitimate for operators to market managed services under certain conditions – as they alone are able to guarantee a higher quality for specific types of content, such as television programming – alongside internet access which supplies general connectivity to all content and services. An ISP (internet service provider) must supply its users with an internet access service that is of sufficiently high quality and adheres to the principle of freedom of use – in terms of the content sent and received, and the applications and connected devices used, provided they do not harm the network. Information travelling over the networks must, by and large, be treated equally, making no distinction between senders, recipients, services, applications or devices.

Exceptions are nevertheless possible, although any traffic management practices must in all instances satisfy the criteria (reiterated in the ARCEP proposals) of relevance, proportionality, efficiency, non-discrimination between the players and transparency. The Authority considers that, if managed services must be able to develop to protect the players' ability to innovate, they must not result in a degradation of the quality of internet access below a set minimum threshold.

The sector reacted positively on the whole to the proposals and recommendations published in September 2010. They demand greater transparency on the techniques being employed and better information for the regulator. To put them into practice, ARCEP began four courses of actions which are detailed on page 131.

1.3. The revised regulatory framework

The Authority's actions are part of the legal framework that came into effect in August 2011 with the transposition of European directives that assign a new objective and new responsibilities to the regulator. ARCEP is thus now tasked with ensuring, "*the ability of end users to access and distribute information, and to run the applications and services of their choice*"[3].

The regulator has a newfound responsibility to maintain a sufficiently high level of service and prevent congestion, and "*can set minimum quality of service requirements*"[4]. This power is accompanied by the ability to determine the nature, rules and conditions governing the publication of the quality of service (QoS) measurements performed by the operators[5].

In addition, ARCEP's powers to settle disputes have been expanded to include all undertakings involved in interconnection, as it is now responsible for supervising the "*reciprocal technical and pricing terms and conditions governing traffic routing between an operator and an undertaking providing online communication services to the public*[6]". It has also gained the ability to gather "*information and*

3 - *Article L.32-1, Point II, Para. 15 of the French Postal and electronic communications code (CPCE)*
4 - *CPCE Article L. 36-6, Para. 5*
5 - *CPCE Article D. 98-4*

documents concerning the technical and pricing terms of traffic routing applied to their services" [7] from these undertakings.

Lastly, the Law requires operators to be transparent about their traffic management practices, and stipulates that information on the practices in customers' contracts "*will be presented in a clear, comparable and detailed fashion, and made readily accessible*"[8].

2. A European debate

The question of internet and network neutrality has elicited a great deal of interest, and has been the focus of a number of initiatives from a great many players: European institutions, regulators within BEREC and Member States.

2.1. Actions at the European level

In April 2011, the European Commission issued a communication on "*the open internet and net neutrality in Europe*"[9], which provided a summary of the current state of affairs, including existing legal provisions and the work on the issue that is underway, notably within Body of European Regulators for Electronic Communications (BEREC). The document assigns BEREC a prominent role as expert, calling on the body to deepen and expand the scope of the work it is doing on the matter. As the Commission continues to monitor these issues, it is expected to express a more detailed position over the course of 2012, once BEREC has published its work.

Meanwhile, the European Parliament reaffirmed its strong commitment to the fundamental principles of network neutrality in its "*resolution of 17 November 2011 on the open internet and net neutrality in Europe*". It recognises the risks of departing from the principles of net neutrality and underscores the importance of adopting a consistent approach at the European level. It identifies a number of specific subjects, such as traffic management and the interconnection market, that the Commission should continue to examine, and calls on NRAs[10] to work actively to ensure net neutrality, with the help of BEREC.

With its "*Conclusions on the open internet and net neutrality in Europe*"[11] of 13 December 2011, the European Council adopted a position in support of a proactive approach to net neutrality.

2.2. The work being done by BEREC

The role played by BEREC – whose work on the issue is being co-chaired by Norwegian regulator, NPT, and ARCEP – has been central to the debate since 2010. Following the adoption of the new Telecoms Package, the European Commission tasked BEREC with several projects. The body began with an inventory of the status of net neutrality in Europe, before moving onto a more in-depth examination of specific topics in a bid to develop a shared understanding of the regulatory issues at hand, and establish a common methodology for addressing them.

In late 2011, BEREC published a report on quality of service[12] along with guidelines on the transparency of offerings[13]. Several more actions are still underway and will result in publications over the course of 2012, including: a report on IP interconnection, a report on competition within the context of net neutrality, QoS guidelines and a survey on operators' traffic management practices. All of this work will help the Commission determine its subsequent courses of action.

6 - *CPCE Article L. 36-8, Para. 2*
7 - *CPCE Article L. 32-4, Para. 2*
8 - *Article L.121-83 on the Consumer code, particularly paragraphs g) and i)*
9 - *COM (2011) 222 final of 19 April 2011*
10 - *National regulatory authorities*
11 - *http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/fr/trans/126891.pdf*
12 - *http://erg.eu.int/doc/berec/bor/bor11_53_qualityservice.pdf*
13 - *http://erg.eu.int/doc/berec/bor/bor11_67_transparencyguide.pdf*

2.3. Actions being taken by Member States and national regulatory authorities

Virtually none of the EU Member States have introduced restrictive legal provisions relating to net neutrality beyond what the European framework demands. Some national regulatory authorities (NRA) have nevertheless taken certain initiatives.

Of all EU Member States, to date only the Netherlands have introduced legal provisions aimed at framing traffic management practices. The Dutch House of Representatives added amendments when transposing the European framework into Law aimed at forbidding internet service providers from blocking or throttling internet services and applications. The text nonetheless allows for four exceptions which are deemed reasonable motives: to minimize the effects of congestion, using non-discriminatory techniques; to preserve the integrity and security of the network; to restrict the transmission of unsolicited communication, provided the end user has given their prior consent; to implement a legislative provision or court order. The text was due to be adopted by mid-2012.

Elsewhere in Europe, along with ARCEP, Norwegian regulator NPT was a pioneer in publishing net neutrality guidelines back in 2010, as part of a co-regulatory approach with the sector's players. This document identifies competition and transparency in the broadband retail market as key guarantors of neutrality. NPT has combined them with an obligation not to discriminate between traffic streams according to their nature, origin or destination, and this at all points along the network. British regulator Ofcom has been conducting in-depth work on the topic of net neutrality since 2010, and in November 2011 published a report on "*Ofcom's approach to net neutrality*". It concludes that competitive forces are currently strong enough to protect net neutrality, but that it is still necessary to keep a close watch on the market's development and perform additional work in 2012.

Italian regulator, AGCOM, is also exploring the issue. It has introduced a measurement and monitoring system whose purpose is to improve quality of service and, in 2011, held two public consultations. Over in Finland, federal regulator, FICORA, in 2009 ordered operators to avail themselves of the means to measure the quality of their services.

Interview with ARCEP Executive Board member, Françoise Benhamou

Regulation in Europe and in other parts of the world wants to protect intellectual property by imposing supervision rules on internet companies that would appear to contravene net neutrality. What are your thoughts on that?

Françoise Benhamou : *We need to guard against false interpretations of what net neutrality means. To come back to the metaphor of the motorway – in other words opening up traffic to everyone in an impartial fashion – allowing everyone to use the motorway does not mean that we need to make it easy for a trafficker to escape. In other words, we need to separate the general principle of neutrality from the issue of battling against openly unlawful content providers. ARCEP needs to work to ensure neutrality in the sense of non-discriminatory access and proper definition of the rules that apply to traffic congestion remedies. We are not involved in the enforcement of intellectual property laws. We have no power in the arena of filtering or legal blocking: these are obligations that public powers can impose on operators in a bid to reconcile the freedom to communicate and respecting other fundamental rights – such as intellectual property, privacy, etc. – and, of course public safety imperatives, such as the battle against child pornography or against incitement to racial hatred.*

We can nevertheless take things further and reiterate two vital principles. The first is that any blocking on the network must be a last resort, when it is impossible to remove the content at the source, as stipulated in the Law on confidence in the digital economy. The second is that if this blocking is absolutely necessary, it must only come as the result of a decision from a competent authority, typically a judge, in response to a targeted request. A recent

judgment from the Court of Justice of the European Union (CJEU) in the Scarlet v. SABAM case is clear on this point: ISPs cannot be required to install systems that filter all content as a preventive measure.

The direct sales relationship between content providers and internet users disregards the question of fair financial compensation for bandwidth that is paid for by operators' investments. How do you think we can achieve a balance in the value chain?

Françoise Benhamou : *This is the issue of how to finance the internet and neutrality as seen from an economic angle. Even if their interests do not always coincide, content providers and internet users nevertheless both want the broadest possible – we could even say infinite – access to an ever-expanding selection of content, applications and services. The question of who should pay for bandwidth has arisen with the current ongoing surge in mobile traffic which requires massive investments that are crucial to ensuring quality. That being said, we must not be fooled by appearances. Everybody – internet users and content providers alike – pay for their connection, and use it under the terms listed in their contracts. Making a phone call to my banker does not require the contractual and financial relationship I have with her to go through my telephone operator, and I pay for that call through my monthly phone bill. The same is true with the internet.*

"Europe parlementaire" magazine , 21 March 2012

3. The Authority's actions

The current regulatory framework in France has helped create effective and sufficiently strong competition in retail markets. This competition helps sustain alternative internet access offerings, but is not such that it can guarantee internet and network neutrality. ARCEP has therefore identified four course of action, following the guidelines laid out in its proposals of September 2010 and in the revised regulatory framework of 2011.

The Authority provided in-depth assessment of its actions in this arena in the report it submitted to Parliament in early summer 2012[14].

3.1. Transparency

Changes to the regulatory framework governing net neutrality have resulted in stronger obligations regarding the information that electronic communications operators must provide – e.g. on traffic shaping, restrictions on access to services, etc. To improve the information made available to end users on operators' traffic management practices, ARCEP created a working group with DGCIS[15] and DGCCRF[16] whose members include representatives of ISPs, consumers and other users. The purpose of this group is to determine the rules for informing the public about traffic management practices including, in the broadest sense, technical or contractual traffic shaping techniques and how they may be used, according to the type of data, undertakings, services or applications involved.

Work is also be done on transparency and quality of service to guarantee that users have access to clear and understandable information.

ARCEP is involved, too, in the work being done by BEREC which has submitted its guidelines on transparency to consultation[17].

14 - In accordance with Article 21 of Law No. 2011-302 of 22 March 2011, bringing various provisions for adapting to European Union laws in the area of health, labour and electronic communications.
15 - General directorate for competition, industry and services (Direction générale de la compétitivité, de l'industrie et des services)
16 - General directorate for fair trade, consumer affairs and fraud control (Direction générale de la competition, de la consommation et de la répression des fraudes)
17 - BEREC Guidelines on Transparency in the scope of net Neutrality: Best practices and recommended approaches. http://erg.ec.europa.eu/doc/berec/bor/bor11_67_transparencyguide.pdf

3.2. Quality of service

In its proposals, ARCEP restated its commitment to internet access services that are transparent and of sufficiently high quality. The Authority's aim is not only to assess the quality of internet access services and ensure that it does not diminish, but also to ensure that traffic management does not result in targeted deteriorations. This approach applies to both wireline and wireless networks.

The Authority has therefore taken several course of action to monitor the quality of internet access and to ensure that it is sufficiently high and not being degraded. Should this occur, however, ARCEP could consider imposing minimum quality of service requirements, as allowed by Law following the transposition of the Telecoms Package of 2009. The information gathered will also help inform end users' choices between retail market products – as detailed in the section on the quality of internet access services on page 120 – and so strengthen competitive emulation between operators.

Looking more specifically at wireline networks, in 2011 ARCEP began discussions with the sector's stakeholders – i.e. operators, equipment manufacturers, content providers, consumers and researchers – to prepare for the introduction of a system for monitoring the quality of internet access.

The results of the public consultation on the general guidelines for this system – which ran from December 2011 to February 2012 – will enable ARCEP to fill in the details on the approach being taken and move towards the system's concrete implementation. The objective is to compare the different ISPs' performance using several types of indicator that reflect the quality of internet access. Bitrate measurements will be completed by technical indicators of network quality and indicators that reflect users' consumption habits, drawing a distinction between the portion of the result that can be attributed to the access technology (copper, cable, optical fibre) and the portion to be attributed to the ISP's performance.

As to mobile networks, ARCEP publishes an annual quality of service survey to which a system of monitoring traffic management practices is due to be added in 2012.

ARCEP is also contributing to the work being done by BEREC which, in 2011, published *"A framework for Quality of Service in the scope of net Neutrality,"* and is currently in the process of drafting guidelines on this topic.

3.3. IP interconnection

IP interconnection refers to the technical-economic relationship between operators, or between operators and major content and application providers, for connecting to one another and exchanging traffic. It is the very foundation of the internet.

It guarantees that all users have access to the entire network. Historically, IP interconnection has been an unregulated market, and home to powerful forces. It is nevertheless also becoming a source of conflict between the players. ARCEP therefore considers it necessary to acquire an in-depth understanding of this market. In particular, the Authority wants to ensure there is no major dysfunction in the market, and be able to anticipate any possibly negative developments.

To this end, in spring 2011 it sent out an informal questionnaire to stakeholders – ISPs, transit operators, service providers, CDN[18]– to obtain detailed information on their interconnection relationship. Drawing on this first set of data, and with a view to obtaining information on a regular basis through a formal mechanism, ARCEP launched a public consultation in December 2011 on the prospect of regular information gathering campaigns on the technical and pricing terms of interconnection and data routing.

18 - A Content Delivery Network (CDN) is composed of servers that are interconnected via the Web and which operate in tandem to make content and data – usually large multimedia files – available to users.

This mechanism was introduced through the ARCEP Decision of 29 March 2012[19] which will initially apply only to electronic communications operators who are required to declare themselves to the Authority (by virtue of CPCE Article L 33-1). The questionnaires that will be sent out to them twice yearly will allow ARCEP to deepen its understanding of their interconnection and routing relationships with other internet companies.

If necessary, operators who are not required to declare themselves to ARCEP and providers of public online communication services (PPOCS) may periodically be asked to complete the questionnaire as well, if they are interconnected with operators who are required to submit a biannual statement. The first responses to this information gathering campaign are due in August 2012.

3.4. Traffic management practices

The ARCEP recommendations on internet and network neutrality address the use of traffic management practices, in other words all of the techniques that differentiate the way traffic travelling over the network is treated – for instance by prioritising certain steams and throttling others, or even by completely blocking certain types of traffic.

To improve its knowledge of the practices being employed, in the first half of 2011 ARCEP asked operators for information on the traffic management measures being used on their networks. Then, at the initiative of the European Commission, from December 2011 to January 2012 the Authority took part in a more detailed inventory of practices across Europe, which covered both operators and the public.

The results of this exercise revealed the variety of practices being employed, some of which appear to pursue legitimate objectives in an efficient and proportionate manner. Others, however, need to be looked at more closely to verify whether they comply with the Authority's stated principles. Exercises such as these also underscore the need to monitor these practices continually. The results enabled ARCEP to provide an assessment of the implementation of its recommendations of September 2010, and of their operational relevance, in the report it submitted to Parliament in mid-2012.

At the European level, the Commission is preparing a summary of the survey of existing practices, while BEREC is due to publish an analysis of how these practices affect end users, as well as content, application and service providers. services.

Article by Nicolas Curien, former ARCEP Board member

The digital revolution is steering us towards a knowledge-based economy and society, and not just an information-based one. Here, the internet plays the role of an extraordinarily powerful "cognitive prosthesis" that expands the field of perceived reality and multiplies the potential fields of endeavour [...]

Compared to the two industrial revolutions that preceded it, the digital revolution also has a singular trait, namely that it affects one the essential aspects of the human species: cognition. This is why the internet is not only a tool at the service of humankind, as a railway or an electrical grid might be, but also a "complete" object in the philosophical sense of the term, within which individuals express themselves, read, write, communicate, within which they live and are!

"Big data or the digitidal wave",
Les cahiers de l'ARCEP No. 7, November 2011

19 - ARCEP Decision No. 2012-0366 of 29 March 2012 on the implementation of periodical campaigns for gathering information on the technical and pricing terms of IP interconnection and routing

PART III

Ensuring that regulated markets run smoothly

The postal market

1. Overview of the postal markets in France in 2011

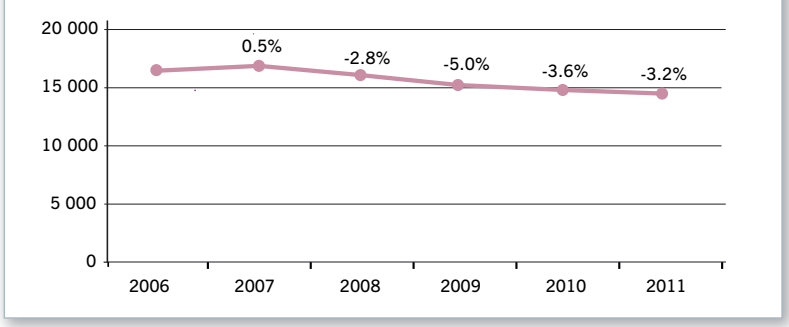
1.1. The market as a whole

a) Items of correspondence delivered in France

In 2011, the market for items of correspondence (i.e. letters weighing less than 2 kg, accounted for 7.5 billion euros in revenue, 1.3% less than in 2010. The corresponding volumes (14.3 billion items) were 3.2% down on the same period.

The addressed-advertising market (20% of the market in terms of value and 30% in terms of volume) contracted less sharply (0.5 in value and 1.9% in volume) than the correspondence-item market (1.5% in value and 3.9% in volume).

Volumes (in millions of items) of items of correspondence delivered in France



The decline in items observed in 2011 had slowed compared with 2009 and 2010. Over the past four years, the average annual decrease in volumes was around 3.6%.

Revenue (in millions of euros, excl. tax) for items of correspondence in France							
	2006	2007	2008	2009	2010	2011	Change 2010-2011
Addressed advertising	1 647	1 657	1 646	1 491	1 482	1 475	- 0.5%
Items of correspondence, not including addressed advertising	6 788	6 924	6 666	6 346	6 123	6 030	- 1.5%
Total items of correspondence	**8 435**	**8 581**	**8 312**	**7 837**	**7 605**	**7 505**	**- 1.3%**
Amount in the reserved area	6 201	6 269	6 170	5 859	5 721	-	-

Source : ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

Volumes (in millions of items of correspondence) delivered in France							
	2006	2007	2008	2009	2010	2011	Change 2010-2011
Addressed advertising	4 871	4 795	4 733	4 419	4 347	4 262	- 1.9%
Items of correspondence, not including addressed advertising	11 668	11 821	11 419	10 928	10 454	10 066	- 3.7%
Total items of correspondence	**16 539**	**16 616**	**16 152**	**15 347**	**14 800**	**14 328**	**- 3.2%**
Amount in the reserved area	13 804	13 789	13 470	12 780	12 243	-	-

Source: ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

b) Outward international mail

Outward international mail volumes continued to slide. In 2011, at 385 million letters, correspondence flows shrank nearly 7% compared with 2010, i.e. roughly 30 million fewer letters.

In contrast, related revenue held steady at 392 million euros.

Nearly 8 out of 10 outward international items went to the European Union.

Revenue (in millions of euros, excl. tax) and volumes (in millions of items) from outward international mail							
	2006	2007	2008	2009	2010	2011	Change 2010-2011
Revenue	419	398	392	376	391	392	+ 0.1%
Volumes	475	462	468	436	413	385	- 6.9%

Source: ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

1.2. The operators in a fully liberated market

On 1 January 2011, the postal monopoly for items of correspondence weighing less than 50 grams was abolished, in accordance with the Law of 9 February 2010 . Since then, the market has been completely liberalised and there is no longer a reserved area. Nevertheless, at 31 December 2011, no authorised service provider had seemed able to capture a significant share for itself. La Poste continues to hold a virtual monopoly on delivering items of correspondence throughout the national territory.

After Adrexo dropped its dedicated correspondence-item network in 2007 because market opening was postponed, two main reasons explain the absence of larger providers on the French market: the steady decline in the correspondence-item delivery market over the past few years, and the very substantial resources needed to set up a delivery network compared with the return from postal operations.

1 - Law No. 2010-123 of 9 February 2010 on the state-owned company La Poste and postal activities.

a) Domestic mail operators

To date, with the exception of Adrexo which is authorised to operate throughout Metropolitan France, the other authorised postal service providers are locally based small- and medium-sized businesses. These 17 companies, ranging from individually owned businesses to limited companies, operate in areas ranging from a single town/city to one or two *départements*. In most cases, their postal delivery operations represent a minor part of their services.

Even if the competition were to develop in future to the point of capturing significant market share, the Law provides for a contribution – in the form of a compensation fund – to financing the additional cost generated by universal postal service obligations. Only authorised operators delivering a certain volume of mail would be affected by this contribution.

b) Cross-border mail operators

The international postal market was fully opened up to competition from 1 January 2003. There is real competition between La Poste and subsidiaries of foreign postal services for letter items for abroad. In France, there are also two independent private operators, IMX France and OptiMail Solutions, operating in this particular segment.

However, at around 4%, this market represents only a fraction of addressed items.

1.3. The mail preparation market: the BASIC study

In July 2011, ARCEP published a study by the consultancy firm of BASIC on mail-preparation operations as a follow up to an earlier study published in 2008. This study allows better assessment of developments in this market which is closely linked to that for physical mail volumes, at a time when technological changes (data processing, dematerialisation) are tending to alter the skills required and the investments needed to operate in the mail-preparation business.

Rolled out in France from the 1970s, the mail-preparation sector focuses on preparing and stuffing letters, sorting them in accordance with La Poste sorting plans and handing them over to the postal network. Mailing houses have gradually added other functions (address-database management, printing, handling of returned items, etc.). In 2009, mail preparation in the narrow sense generated 730 million euros in turnover, and almost 1.1 billion euros when related activities are included.

Dematerialisation is a key factor in assessing changes in this business. The study shows that senders adopt prudent strategies aimed at defining the ideal mix of electronic and physical communication rather than activating fast, radical substitution of letters sent through the post. The privileged role of conventional mail in campaigns to develop customer loyalty is still undisputed. These considerations suggest that dematerialisation in the transactional mail field might be only gradual. In the direct marketing field, while Internet communication continues to grow, the pace of this expansion has nevertheless slowed.

Mail preparation operations are built round three major activities, depending on the nature of the items processed. The study describes the situation for each and examines possible development scenarios.

- **The preparation of transactional mail** (bills, account statements, administrative items) has changed in response to new technologies, in particular digital printing, which now permits logical sorting of letters generated from computerised customer databases. It has not been overly affected by falling transactional mail volumes because more customers are turning to mail preparation. In future, however, this segment should nevertheless be affected by dematerialisation policies which have not yet been intensively introduced by big mailers like banks and insurance companies. What is more, the introduction of automated solutions for processing single-piece mail should be a source of growth.

- **Direct marketing mail business** (advertising items) is dependent on marketing's economic environment and on advertising-resource allocation choices. Over

the period covered by the report, mailshots (using the medium of physical mail) remained a fairly constant percentage of direct mailing expenditure as a whole. The most probably development scenario is that of considerable regrouping of the market around two major categories of players: those able to offer their customers services with high added value, and a sizeable number of small mail-preparation companies which will continue operating, either because of their local presence or as sub-contractors.

- Lastly, when it comes to **press-item preparation**, falling delivery volumes, higher postal tariffs and the concentration of publishers' service-procurement policies are likely to increase the pressures on players over the next few years, and this could lead to further amalgamation.

2. ARCEP's new powers in postal matters

2.1. Processing complaints

a) The new provision introduced in 2011

Under the Law of 9 February 2010, postal service users can, as of 1 January 2011, submit to ARCEP complaints which could not be satisfied with the procedures put in place by postal service providers.

ARCEP received 75 letters of complaint in 2011, of which only six were admissible. 74 concerned La Poste, which can be explained by the fact that this operator currently processes the majority of flows.

Of the six admissible submissions, two were amicably settled between the users and La Poste, and two were the subject of Opinions delivered by ARCEP in 2011.

b) The first example: parcels delivered against signature

On 6 July 2011, ARCEP received a complaint about La Poste's parcels service. In this case, ARCEP observed[2] that the procedures followed by La Poste for delivering parcels against signature needed to be considerably improved.

First, in a FAQ section of its website, La Poste seems to prohibit customers from making reservations on receipt of the item. ARCEP found that a prohibition of this kind had no textual basis.

Furthermore, ARCEP pointed out contradictions between the texts of the terms of sale and the information available on La Poste's website about the possibility for customers to collect their parcel at a post office, so as to be able to open it in the presence of a La Poste staff member.

Last, ARCEP noted that La Poste had not complied with its internal rules of procedure for delivering parcels against signature to the effect that the signature had to be obtained on an identifiable document.

Besides eliminating any contradiction in the information provided to the public, ARCEP also thought it essential for La Poste to improve its procedures for delivering parcels against signature, particularly as regards the conditions under which the person accepting the item can express any reservations at the time of delivery. More specifically, there should be a space on the delivery bill to allow the consumer to make any such reservations.

Acting on ARCEP's Opinion, La Poste provided for the possibility of users making reservations about the general condition of a parcel on delivery. It undertook to provide a space on the delivery bill for indicating any damage (option of two possible levels), when the addressee's signature is obtained.

2 - Opinion No. 2011-1015 of 20 October 2011 on a complaint about the parcels service.

2.2. Evaluating the cost of the national planning and development mission

Through its network of contact points, La Poste contributes to the planning and development of the national territory, in addition to its universal service obligations. The Law of 9 February 2010 charges ARCEP with evaluating the net cost of this mission, and ARCEP carried out this evaluation for the first time in 2011[3], arriving at a cost of 269 million euros for 2010.

a) ARCEP's calculation of the net cost

The cost of this national planning and development mission is calculated in accordance with the method specified in the Decree of 18 July 2011. In this method, the revenue and costs of the existing network are compared with the corresponding amounts for the (hypothetical) network which La Poste would operate if its only obligation were guaranteeing access to the universal service. The net cost corresponds to the cost avoided, less any revenue lost by reducing the size of the network.

The total cost of the existing network stands at 2,901 million euros. Without its national planning and development mission, La Poste would have operated a network with 7,329 contact points. The cost of this hypothetical network corresponds to the actual cost of a reduced network, namely 2,440 million euros, plus the costs resulting from demand in relation to the contact points eliminated, which were assessed at 192 million euros. Thus, the total cost of the hypothetical network is 2,632 million euros.

This produced an avoided cost of 269 million euros. Considering that La Poste's entire revenue was preserved and that revenue loss under the hypothetical scenario was therefore zero, ARCEP deemed this to be the net cost.

The Law also provides that ARCEP should submit a report to the French Government and Parliament about the net cost, after consulting the Higher Public Service Commission on the Post and Electronic Communications (CSSPPCE). Transmitted on 22 December 2011, this report addresses the comparative economics of the various types of contact point. La Poste's network comprises just over 6.600 contact points operated on a partnership basis, either with municipal authorities (local-council run postal agencies), or with retailers (sub post offices in shops). These solutions enable La Poste to perform its territorial presence mission by pooling use of the necessary resources.

		2006	2007	2008	2009*	2010
Net cost (million euros)	La Poste evaluation	399	382	351	314	287
	ARCEP evaluation				288	269
Reduction		144	137	136	133	156

Source: ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.
* ARCEP carried out an evaluation for 2009 for guideline purposes.

b) Compensation received by La Poste

Since 1990, La Poste has been compensated for this net cost by means of local tax reductions (property tax on developed and undeveloped property, territorial economic contribution), the amount of which will henceforth be based on ARCEP's evaluation. This amount came to 156 million euros in 2010 and 168 million euros in 2011[4].

3. The universal postal service

3.1. Changes in the scope of the universal postal service

The scope of the universal postal service is defined by the Post and Electronic Communications Code. La Poste keeps an updated catalogue in which its universal-service obligations are translated into its

3 - Decision No. 2011-1081of 22 September 2011 on the evaluation for 2010 of the net cost of the additional network coverage enabling La Poste to perform its national planning and development mission.
4 - Decree No. 2011-2069 of 30 December 2011 created Article 344 quindecies of the General Tax Code setting tax reduction rates for 2011 of 85% for corporate financial tax contributions, and 79 % of the added value used in application of Article 1586 ter for corporate value-added tax

product range. This catalogue underwent several modifications in 2011: La Poste created new products and discontinued or withdrew others, both for single-piece items[5] and bulk items[6].

a) Single-piece items and the "green letter"

La Poste transmits its proposals for substantive changes in connection with single-piece items to the Minister for Posts and to ARCEP. . The latter has one month to give its opinion and transmit it to the Minister for Posts who can then oppose the change[7].

Thus, on 7 March 2011, La Poste sent ARCEP its project for creating a new single-letter product to be marketed as the "green letter". This service is characterised by a guideline transmission time of two days, placing it between the priority letter (one day) and the economy letter (more than two days).

La Poste stated the aim of transmitting 95% of green letters in two days and expects a substantial shift from priority letters to this new product. In the long term, the less restrictive schedules should enable it to make significant cost savings. ARCEP took note of this new product[8], seeing it as enhancing the universal service range by offering consumers a choice. ARCEP's Opinion nevertheless recalled that the provision of a priority letter service with next-day delivery is a mandatory universal postal service component[9], stating that ARCEP will ensure the quality of the priority letter service and proper information of consumers.

Marketing of the green letter started on 1 October 2011. Noting a risk of reduced consumer access to the priority letter following the introduction of this product, ARCEP launched a public inquiry[10] on conditions for marketing single-piece items. This inquiry has now been concluded[11], and ARCEP has begun discussions with La Poste on remedying the anomalies identified.

Changes were also made to the catalogue, with the discontinuation from 1 July 2011, of the economy international service (letters and small packets), where volumes were marginal[12].

b) Bulk items

The only changes made to the universal service catalogue for bulk items concerned advance notification of ARCEP and the Minister.

On 1 October 2011, La Poste removed the "Destineo Intégral" bulk-item service for advertising from the universal service catalogue. This product is still available but no longer enjoys the VAT exemption for universal service products. This change does not affect customers who recover VAT but could result in a sizeable price increase (+19.6%) for those that do not (in particular, banks and insurance companies).

Concomitantly, La Poste therefore created "Destineo Pluriel Simply", a new advertising-item product that comes under the universal service, with features similar to those of the withdrawn service and intended more specifically for clients that do not recover VAT. La Poste also included a new advertising-items service for bodies recognised as being of public interest in the universal service catalogue.

5 - *Individual items.*
6 - *Simultaneous posting of more than 100 items of the same kind or belonging to the same category.*
7 - *Article R.1-1-10 of the Post and Electronic Communications Code.*
8 - *Opinion No. 2011-0416 of 7 April 2011.*
9 - *Article R.1 of the Post and Electronic Communications Code.*
10 - *Decision No. 2011-1246 of 20 October 2011.*
11 - *Decision No. 2012-0156 of 2 February 2012.*
12 - *Opinion No. 2011-0418 of 7 April 2011.*

In its opinion on tariffs for the new bulk-item services[13], ARCEP pointed out the inconsistency of these changes to the catalogue of universal services, seeing them as being mainly motivated by the resultant tax benefits for La Poste. This action allows La Poste to recover more VAT on its intermediate purchasing and payroll tax. Reducing the scope of the universal service to optimise taxes seems reprehensible, particularly on the part of a public corporation that is wholly owned, directly or indirectly, by the State.

3.2. Tariffs in 2011 and extension of the price cap

a) Tariff movements in 2011

2011 saw an average increase of 2.2% in universal service tariffs that is very close to inflation, (2.1%). In contrast to previous years, bulk-item tariffs also went up.

Annual change in average universal service tariffs (*)

	2009	2010	2011	Average 2010-2011	Tariff increases in 2011	
Single-piece items with stamp	1.7 %	2.0 %	3.3 %	2.3 %	1 july	3.2%
Single-piece items without stamp	1.7 %	1.6 %	2.0 %	1.7 %	1 july	1.4%
International mail	1.0 %	0.3 %	1.7 %	1.0 %	1 july	3.2%
Advertising mail	0.8 %	0.1 %	1.7 %	0.9 %	1 july	3.4%
Parcels	3.4 %	1.4 %	2.3 %	2.4 %	1 march	2.3%
Other (press, services, international…)	2.6 %	1.9 %	2.1 %	2.2 %	1 july	0.5%
Overall basket	1.5 %	1.1 %	2.2 %	1.6 %	-	-

Source : ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

(*) Tariff changes weighted by year n-1 volumes. The tariff framework is based on year n-2 volumes, and this may result in differences from the data above.

Domestic single-piece mail

At 1 July 2011, La Poste raised its tariffs for stamped single-piece items sent by private customers by 3.2%, increasing the price of a priority letter (red stamp) from 0.58 euros to 0.60 euros for the first weight step [0 to 20 grams]. At 1.4%, the increase for machine-franked, as opposed to stamped, items sent by businesses was more modest, thus continuing the gradual uncoupling of rates for items with and without stamps which began in 2010.

Bulk-item services

At 1 July 2011, La Poste increased its tariffs for transactional mail services (items of a mandatory nature, such as bills, bank statements, etc.) by 3.2% and advertising mail services by 3.4%, in contrast with the moderate changes made in 2009 and 2010.

ARCEP issued an Opinion supporting these tariff changes[14] given the context of plummeting transactional mail volumes and a comparatively small margin for advertising mail.

At 1 October 2011, the removal from the universal service catalogue of the "Destineo Intégral" bulk-item service for advertising prompted customers of this product who cannot recover VAT and are not recognised as of public interest to transfer to the new "Destineo Pluriel Simply" services. This transfer was accompanied by a 3% tariff hike on top of the 1 July 2011 increase.

13 - Opinion No. 2011-0847 of 26 July 2011.
14 - Opinion No. 2011-0572 of 31 March 2011 concerning universal service bulk items, presented in La Poste's tariff dossier dated 20 April 2011

Parcel services

At 1 March 2011, La Poste increased domestic and international Colissimo tariffs by 2.6% and 1.9% respectively. La Poste did not raise tariffs for overseas items which cover items sent from Metropolitan France to the overseas *départements* (DOM), and from the latter to the overseas territories In so doing, it complied with ARCEP's comments, in its Opinion of 10 February 2011, emphasising that the high profit margin obviously conflicted with universal service tariff principles and pointing out that the tariff increases envisaged for overseas territories were inappropriate[15].

International items

On 1 July 2011, La Poste introduced limited increases for products used by private individuals. Only the tariff for the first weight step [0 to 20 grams] of priority international letters went up (0.77 euro for such items sent within the European Union). However, the discontinuation of the economy range (letters and small packets) shifted consumer demand towards the more costly priority product. This means a tariff increase of around 40%, but the volumes concerned are marginal, which explains the low average tariff increase (+1.3%) for international letters. ARCEP commented that it would be careful to ensure that tariffs for single-piece international products, for which there was now only one service level, continued to be affordable in future.

Tariffs for products used by businesses remained stable in 2011, partly in response to ARCEP's 2010 investigation of the justification for tariff increases, bearing in mind the margins generated by this segment.

b) The tariff framework

The tariff framework situation in 2011

The period originally adopted for implementing the second tariff framework system[16]was from 1 January 2009 to 31 December 2011.

This system provides for a tariff increase which is limited on average to inflation plus 0.3% for all universal service products (overall basket), and just to inflation for the remaining basket of single-piece items used by businesses (sub-basket). The balance sheet for what was to be the final year of the system is drawn up as follows:

- for the overall basket, taking account of the balance from previous years, the increase authorised for 2011 was 2.9%; thus, the actual increase of 2.2% a complies with the multi-year tariff framework [2009 –2011];
- for the sub-basket, the authorised increase was 1.8% compared with an actual increase of 2.1%, thus overstepping the price cap for the period [2009 – 2011] by 0.3%.

ARCEP nevertheless accepted this exceeding of the price cap because of the uncoupling observed between tariffs for products with stamps and those without, one of the reasons behind the sub-basket, and because La Poste undertook not to increase its tariffs for this sub-basket in 2012[17]. This undertaking resulted in tariff-framework compliance for this sub-basket assessed over the extended period (2009 – 2012), the extension of the second tariff-framework system finally adopted by ARCEP (see below).

15 - Opinion No. 2011-0161 of 20 February 2011 concerning La Poste's tariff dossier dated 21 January 2011 on universal service parcel products.
16 - Decision No. 2008-1286 of 18 November 2008 on the characteristics of the multi-year tariff framework for universal postal services
17 - Opinion No. 2011-0415 of 5 April 2011 on tariffs for domestic single-piece items coming under the universal postal service, presented in La Poste's tariff dossier of 7 March 2011.

One-year extension of the tariff framework system

As the period set for the tariff framework was due to expire, ARCEP and La Poste did some preparatory work on introducing a new framework for 2012 to 2014, reconsidering La Poste's environment, and in particular its forecast expenditure and traffic. However, it transpired that projections up to the year 2015 did not indicate satisfactory financial equilibrium for the universal service. Moreover, changes to the scope of products coming under the universal service, in particular the creation of the green letter, designated to make up a substantial proportion of single-piece items, and the withdrawal of certain advertising mail services, are likely to impact on La Poste's economic situation.

In this context, the most appropriate solution seemed to be to extend the current system by one year, and to make the necessary adjustments. This one-year extension will be used for further work and will make it possible to obtain a more detailed picture of where La Poste is headed in economic terms[18].

ARCEP nevertheless supplemented the 2012 system, considering it necessary and appropriate for green-letter product tariffs to be subject to a specific tariff framework identical to that governing the overall basket, namely a tariff increase limited to inflation, plus 0.3%, i.e. 2.0% for 2012.

3.3. Quality of service

a) Quality of service testing and publication of information

In accordance with the Law of 20 May 2005 and the texts adopted for its application, ARCEP monitors La Poste's compliance with the quality of service objectives laid down by the Minister for Posts ARCEP also sets great store by transparency in respect of universal postal service quality, in particular by ensuring that La Poste publishes information about it.

Every year since 2006, La Poste has published – at ARCEP's request – a universal postal service indicator table[19] , the content of which is regularly discussed with consumer associations. The list of indicators has expanded with each passing year and now covers a substantial proportion of user information requirements.

ARCEP has also commissioned various studies on the reliability of La Poste's quality of service testing:

- audit of priority-letter transmission time testing (2006);
- study on parcel-service quality testing and complaint numbers (2008);
- study on the analysis of La Poste's service quality for registered items and on registered-letter quality (2010).

These studies helped identify the necessary improvements which were then made by La Poste. This also explains the sweeping changes La Poste made to its operational procedures for registered letters in 2011 (see below).

After disappointing results for 2010, 2011 brought a marked improvement in La Poste's quality of service. The poor quality observed in 2010 was partly due to particularly unfavourable circumstances for La Poste, especially in terms of weather.

b) Quality of service in 2011

Mail transmission times

Priority-letter transmission times improved steadily and regularly between 2005 and 2009, up 6 percent. After deteriorating in 2010, better priority-letter transmission times were recorded again in 2011.

Improvement in the percentage of letters delivered in D+2 resumed after a disappointing 2010.

18 - Decision No. 2011-1451 of 20 December 2011.
19 - Available at: http://www.laposte.fr/legroupe/content/download/15102/122717/file/r%C3%A9sultats2011-DREN.pdf

Mail transmission times								
	2005	2006	2007	2008	2009	2010	2011	Change 2010-2011
Priority letters								
% delivered in D+1	79.1%	81.2%	82.5%	83.9%	84.7%	83.4%	87.3%	+ 3.9 pts
% delivered in D+2	95.4%	96.2%	96.3%	96.8%	96.8%	96.0%	97.5%	+ 1.5 pt
Cross-border mail inward								
% delivered in D+3	95.0%	95.9%	95.5%	97.0%	95.7%	92.7%	96.0%	+ 3.3 pts
% delivered in D+5	99.1%	99.3%	99.1%	99.5%	99.3%	98.7%	99.3%	- 0.6 pt
Cross-border mail outward								
% delivered in D+3	93.0%	94.0%	94.8%	95.4%	94.4%	90.4%	93.6%	+ 3.2 pts
% delivered in D+5	98.5%	98.7%	98.8%	99.0%	98.7%	99.6%	98.4%	- 1.2 pt

Source: ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

Transmission times for registered letters

There was a substantial improvement in the quality of registered letters in 2011 also, after deterioration in two successive years. The information available indicates that consumers must be able to reasonably expect delivery of their registered items in D+2.

The percentage of items delivered in D+7, the product's reliability benchmark, also improved to 99.8% in 2011. Today, only one registered letter in 500 reaches its destination more than a week after posting.

Registered-letter transmission times and reliability					
	2008	2009	2010	2011	Change 2010-2011
Transmission times					
% delivered in D+2	90.9%	88.7%	85.8%	92.5%	+ 6.7 pts
Reliability					
% delivered in D+7	99.6%	99.7%	99.6%	99.8%	+ 0.2 pt

Source: ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

Transmission times for Colissimo guichet

The parcels tested are "Colissimo guichet", i.e. individual parcels with a contractual transmission time of D+2, posted by private customers and small businesses at La Poste contact points. If it fails to meet its transmission-time target, La Poste undertakes to give senders a voucher for posting their next parcel free. This system therefore gives it a powerful incentive to provide good quality of service. Like the other products, quality improved here too in 2011. To be on the safe side, consumers should, however, allow an extra day (D+3) to ensure their parcel arrives on time.

Colissimo transmission times and reliability

	2005	2006	2007	2008	2009	2010	2011	Change 2010-2011
Transmission times								
% delivered in D+2	83.8%	84.1%	85.8%	85.0%	87.7%	84.8%	88.7%	+ 3.9 pts
% delivered in D+3	92.2%	95.5%	95.9%	96.3%	96.6%	95.2%	97.0%	+ 1.8 pt
Reliability								
% delivered in D+7				99.8%	99.9%	99.8%	99.8%	-

Source: ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

Number of post boxes and latest posting times

An accurate grasp of latest posting times for post boxes and how they change is essential for correct evaluation of quality of service statistics. The following table shows that latest posting times have remained stable in recent years.

Improvements in La Poste's quality of service are therefore rooted in more effective operation of its industrial base.

Number of post boxes and their distribution in terms of latest posting times

	2007	2008	2009	2010	2011	Change 2010-2011
Number of post boxes	147 343	149 793	149 208	148 366	144 610	- 3 756
- including those emptied at or before 1 pm	120 837 82.0%	119 788 80.0%	119 913 80.4%	119 950 80.8%	117 669 81.4%	- 2 281
- including those emptied at or before 4 pm	143 635 97.5%	142 267 95.0%	141 795 95.0%	141 152 95.1%	137 757 95.3%	- 3 395

Source: ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

ARCEP plans to refine its evaluation of changes to latest posting times on the basis of the volumes processed rather than the number of post boxes (boxes in urban areas collect much more mail than those in rural areas). It also plans to introduce a tool for measuring the accessibility of post boxes with afternoon and Saturday collections.

Complaints

The number of complaints handled by La Poste has risen steadily since 2007. La Poste says this is because of the introduction of new channels for lodging complaint like the 3631 hotline or La Poste's website.

Thus better accessibility to La Poste's complaints service is allegedly behind this increase, an explanation which ARCEP is in the process of verifying.

Moreover, La Poste maintains a 99% response rate within 21 days for the complaints sent to it.

Complaint processing statistics

	2005	2006	2007	2008	2009	2010	2011	Change 2010-2011
Number of complaints letters								
Number	533 123	591 252	417 237	446 751	627 812	862 538	926 872	+ 64 334
Number as a percentage of total flow	0.003%	0.003%	0.002%	0.002%	0.003%	0.004%	0.005%	-
Complaint processing time								
Response within 21 days	87.0%	90.0%	97.0%	97.7%	95.3%	99.0%	99.2%	+ 0.2 pt
Response within 30 days	93.0%	94.0%	98.7%	99.0%	98.0%	99.4%	99.6%	+ 0.2 pt
ndemnification								
Complaints giving rise to indemnification	7.6%	7.7%	9.0%	10.4%	14.6%	13.7%	12.9%	- 0.8 pt

Source: ARCEP, Observatoire postal - Enquêtes annuelles jusqu'en 2010, enquête avancée pour 2011, estimation provisoire.

.c) La Poste's quality of service objectives

In accordance with Article R. 1-1-8 of the Post and Electronic Communications Code, on 22 December 2011, ARCEP issued an Opinion[20] on a draft ministerial order concerning universal service quality objectives for 2011 and 2012

- Regarding quality testing of registered letters, ARCEP considered that delivery-time measurement should henceforth be based on a full count of items.

- In connection with the scope of the objectives, ARCEP recalled that the objectives must enable users to correctly gauge the quality of service they can expect. Target levels should therefore be stable around 95% for sustainable setting of universal service characteristics.

- On the subject of the objectives, ARCEP opined in particular that a clear distinction should be made between the characteristics of the green letter, which was introduced in 2011, and those of the priority letter so consumers can make an informed choice. Thus the D+2 object for the green letter should be set quickly at 95% to emphasise that this product is delivered two days after posting.

Moreover, priority-letter quality should be better than it is at present and ultimately attain 95%. This improvement could then result in an increased price differential between it and the green letter..

4. Specific case studies

4.1. Sending small, low-value items

ARCEP paid great attention to the conditions for sending small, low-value items at affordable tariffs. Though conditions for *Mini Max* service use and its accessibility improved in 2011, ARCEP had to impose a financial penalty on La Poste.

20 - Opinion No. 2011-1509 of 22 December 2011 on a draft ministerial order concerning La Poste's quality of service obligations for 2011 and 2012, under the head of the universal service La Poste is obliged to provide in application of Article L. 2 of the Post and Electronic Communications Code.

a) Conditions for *Mini Max* service use and its accessibility to the public

The *Mini Max* product, designed for sending low-value items at a tariff close to that for letters, was launched at the end of 2008, at ARCEP's request. However, in 2010, it transpired that conditions for its use were over restrictive. In particular, in addition to putting prepayment labels on these items, users had to affix stickers which could only be bought singly at post offices, making it necessary to go there to send every single *Mini Max* item

Marketing procedures for the *Mini Max* product were further diversified in 2011, and it is now available:
- *from post-office dispensers; and*
- *over the Internet*

At the same time, use of the sticker was discontinued and the prepayment and identification label combined. Furthermore, consumers wishing to use conventional postage stamps to frank their items can now write "*Mini Max*" on the envelope.

b) These changes provide better access to this product

A joint study conducted by ARCEP and the National Consumer Institute (INC) in 2010 revealed that information about this product was inadequate, thereby restricting its accessibility. In particular, the information provided by La Poste was limited and counter staff could not give consumers appropriate advice because, more often than not, they themselves knew little about it.

To remedy this situation, La Poste took various measures to improve user information by means of posters and coaching of counter staff. A study conducted by a firm of independent consultants thus revealed an improvement in information visibility and a much better knowledge of the Mini Max product among counter staff, thus meeting the goals of appropriate information for consumers about sending low-value items.

c) Product expected for sending small items

ARCEP nevertheless felt that the size conditions for the Mini Max service were overly restrictive, as items must not be thicker than two centimetres or heavier than one kilogram.

However, both Community and French legislation stipulate that the universal postal service must comprise a separate affordable parcel product for postal items weighing up to two kilograms. As a result, ARCEP was obliged to note that the universal service assigned by law to La Poste did not include an affordable product, i.e. one priced close to the letter tariff, for sending postal items, other than letters, weighing less than two kilograms and thicker than two centimetres, even though such products are available in many European countries.

Consequently, after instructing La Poste to offer an affordable product for sending low-value items over two centimetres thick and weighing more than one kilogram under conditions similar to those for letters, and in application of Article L. 5-320 of the Post and Electronic Communications Code, ARCEP imposed a one million euro penalty on La Poste for neglecting its universal service obligation, in a decision dated 20 December 2011[21].

4.2. The registered letter

The registered letter is a product to which consumers attach special importance. Within the framework of ARCEP's Postal Consumers Committee, representatives of consumer associations have on several occasions emphasised the importance of having a quality registered letter service, especially as regards reliability.

21 - Decision No. 2011-1453 of 20 December 2011 imposing a penalty on the La Poste company, in application of Article L. 5-3 of the Post and Electronic Communications Code.

Transmission times for registered letters need to be accurately measured and percentage losses evaluated. Care should be taken to ensure this product offers the reliability guarantees consumers expect.

A study commissioned by ARCEP from the consultants Ernst & Young in 2010 revealed that the quality measurement system used by La Poste for registered items should be altered because it did not allow losses to be measured and could not guarantee full representativity for transmission-time calculation.

In 2011, La Poste did extensive work on ensuring registered-item transmission times and losses were measured with satisfactory reliability. A new measurement system was developed on the basis of the European Standard EN 14137 system and its use made mandatory by ministerial order.

The measure introduced is based on on exhaustive scanning of registered letters that makes it possible to:

- record each item on the date on which it was posted ;
- record each item on the date on which it was delivered;
- compare these records to measure the transmission times and count items which were posted but not delivered.

The work started in 2011 consisted of systematising item scanning at the network entry point, an approach which had not previously been developed (La Poste already had a system for bar-code scanning registered items on delivery) and designing an information system for linking network entry and exit data which can then be used to evaluate transmission times and estimate percentage losses (items scanned on network entry that do not exit). With this system, exhaustive measurements can be made in 2012.

In parallel with this work, ARCEP asked La Poste to clarify information about whether or not registered letters are priority items.

While Community and national regulations do not specify whether or not registered letters are priority items, in the light of the present universal service catalogue and of La Poste's terms and conditions of business, ARCEP considers that registered letters count as priority items.

However, the information published in the indicator table shows that transmission times for registered letters are considerably longer than those for priority letters where D+1 is the standard.

4.3. The Postal Consumers Committee

In 2008, ARCEP set up a Postal Consumers Committee to promote dialogue and cooperation with consumer associations on matters coming within ARCEP's purview. This Committee meets twice a year, and eight meetings have been held since 2008 to debate issues of importance for postal regulation and for consumers.

These discussions have enabled ARCEP to effectively gear its actions to user interests. ARCEP takes maximum account of the views and concerns expressed by the consumer associations in regulating the universal service provider, La Poste, as well as other authorised postal service providers.

Un numéro des cahiers de l'ARCEP a été consacré au secteur postal (avril 2011)

Sommaire

Dossier

QUEL AVENIR POUR LE SECTEUR POSTAL ?

In particular, ARCEP's services present the quality of service results published by La Poste, at ARCEP's request, in the universal service indicator table. Discussions also centre on expedient changes to indicator-table information about the quality of universal service products. On several occasions, the consumer associations have, for instance, recalled the importance they attach to quality of service and transmission times. For them, it is crucial for the statistics in the universal service indicator table, but also those published otherwise by La Poste, to permit easy comparison with previous periods. New indicators are adopted when La Poste can implement a reliable measure at reasonable cost.

The Postal Consumers Committee also provided a privileged discussion platform for the introduction of the complaint-handling procedure as part of ARCEP's new powers.

The procedure introduced by ARCEP was revised to take account of the proposals made, particularly about deadlines for submitting complaints to ARCEP which were considered too restrictive in the first version. At the latest Committee meeting, the consumer associations stated the importance they attach to La Poste follow-up on ARCEP's opinions on postal complaints.

4.4. Information about the postal sector

Early in 2011, when the sector was totally opened up to competition, ARCEP dedicated an issue of its quarterly newsletter, "Les cahiers de l'ARCEP", to the future of a postal sector in search of a new economic model. Because – faced with the decline of the letter, once at the

core of their business – postal services are having to reinvent themselves: how can they remain competitive while satisfying customers throughout their national territory and providing a good-quality universal service? How should they react to the growing substitution of electronic mail for hard-copy mail? How can they conduct a development policy based on quality of employment? How can they find good ways of promoting growth?

5. The European Regulators Group for Postal Services (ERGP)

Created in 2010 by a European Commission decision, the European Regulators Group for Postal Services (ERGP[22]) took up its work in 2011 under the chairmanship of Joëlle Toledano, an ARCEP Executive Board member.

The ERGP groups the national regulatory authorities of the 27 Member States, plus several observers (European Commission, countries applying to join the Union, etc.). It acts as an advisory group of experts, as well as facilitating consultation, coordination and cooperation between the independent national regulatory authorities in the Member States and between the latter and the Commission.

The ERGP's work is organised around five topics:

- in the field of accounting, a group of experts chaired by ARCEP is studying the rules for allocating common costs, a key issue for postal corporations, both as universal service providers and on competitive markets;
- a second group is studying the cost of the universal service obligations for the incumbent operator which could give rise to compensation; it is also examining the impact of the different VAT systems used by operators;
- a third group compiles information about the postal-market situation in the various Member States and reprocesses them to make them comparable; work on quality of service, end-user satisfaction and market indicators;
- a fourth group is examining the issue of postal network access for new entrants, mailing houses and consolidators;
- lastly, a fifth group is studying tariffs for cross-border items, at the request of the European Commission, which wishes to understand whether the prices noted are justified.

This work resulted in the adoption and publication at the end of 2011, of two reports: the first on quality of service and end-user satisfaction, the second on market indicators. Two further reports, on common cost allocation and on calculation of the universal service's net cost and evaluation of a reference scenario, were submitted for public consultation at the end of 2011 and, after stakeholder comments had been taken into account, adopted in April 2012[23].

After this year under the chairmanship of France, Göran Marby, Director General of the Swedish regulator PTS, took over as ERGP Chair in 2012. ARCEP, as its former Chair, acts as one of the Vice-Chairs in the person of Marie-Laure Denis who succeeded Joëlle Toledano on ARCEP's Executive Board; the other Vice-Chair is Luc Hindryckx, Chairman of the Board of the Belgian regulator IBPT, in preparation for 2013 when he will become ERGP Chairman. The Group will continue its work in 2012 on the basis of the work programme adopted following a public consultation.

22 - Commission Decision of 10 August 2010 establishing the European Regulators Group for Postal Services (2010/C 217/07)
23 - http://ec.europa.eu/internal_market/ergp/.

Electronic communications market figures

1. Principal market data

1.1. Traffic up, prices down

• Revenue

Operators' revenue decreased by 2.3% in 2011 to €40.8 billion – largely due to a change in the taxation scheme that applies to the sector.

Revenue from fixed broadband and ultra-fast broadband services continues to rise (+5.6% in 2011) and stands at close to €10 billion. It is not, however, offsetting the ongoing decline in income from narrowband services, i.e. telephony and dial-up internet access – which totalled only €7.1 billion for the year – resulting from a swift decrease in the number of subscriptions to these services.

Mobile services as a whole, including value-added services (VAS), generated €20.3 billion in 2011, which marks a 2% drop compared to 2010.

This decrease can be attributed to the fact that the lower VAT rate that had been allowed for audiovisual access services was repealed on 1 February 2011, and that most mobile operators decided not to carry the subsequent price hike over to their retail tariffs. Most VAT-included prices therefore remained the same, and the higher value-added tax rate translated into lower VAT-included income for operators – which is what observatory figures reflect.

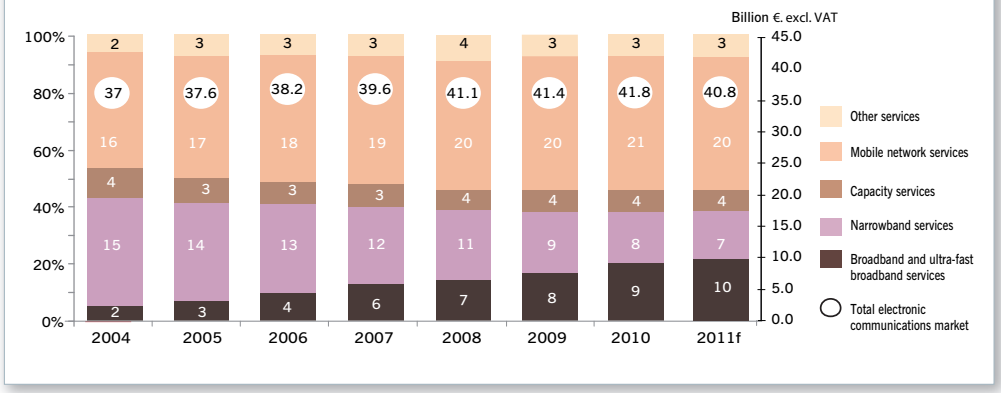
Operators' retail market revenue (billion €)

	2007	2008	2009	2010	2011f	Growth 2010-2011
Fixed network services	20.6	21.1	21.2	21.0	20.5	-2.5%
Broadband and ultra-fast broadband services	5.6	7.0	8.4	9.2	9.7	5.6%
Narrowband services	11.6	10.5	9.1	8.2	7.1	-13.0%
Capacity services	3.4	3.5	3.7	3.7	3.7	0.4%
Mobile network services	19.0	20.1	20.3	20.7	20.3	-2.0%
Total electronic communications market	39.6	41.1	41.4	41.8	40.8	-2.3%
Other services	3.3	3.6	3.0	3.2	3.3	3.0%
Operators' total end-market revenue	42.9	44.8	44.4	45.0	44.1	-1.9%

Source: ARCEP, Electronic communications observatory. Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Note: "other services" revenue is not derived from the electronic communications market, per se. It includes revenue generated by the sale and rental of terminals and equipment, including the rental of IP boxes, hosting and call centre management revenue, and revenue derived from print directories, advertising and the sale of databases. Contributions from declared operators provide only a partial view of these market segments.

Evolution of electronic communications operators' revenue, and breakdown by segment



Source: ARCEP.

- **Equipment**

The number of fixed lines has remained virtually unchanged for the past three years at around 35.3 million. Most of these lines (65%) supply a broadband or ultra-fast broadband connection to the internet, which translates into 22.8 million subscriptions, and close to six out of ten supply voice over broadband services. VoBB subscriptions in fact now outnumber PSTN ones.

Equipment

	2007	2008	2009	2010	2011f	Growth 2010-2011
Number of fixed lines	34.5	35.0	35.3	35.3	35.3	-0.1%
Number of mobile customers	55.3	58.0	61.5	65.1	68.6	5.4%
Number of broadband and ultra-fast broadband fixed network subscriptions	15.8	17.8	19.9	21.3	22.8	6.6%

Source: ARCEP, Electronic communications observatory. Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

- **Traffic volume**

Traffic originating on fixed networks (PSTN + VoBB) has been increasing steadily since the introduction of voice over broadband services in 2005. Calling minutes nevertheless remained virtually unchanged (+0.1%) in 2011 compared to the previous year, at 113.5 billion minutes. VoBB calling traffic grew by around 8.5 billion minutes, as it did in 2010, which entirely offsets the decline in calling traffic over the PSTN.

2011 also saw fixed-to-mobile calls being added to broadband bundles that include high-volume calling. As soon as these offers were introduced, fixed-to-mobile calling traffic increased by a very healthy 53.6% over 2010, after having held steady at around 11 billion minutes for the previous eight years.

For the second year in a row, mobile calling traffic rose by close to 3%, although not at the expense of SMS traffic, which rose by 42.1% over 2010, nor of the use of mobile data services whose traffic doubled during the year.

Traffic volume (billion minutes)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Originating on fixed networks	106.0	109.7	111.2	113.4	113.5	0.1%
Originating on mobile networks	99.5	101.8	100.8	103.2	106.1	2.8%
Number of person-to-person SMS/MMS (billion)	19.5	35.1	63.5	103.4	147.0	42.1%
Total data traffic (in terabytes)			13 578	31 059	55 922	80.0%

Source: ARCEP, Electronic communications observatory. Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

- **Prices**

Mobile service prices decreased by an annual average of 1% in 2011. Users with flat rate plans were the beneficiaries here, with the price of their services decreasing by 1.5% compared to a 0.2% increase for those using pay-as-you-go solutions. This decrease was concentrated chiefly in offers that do not include a handset subsidy, and particularly those sold only online – of which there were still relatively few in 2011.

1.2. Employment and investment

- Electronic communications operators' employment figures rose by 1.2% for the second year in a row – which marks a break from the steady decrease that had been occurring for just over 10 years, up to 2009. Operators were thus employing around 128,000 people at the end of 2011, or roughly the same as in 2008.

- The strong increase in capital expenditures in 2010 carried over into 2011, with operator spending coming to €7.9 billion, which is a near record high – second only to investment figures for 1998.

Spending on broadband and ultra-fast broadband network rollouts rose by just over 10%, and this for both wireline and wireless systems. Operators spent some €2 billion on 3G mobile networks and on acquiring 4G licences (around €900 million), and €700 million on fibre network rollouts.

Employment and investment						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Number of direct jobs (000s)	129.9	126.1	124.0	126.0	127.5	1.2%
Investments (billion €)	6.1	6.5	5.9	7.3	7.9	8.0%

Source: ARCEP, Electronic communications observatory. Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Note : these figures include only operators declared with ARCEP, and not the entire electronic communications economic sector. Excluded are distributors/retailers, service providers (consultants, market research firms, call centres…) and equipment manufacturers. Enterprises declared with ARCEP and which are involved only marginally in the electronic communication sector are not included in sector employment figures.
- Investment figures refer to the gross investments made by operators declared with ARCEP in their electronic communications business during the fiscal year in question.
- Starting in 2004, the framework governing electronic communications was expanded to include all internet service providers and data carriers.

Electronic communications investment levels

Source: ARCEP, Electronic communications observatory. Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

1.3. Fixed broadband

a) The retail market

Total broadband revenue came to €9.7 billion in 2011. Income from access products came to €8 billion, which marks €400 million increase that is attributable to a rise in customer numbers.

VoIP calling traffic continued to increase steadily in 2011, rising by 13.2% over the year before. At 72.7 billion minutes, it accounts for close to two thirds of traffic originating on fixed networks. It also represents 84% of calling traffic to international destinations, and 58% of national fixed-to-mobile calls. Long excluded from ISPs' high-volume flat rate bundles using IP boxes, fixed-to-mobile calling traffic had been increasing slightly as the number of mobile service customers grew. But their addition to virtually all of operators' new internet and VoIP bundles in early 2011 radically altered customers' calling patterns. Overage calling revenue (€700 million in 2011) thus decreased by 11.4% compared to 2010.

Internet access is now being supplied almost exclusively via broadband connections – with fewer than 300,000 subscriptions still over narrowband – and chiefly via ADSL which accounts for a little more than nine out of 10 connections, or 21.0 million subscriptions.

The number of ultra-fast broadband subscriptions grew by more than 40% on the year, and stood at 665,000 in December 2011, of which 200,000 correspond to fibre-to-the-home (FTTH) lines. The combined increase for broadband and ultra-fast broadband access subscriptions came to 1.4 million during the year, and they now outnumber the steadily shrinking base of PSTN subscriptions. Subscriptions to IPTV services as part of an internet bundle are increasingly popular, and now being supplied over 12.3 million lines (+14.7%).

Retail market revenue (billion € excl. VAT)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Broadband access	4.6	5.8	7.0	7.6	8.0	5.6%
VoIP calls (flat rate overage)	0.4	0.6	0.7	0.8	0.7	-11.4%
Other revenue	0.6	0.6	0.7	0.9	1.1	21.2%
All broadband services combined (bn€)	5.6	7.0	8.4	9.2	9.7	5.6%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

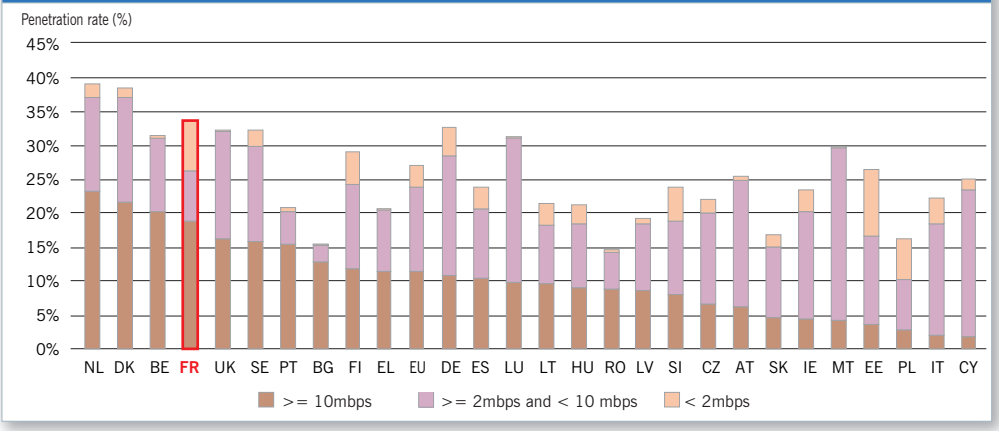
Subscriptions (million)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Internet access	15.8	17.8	19.9	21.3	22.8	6.6%
Voice over broadband	10.9	14.4	17.0	18.9	20.6	8.8%
TV over ADSL	4.5	6.2	8.8	10.7	12.3	14.7%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Calling traffic (billion minutes)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Voice over broadband calls	33.2	47.5	55.7	64.2	72.7	13.2%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Broadband penetration rate in the EU-27 as of June 2011, broken down by bitrate



Source : Commission européenne, juin 2011

b) The wholesale market

The growth momentum for broadband over ADSL continues to be a healthy one in both the retail market and the wholesale market between operators. The number of lines leased from the incumbent carrier – via unbundling and bitstream solutions – stood at 11.4 million as of December 2011, which marks an increase of just over 800,000 lines on the year. Full unbundling represents close to 80% of wholesale lines sold to alternative operators, or a total 8.9 million lines.

This wholesale solution has been growing steadily year on year – increasing by 1.2 million lines in 2011 – at the expense of other wholesale solutions which have been declining for a little over three years now. This is true of shared access which represented 1.1 million lines at the end of 2011, marking a close to 12% decrease compared to 2010. Meanwhile, the number of bitstream connections shrank by 14.0% in 2011 compared to -9.9% in 2010, while the number of naked bitstream connections – which has been holding steady at around 1.2 million since 2008 – shrank by roughly 100,000 lines.

Unbundling (million)

	2007	2008	2009	2010	2011f	Growth 2010-2011
Number of shared access lines	1.613	1.393	1.309	1.194	1.055	-11.7%
Number of fully unbundled lines	3.625	4.939	6.414	7.690	8.886	15.6%
Total LLU lines	5.238	6.332	7.723	8.884	9.942	11.9%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Bitstream (ATM and regional IP) and national IP (million)

	2007	2008	2009	2010	2011f	Growth 2010-2011
Total number of lines	0.942	1.186	1.245	1.219	1.115	-8.5%
Of which bitstream	1.291	1.010	0.647	0.487	0.352	-27.7%
Total of lines	2.233	2.196	1.892	1.706	1.467	-14.0%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

1.4. Fixed line calling over the PSTN

The revenue generated by services delivered over narrowband fixed networks – i.e. landline calling, public payphones and cards, value-added services over the PSTN – declined by a further 13% in 2011.

Revenue from both subscriptions and fixed line calling is suffering from the swift drop in the number of PSTN subscriptions, which shrank by 2.2 million or -10.4% compared to the year before. Although less dramatic than in the four previous years, the decrease in carrier selection subscriptions is sill sharp – dropping down to 1.8 million subscriptions in December 2011, or 15.6% less than in 2010.

The decrease in calling traffic has been even more dramatic, however, standing at -17.0% or 8.4 billion fewer minutes – which can no doubt be attributed to the increase in fixed-to-mobile calls being made from IP boxes (i.e. VoIP calls) since the start of 2011.

Retail market revenue (billion €)

	2007	2008	2009	2010	2011f	Growth 2010-2011
PSTN subscriptions	9.7	9.0	7.8	7.1	6.2	-13.2%
Public payphones, cards and narrowband Internet	0.5	0.4	0.3	0.2	0.2	-37.4%
Value-added and directory services	1.4	1.2	0.9	0.9	0.8	-4.3%
Total narrowband services	11.6	10.5	9.1	8.2	7.1	-13.0%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Subscriptions (million)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
"Classic" telephone subscriptions	28.7	26.3	23.9	21.5	19.3	-10.4%
Carrier selection	4.9	3.3	2.8	2.2	1.8	-15.6%

Source : ARCEP, Observatoire des communications électroniques.
Enquêtes annuelles jusqu'en 2010, enquête trimestrielle pour 2011, estimation provisoire.

Calling volume (billion minutes)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Calls on the PSTN	72.8	62.2	55.5	49.2	40.8	-17.0%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

1.5. Capacity services

The revenue generated by the capacity services market has remained relatively unchanged for the past three years, and came to €3.7 billion in 2011. Leased lines account for just over 40% of this segment. Businesses' and operators' needs are evolving towards increasingly fast connections, which is making certain products obsolete, such as narrowband leased lines as well as X25 services.

Retail market revenue (billion €)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Leased lines	1.4	1.5	1.5	1.5	1.5	1.7%
Data transport	2.0	2.1	2.2	2.2	2.1	-0.5%
Capacity services revenue	3.4	3.5	3.7	3.7	3.7	0.4%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

1.6. Mobile services

After a relatively dynamic start to the year, mobile customer growth slowed in the fourth quarter of 2011: +1.6 million new customers compared to more than 2 million in Q4 during the previous two years – probably due to customers awaiting the arrival of the fourth mobile network operator in early 2012.

Mobile customer growth was nevertheless lively in 2011, keeping pace with the steady growth momentum since 2008 of just over 5% a year – which translates inot over 3 million additional SIM cards. The number of SIM cards in service thus stood at 68.6 million in December 2011, which corresponds to a penetration rate of 105.7%.

A sizeable portion of growth in this segment over the past several years has come from the business market, with the development of machine-to-machine (MtoM) cards whose numbers rose by 0.7 million in 2011, and to the popularity of internet-only cards such as 3G dongles for phones and tablets (+0.4 million). Together, these account for close to 10% of the total base, or 6.5 million SIM cards.

The growing use of data services is in fact one of the prime contributors to the rise in traffic on mobile systems: data traffic has quadrupled in two years, and came close to 60,000 terabytes in 2011.

The number of 3G users continues to grow by 5 to 6 million each year: at the end of 2011, four out of ten mobile customers, or 27.8 million in all, had used 3G at least once either for data or for calls.

The popularity of texting has not waned, posting growth rates comparable to those observed in 2010: just over 40 billion more text messages were sent in 2011, bringing the total number of SMS sent during the year to 150 billion.

Revenue from these data services (€5.2 billion) rose by 16.0% in 2011, whereas mobile service revenue as a whole was down. As a result, data services' share of total mobile revenue grew by five points in 2011, from 23% to 28%.

The rise in data traffic has not affected mobile calling traffic, with calls originating on a mobile line increasing by close to three billion minutes in 2011 (+2.8%). Resulting revenue decreased significantly, however, by 8% over the year before.

Mobile services (including VAS) as a whole generated a total of just over €20 billion, which is the same as in 2009.

Retail market revenue (billion €)

	2007	2008	2009	2010	2011f	Growth 2010-2011
Voice services	15.1	15.6	15.1	15.0	13.8	-8.0%
Data services (SMS and data)	2.4	3.1	3.8	4.5	5.2	16.0%
Value-added and directory services	1.4	1.4	1.4	1.3	1.3	4.9%
Total mobile services	19.0	20.1	20.3	20.7	20.3	-2.0%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Subscriptions (million)

	2007	2008	2009	2010	2011f	Growth 2010-2011
Mobile network customers	55.3	58.0	61.5	65.1	68.6	5.4%
Of which active 3G subscribers	5.9	11.4	17.7	22.9	27.8	21.2%
Of which data-only cards (3G dongles)	0.5	1.0	2.1	2.7	3.2	15.4%

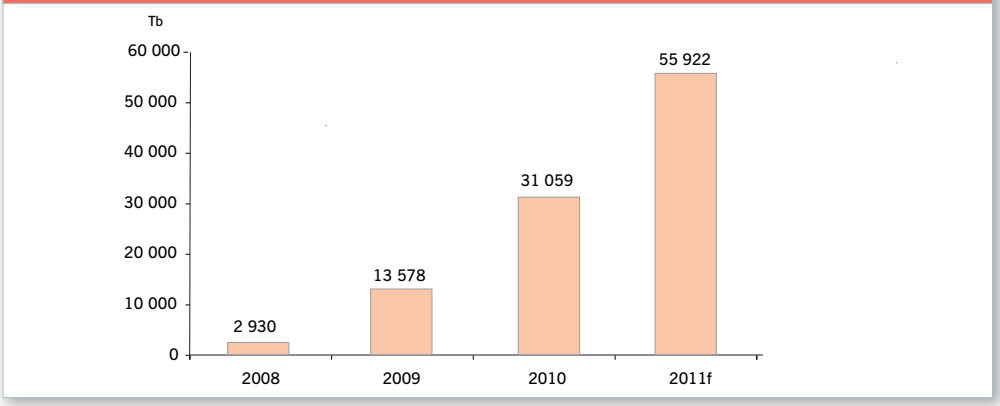
Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Calling volume

	2007	2008	2009	2010	2011f	Growth 2010-2011
Voice calls (billion minutes)	99.5	101.8	100.8	103.2	106.1	2.8%
Number of person-to-person SMS/MMS (billion)	19.5	35.1	63.5	103.4	147.0	42.1%
Data traffic (Terabytes)			13 578	31 059	55 922	80.0%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Mobile customers' data traffic



Source: ARCEP.

2. Usage

2.1. Number portability

Number retention (million)

	2007	2008	2009	2010	2011f	Growth 2010-2011
Total numbers ported during the year	3.4	4.2	4.7	4.8	5.6	16.8%
For fixed network subscribers	2.5	2.8	2.9	2.5	2.3	-7.9%
For mobile network subscribers	0.9	1.4	1.8	2.3	3.3	43.3%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

There was a substantial rise in the use of mobile number portability in 2011: a total 3.3 million mobile numbers were ported from one operator to another over the course of the year, or a million more than in 2010.

There were two main reasons for this increase: a record high in retention figures in the first quarter with the change in the VAT rate – which was ultimately not carried over to retail prices – that temporarily freed a portion of customers from their contracts and, in late 2011, the shortening of the portability process from seven calendar days to three working days as of 7 November 2011.

2.2. Average consumption indicators

The average monthly invoice for a fixed line (including monthly spending on landline calling and internet access) stood at €36.3, excl. VAT, in 2011, which is €1.10 lower than the year before. This invoice corresponds to what a customer pays in a month to access the fixed network, whether or not they have an internet connection, broadband or narrowband, and whether or not they have a PSTN or IP telephony subscription, or both.

Up until 2008, and with the increase in the number of households with internet access, along with the switch from narrowband to broadband, fixed line invoices had been rising steadily. They had hovered around €37.5 a month between 2008 and 2010, with the decrease in revenue from narrowband subscriptions being offset by the rise in broadband equipment levels, and the resulting income.

In 2011, however, the decline in PSTN calling traffic and subscription numbers accelerated – the average monthly invoice per landline account decreased by €0.90 – while the broadband subscription growth

rate slowed. The decline of the narrowband band segment is due to the decrease in PSTN subscriptions (-10.4%). Meanwhile PSTN calling traffic, expressed in minutes, also continues to shrink – by a further 6.9% in 2011 – whereas customers' average VoIP call consumption rose by eight minutes to 5 hours and 6 minutes a month.

Average monthly consumption per fixed line

€, excl. VAT, or minutes a month	2007	2008	2009	2010	2011f	Growth 2010-2011
Average monthly invoice: access and calls over the phone service and the Internet	36.7	37.5	37.5	37.4	36.3	-2.8%
Average monthly volume of outbound voice calls	252	259	260	264	265	0.6%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Average monthly invoice per subscription

€, excl. VAT, a month	2007	2008	2009	2010	2011f	Growth 2010-2011
PSTN subscription	26.8	27.2	26.1	26.0	25.1	-3.3%
Narrowband internet access	8.1	7.9	7.3	6.8	6.6	-3.2%
Broadband or ultra-fast access	30.5	32.4	35.0	35.2	34.8	-1.2%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Average monthly fixed line consumption per customer

In hours a month	2007	2008	2009	2010	2011f	Growth 2010-2011
PSTN subscription	195	183	179	175	163	-6.9%
VoBB calls	316	312	295	298	306	3.0%
Average monthly volume per narrowband customer	646	659	604	567	508	-10.4%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

- Mobile customers' average monthly invoice (excl. VAT) – not including MtoM cards and corresponding revenue – decreased by €1.70 compared to 2010. This decrease can be attributed to the fact that operators did not carry the rise in the VAT rate – which occurred on 1 February 2011 – over to retail customers' invoice.

Monthly traffic volumes held steady, decreasing by a minute, as they did it 2010, while the average number of SMS sent stood at 200 messages a month – and up to 257 SMS a month for those customers with a flat rate plan, compared to 72 SMS for pay-as-you-go customers. Average data traffic on all mobile cards, excluding M2M, came to 75 Mb a month in 2011.

Mobile customers' average monthly consumption						
In euros, excl. VAT, or units per month	2007	2008	2009	2010	2011f	Growth 2010-2011
Average monthly invoice per customer (€, excl. VAT)	27.5	27.7	26.9	26.4	24.7	-6.6%
Average monthly volume of calls per customer (minutes)	156	154	147	146	145	-0.7%
Average monthly number of SMS sent per customer	30	52	92	146	200	37.3%

Source: ARCEP, Electronic communications observatory.
Annual surveys up to 2010, quarterly survey for 2011, interim estimate.

Note : Calculations for average voice and SMS traffic do not include M2M cards (number of cards and corresponding revenue) or data only cards

2.3. Household and individual equipment rates

Household equipment levels at year end (%)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Fixed telephony	83.6	85.4	86.2	88.1	87.8	-0.3%
Microcomputer	60.0	64.7	68.3	71.5	73.9	3.4%
Internet access	49.4	57.8	62.6	69.2	72.9	5.3%

Source : Médiamétrie - Gfk - Référence des équipements multimédia

Individual equipment rates at year end (%)						
	2007	2008	2009	2010	2011f	Growth 2010-2011
Active mobile penetration rate (% of the population)	84.6	88.7	92.9	97.8	102.2	4.5%

Source: ARCEP, Mobile market quarterly observatory

The rate of wireline telephone equipment amongst residential users (87.8%, -0.3 points on the year) was down slightly from 2010, according to the quarterly index of household equipment published by Gfk-Médiamétrie. Microcomputer and internet access equipment levels have both risen: by 2.4 points and 3.7 points, respectively, compared to 2010. Close to three quarters of French households now have a computer, and virtually all (99%) households with a computer also have internet access.

Market analysis performed in 2011

1. Broadband and ultra-fast broadband

With its Decisions Nos. 2011-0668 [1] and 2011-0669[2] adopted in 14 June 2011, ARCEP completed its cycle of analysis for broadband and ultra-fast broadband markets begun in 2010, corresponding to markets 4 and 5 defined by the European Commission in its recommendation on relevant markets of 17 December 2007: wholesale market for unbundled access to physical network infrastructure (market 4) and the wholesale market for broadband and ultra-fast, or bitstream, access (market 5).

The work performed in the first half of 2011 provided an opportunity to fine tune the drafts of these two decisions, which were submitted to public consultation on 27 July 2010, particularly to take account of the remarks that ARCEP received from the Competition Authority and the European Commission.

These two decisions provide in particular for a rendez-vous clause midway through the market analysis cycle, in other words 18 months after they come into effect – i.e. in December 2012 – without eliminating the ability to review the analysis at any earlier date if the situation in the marketplace warrants it, as stipulated in CPCE Article D.30 1.

ARCEP will therefore review its scheme in December 2012 and make any adjustments to its initial, stated remedies should it be ascertained that they have proven insufficient. This review will provide an opportunity to analyse the effectiveness of symmetrical regulations governing FTTH rollouts, notably co-investment mechanisms, to assess the usefulness of strengthening the asymmetrical regulation imposed on the incumbent carrier, and possibly to impose similar asymmetrical regulations on other undertakings.

Following the publication of these two decisions, in August 2011 France Telecom published new versions of its reference offers, to comply with the resulting obligations.

1 - Decision No. 2011-0668 of 14 June 2011 on the definition of the relevant market for wholesale (physical) network infrastructure access, including shared or fully unbundled access, at a fixed location, the designation of an operator with significant power in this market and the obligations imposed on this operator as a result.

2 - Decision No. 2011-0669 of 14 June 2011 on the definition of the relevant market for wholesale non-physical or virtual network access including bitstream access at a fixed location, the designation of an operator with significant power in this market and the obligations imposed on this operator as a result.

Although most of the principles contained in the previous cycle of analysis for both of these markets have been maintained, the draft decisions nevertheless include a set of changes whose objectives are threefold:

- to assist in the development of new optical fibre local loops;
- to encourage the ongoing expansion of the copper local loop's unbundling;
- and to provide a framework for schemes to increase bandwidth thanks to sub-loop access.

a) Enable and provide a framework for deploying new optical fibre local loops

France Telecom's obligation to grant reasonable requests for access to its civil engineering infrastructure within the local loop has been upheld and made more specific, both in terms of scope and its operational aspects.

First, for the sake of efficiency and transparency, Decision No. 2011-0668 requires France Telecom to group its civil engineering access offers together in a single solution for FTTx[3] rollouts. The decision also seeks to have regulations governing access to civil engineering to be made consistent with the regulatory framework for sharing the last metres of FTTH networks. This will involve defining new engineering rules (cf. page 95) aimed at making optimal use of civil engineering and encouraging shared network rollouts.

This same decision also provides for a considerable increase in the scope of the infrastructure which France Telecom must now make available to operators deploying FTTx networks. It expands the obligation to grant reasonable requests for access to overhead supports, and expands the obligation to provide access to infrastructure to deployments whose purpose is to connect certain distant sites as network elements, such as wireless base stations.

Finally, the decision provides for new, related solutions for operators deploying FTTH networks: chiefly France Telecom's obligation to provide certain terms of collocation inside its exchanges when installing its own activated equipment.

b) Encouraging the extension of the copper local loop, and adjusting bitstream tariff regulation

- During this new cycle of market analysis, ARCEP had wanted to implement a regulatory framework that allowed **unbundling to continue to progress**. To this end, the new operational and pricing rules governing collocation offers (inside the exchange), and the "LFO[4]" fibre backhaul solution, must enable operators to expand their broadband coverage to the most isolated, small exchanges. While alternative operators could easily unbundle exchanges of around 2,000 lines, ARCEP considers that the new solution will allow operators, for a comparable level of investment, to continue to expand LLU and unbundle exchanges[5] of 1,000 lines, or even fewer. In addition, to improve transparency on the availability of fibre resources in the context of the "LFO" solution (cf. page 79), France Telecom's "offer of prior information" requires the incumbent to provide information on the availability of these resources to any operator or local authority that requests it.

- **As to bitstream offers and the supervision of their pricing:** in light of the progress made in LLU, in its market analysis ARCEP draws a distinction between two types of geographical area for the residential market:
  - areas where at least one alternative operator is selling bitstream offers in the wholesale market, which today corresponds to around 4,500 exchanges (80% of lines). Decision No. 2011-0669 stipulates that all price-related obligations will be lifted in these areas;

3 - FTTx (fibre to the...) consists of bringing optical fibre as close to end users as possible, to increase quality of service and especially connection speeds. The "x" can refer to the neighbourhood, (FTTN: Fibre to the Neighbourhood) the building (FTTB), the home (FTTH) or the last amplifier before the customer's premises (FTTLA).

4 - Lien en fibre optique = Optical fibre link

5 - Subscriber connection point, or exchange: a concentration point in the France Telecom copper local loop that houses activated equipment from which an operator activates its customers' DSL connection

- and areas where France Telecom continues to have a monopoly over the supply of bitstream access. This same decision maintains an obligation of cost-based pricing for France Telecom in these areas.

In its new bitstream offer, up until now France Telecom has listed a single tariff that applies to the whole of France, making no geographical distinctions. The tariff complies with the pricing obligation within the perimeter of the regulated area. Also, given the inexorable rise in the average bandwidth consumed, it became necessary to ensure a sufficient correspondence between the variable bitrate and the way bitstream backhaul is priced. In October 2011, ARCEP therefore worked on modelling the cost to France Telecom of supplying its bitstream solution – which resulted in revised prices for bitstream offers in early 2012, and particularly a decrease in the portion of the price that varied according to the bandwidth purchased.

c) Providing a framework for schemes to increase bandwidth through access to the sub-loop

Decision No. 2011-0668 requires France Telecom to create a solution that allows operators and local authorities to request reengineering of the copper local loop to increase connection speeds thanks to access to the sub-loop. As a result, the incumbent carrier introduced a shared access point solution, called PRM (*Point de Raccordement Mutualisé*) that allows any undertaking to engage in projects for increasing bandwidth. The issue of increasing connection speeds thanks to sub-loop unbundling is examined in detail earlier in this report (cf. page 80).

2. Capacity services

On 1 September 2011 ARCEP completed the regulatory framework for French overseas markets by adopting its final decision on its analysis of the market for wholesale capacity services in the overseas collectivity of Saint-Barthélemy, which will be in effect for a period of three years, up to 2014. In it, the Authority states that this is a relevant market for *ex ante* regulation and designates Global Caribbean Network as the operator that enjoys significant market power (SMP), as a result of which it is subject to several obligations, including cost-based pricing for its services.

3. Mobile telephony

All operators that market a telephone service must allow their customers to reach any number in the numbering plan, including any mobile number in France. To do so, operators must purchase a call termination (CT) service from each of the other mobile operators – the latter thus having a *de facto* monopoly over the market for call termination on its own network. It is this significant market power (SMP) that forms the basis of the regulation governing mobile call termination markets.

a) Background to the third cycle of analysis of wholesale call termination markets from 2011 to 2013 and the Framework Decision of 2 November 2010

In 2010 the Authority began its third cycle of regulation of wholesale mobile call termination in Metropolitan France and the French overseas territories, which covers the period from 2011 to 2013.

On 2 November 2010, ARCEP adopted a decision[6] on determining relevant call termination markets on French mobile networks in mainland France and the overseas markets, the designation of the operators that enjoy significant power in these markets and the obligations imposed on them as a result, for the period running from 2011 to 2013. ARCEP declared each of the mobile carriers in France and overseas as the SMP operator in the wholesale call termination market on their own network.

To remedy the competition issues that had arisen in these markets, ARCEP considered it necessary to uphold the obligations of access provision,

6 - *Decision No. 2010-1149 of 2 November 2010.*

non-discrimination, transparency, cost accounting and account separation that had been imposed during the previous cycle[7]. All operators are now subject to an obligation to charge cost-oriented prices.

For mainland France, this decision extends the previous charge ceiling for CT rates up to 30 June 2011, i.e. 3 eurocents a minute for Orange France and SFR and 3.4 eurocents a minute for Bouygues Telecom. It also stipulates that ARCEP will set regulated CT rates for the remainder of the three-year period in a future decision. The decision was issued based on the results of the revised cost model for a generic mobile operator in Metropolitan France, which is consistent with the European Commission recommendation of 7 May 2009[8] that aims to achieve symmetrical CT rates based on long-run incremental costs by 1 January 2013 at the latest.

For the overseas markets, this decision sets new regulated CT rates for 2011 and 2012, continuing the progressive decrease towards cost-based pricing:

Overseas operator	1 January to 31 December 2011 (eurocents/min.)	1 January to 31 December 2012 (eurocents/min.)
Dauphin Télécom	8.0	5.0
Digicel	4.0	2.5
Orange Caraïbe	4.0	2.5
Orange Réunion	4.5	2.8
Outremer Telecom	5.5	2.8
SRR	4.0	2.5
UTS Caraïbe	8.0	5.0

In July 2011, ARCEP launched a public consultation on the technical-economic cost models employed by mobile operators in French overseas markets. A second consultation was held on the subject in March 2012, with specific models for the Antilles-Guyana region and for the Reunion-Mayotte region. The cost models being submitted to consultation will be used in part by ARCEP to set the charge ceiling for call termination rates, in early summer 2012, for operators in French overseas markets – moving towards achieving cost-based pricing – starting on 1 January 2013.

b) Updating the technical-economic network cost model for a mobile operator in Metropolitan France, and tariff supervision for operators in mainland France up to the end of the third cycle

With a view to this third cycle of regulation for wholesale mobile call termination, in spring 2010 ARCEP began working on updating its technical-economic cost model for a mobile carrier in Metropolitan France.

The work included updating the model's structure to take into account the main changes in the marketplace, both technical – 3G wireless access networks, core network equipment, transmission network build-outs, etc.) and in the area of usage (development of 3G dongles and machine-to-machine cards, etc.

The model's input data were also updated based on quantitative and qualitative information supplied by the operators.

The definitive model was published in March 2011 and served as the basis for setting applicable mobile CT rates for Metropolitan France from 1 July 2011 to 31 December 2013.

7 - The second cycle of regulation for wholesale call termination markets in mainland France was framed by Decisions No. 2007-0810 of 4 October 2007, No. 2008-11 76 of 2 December 2008 then No. 2010-0211 of 18 February 2010 and, for the overseas markets, by Decisions No. 2007-0811 of 16 October 2007 and No. 2009-0655 of 27 July 2009. In both mainland France and the overseas markets, the second cycle of regulation came to an end on 31 December 2010.

8 - European Commission recommendation of 7 May 2009 on the regulatory treatment of fixed and mobile termination rates in the EU(2009/396/EC)

This work allowed ARCEP to complete the pricing framework for the third cycle, through a decision issued on 5 May 2011[9], by implementing a final three-stage transitional period for bringing CT rates in line with a charge ceiling of €0.08 by 1 January 2013, applying the principles of gradual increments, predictability and proportionality.

Metropolitan France	1 January to 31 December 2011	1 January to 30 June 2012	1 July to 31 December 2012	1 January to 31 December 2013
Bouygues Telecom. Orange France et SFR	2 €c/min.	1.5 €c/min.	1 €c/min.	0.8 €c/min.

ARCEP considers it both justified and proportionate to set symmetrical termination rates for all three operators, starting on 1 July 2011, in light of the trend of increasing fixed-to-mobile calling traffic.

c) Analysis of the wholesale mobile call termination markets for Free Mobile, Lycamobile and Oméa Telecom in Metropolitan France

These new operators are not covered by the market analysis decisions No. 2010-1149 of 2 November 2010 on mobile call termination, and No. 2011-0483 of 5 May 2011 on tariff supervision, which are both in effect until 31 December 2013. ARCEP therefore analysed the mobile call termination markets for these three players, and defined a regulated tariff scheme up to 31 December 2013, to line up with the one in place for the three incumbent mobile carriers.

The first public consultation, launched in September 2011, sought to determine whether these three operators enjoyed significant power in their respective markets and, in keeping with the mobile call termination regulation that is currently in effect for the three existing mobile network operators, to impose access, non-discrimination, transparency and tariff supervision obligations on these new entrants.

The aim of the second public consultation, which was launched in December 2011, was to propose a set of regulated tariffs for these three new undertakings, that would be in effect up to the end of 2013.

ARCEP believes a relevant solution is to allow Free Mobile, Lycamobile and Oméa Telecom to offset the additional costs that they will incur temporarily due to their status of new entrants, in particular considering the terms set out in the European Commission recommendation of 7 May 2009[10], and the principles established by the ERG common position on MTR of 2008[11] and the *Conseil d'Etat* decision of 2009[12].

The partially offset additional costs correspond to two distinct factors:

- first, the expected imbalances in the new entrants' traffic in 2012 – during which time call termination rates will be temporarily higher than the long-run incremental cost – will generate additional costs for the new entrant due to the proportionality of the decreases planned for the incumbent operators;
- second, the absolute necessity, in a mature market, for a new entrant to have an access contract during its network rollout period.

Drawing on the information supplied by market players, ARCEP thus defined the elements of pricing for a generic access contract, which exists independently from the individual contracts produced by each of the players concerned. It therefore does not take into account these operators' "chosen excess costs" and does not have any feedback effects on these individual contracts. The Authority expects that this factor will have an impact at least during the period covered by the current draft decision, and for no more than four years after these new players have entered the market.

9 - Decision No. 2011-0483 of 5 May 2011 on the definition of tariff supervision for mobile call termination services provided by Orange France, SFR and Bouygues Telecom for the period running from 1 July 2011 to 31 December 2013
10 - http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:FR:PDF
11 - http://erg.eu.int/doc/publications/erg_07_83_mtr_ftr_cp_12_03_08.pdf
12 - http://www.arcep.fr/fileadmin/reprise/textes/recours/dec-ce-orange-sfr-100709.pdf

Sur cette base, l'Autorité a proposé l'encadrement tarifaire suivant :

Métropole	30 juin 2012	1er juillet au 31 décembre 2012	1er janvier au 31 décembre 2013
Free Mobile. Lycamobile et Omea Telecom	2.4 c€/min	1.6 c€/min	1.1 c€/min

These three incremental stages will make it possible to keep pace with changes in the tariffs applying to the three incumbent operators.

The draft decision does not apply to the operator NRJ Mobile as the launch date for its full-MVNO system is later than the one scheduled for three other new operators.

On 13 April 2012, while confirming the ability to set asymmetrical tariffs, the European Commission expressed doubts about the underlying justification for the proposed tariffs. The resulting procedure is currently underway.

d) Updating the technical-economic cost model for a mobile carrier in the overseas markets, and tariff supervision for these operators up to the end of the third cycle

Based on the cost model for Metropolitan France, which was updated in 2010 and 2011, ARCEP worked on updating the technical-economic cost models for French overseas markets in Q2 2011. This work was performed in two stages: the first involved adapting the structure of the model for mainland France to the specific features of overseas markets, and the second calibrating this adapted model.

A public consultation was held in summer 2011 on the model's structure, and another in Q1 2012 on its calibration. The definitive models were published in the first half of 2012 and are to serve as the basis for the decision on overseas operators' regulated call termination rates for 2013.

4. Fixed telephony

In 2011, ARCEP conducted third cycle of analysis of fixed telephony markets, which resulted in the adoption of Decision No. 2011-0926[13],on 26 July 2011, covering the period running from 2011 to 2014.

This decision upholds the obligations imposed by virtue of Decision No. 2008-0896 [14] – on wholesale access to the telephone service, call origination from a fixed location and call termination from a fixed location – with the following exceptions.

On the matter of call termination, the implementation of the European Commission recommendation of 7 May 2009 resulted in a symmetrical pricing scheme being imposed on all operators, and in CT rates coming in line with the long-run incremental costs of a generic efficient operator (pure NGN) – i.e. 0.08 eurocents a minute, starting on 1 January 2013. Intermediate regulated CT charges – of 0.3 and 0.15 eurocents a minute, as of 1 October 2011 and then 1 July 2012 respectively – will enable a gradual transition to this final rate.

On the matter of call origination, this decision also lightens pricing obligations concerning the initiation of calls to VAS (value-added service) numbers that are imposed on France Telecom – with a view to eventually achieving a system of symmetrical obligations for all wireline carriers. France Telecom's obligations will therefore change from the current obligation to charge cost-based prices to being forbidden to charge excessive prices for this service. A multi-annual pricing schedule specifies the maximum average prices that France Telecom can charge during this cycle: i.e. 0.43, 0.415 and 0.4 eurocents a minute, as of 1 January 2012, 2013 and 2014, respectively.

13 - Décision n° 2011-0926 du 26 juillet 2011 portant sur la définition des marchés pertinents de la téléphonie fixe, la désignation d'opérateurs exerçant une influence significative sur ces marchés et les obligations imposées à ce titre (3ème cycle : 2011-2014)

14 - Décision n° 2008-0896 du 29 juillet 2008 portant sur la définition des marchés pertinents de la téléphonie fixe, la désignation d'opérateurs exerçant une influence significative sur ces marchés et les obligations imposées à ce titre

And, finally, this decision also specifies certain obligations with a view to:

- simplifying the France Telecom interconnection architecture over the next 18 months for calls to numbers associated with accessing a voice over broadband phone service;
- and continuing to improve France Telecom's wholesale line rental (VGAST) solution, which will benefit non-residential customers in particular.

5. Broadcasting services

In its Decision No. 2009-0484 of 11 June 2009, the Authority defined the ex ante regulatory framework to apply from 2009 to 2012 in the wholesale digital terrestrial television broadcasting market. ARCEP designated TDF as the SMP operator in this market, as a result of which it is subject to the obligation to grant reasonable requests for access, to provide access under non-discriminatory conditions and to be transparent, along with cost accounting, accounting separation and tariff supervision obligations. These tariffs, which could not be excessive or constitute a price squeeze under the obligations set during the first cycle of regulation (2006-2009), are now subject to an obligation of cost-oriented pricing.

For the other transmission sites, TDF continues to be subject to an obligation not to charge excessive prices or create a price squeeze, as a way to maintain incentives to deploy alternative infrastructure.

Over the course of 2011, ARCEP extended its efforts devoted to verifying that TDF was complying with its obligations. It also had an opportunity to fine tune the rules that apply to operators in the arena of broadcasting, in response to two dispute settlement requests (cf. page 17). In the first, ARCEP granted the firm Towercast's request for access to the "Grande Jeanne" transmission site operated by TDF in Annecy[15] for wireless broadcasting services. In the second, ARCEP asked TDF to bring some of its existing contracts into compliance with the regulatory framework for the DTT broadcasting infrastructure access market, which as defined in 2009[16].

ARCEP also engaged in preparatory work for the market analysis process that will make it possible to define the ex ante regulatory scheme for 2012-2015. To this end, the Authority met will all broadcasters and multiplex operators to discuss current market conditions, and to improve its understanding of the sector's technical and economic landscape. It also furthered its work on the DTT broadcasting observatory for France, in a bid to gather as much quantitative data on the subject as possible. These elements enabled ARCEP to develop a complete analysis of the cycle running from 2009 to 2012, on regulation governing the wholesale market for terrestrial broadcasting services.

Lastly, to strengthen its ability to monitor TDF's compliance with its pricing obligations, and increase the transparency and predictability of the company's reference offer tariffs, ARCEP also worked on developing a technical-economic model for a terrestrial broadcasting network in France. Based on existing transmission sites, this model allows ARCEP to assess TDF's annual underlying costs, but also to better anticipate how market development hypotheses will affect costs.

6. Market analyses in Europe

6.1. List of relevant markets to be analysed by NRAs around Europe

A European Commission recommendation lists the electronic communications markets that are relevant for analysis by national regulatory authorities (NRAs) in view of potential ex-ante regulation.

15 - Decision No. 2011-0596 of 7 June 2011
16 - Decision No. 2011-0809 of 12 July 2011

An explanatory memorandum attached to the directive describes the principles that an NRA must apply when performing its analysis of the relevant markets. It specifies that a market can be regulated ex-ante if it meets all three of the following criteria:

- the presence of barriers to market entry and to the development of competition;
- lack of prospects for a shift towards effective competition;
- the inefficiency of existing competition laws.

The aim of the recommendation is to harmonise the scope of regulation in Member States, while not being prejudicial to the possible relevance of a market at the national level. As a result, while it is mandatory for an NRA to analyse all of the markets listed, imposing regulation is not if a market does not meet all three criteria, or if there is no SMP operator in the market. On the flipside, an NRA can also decide to regulate a market that is not listed in the European Commission recommendation, provided it satisfies all three criteria.

The Commission's 2003 recommendation listed 18 relevant markets, while the one adopted in 2007 contains only seven markets for which national regulatory authorities must perform an analysis with a view to potential ex-ante regulation:

Markets linked to wireline telephony	1- Access to the public telephone network
	2- Call origination
	3- Call termination
Markets linked to residential and enterprise broadband and ultra-fast broadband access	4- Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.Wholesale broadband access.
	5- Non-physical or virtual network access including
	6- Wholesale terminating segments of leased lines
Markets linked to mobile telephony	7- Mobile call termination

6.2. Status of European NRAs' market analyses in 2011

New notification procedure and newfound powers for the Commission and BEREC

Article 7 of the European Framework Directive stipulates that the measures taken by NRAs as part of their market analyses must be notified to the European Commission and to the other European national regulatory authorities.

An NRA formally notifies its decision by publishing all of the relevant documents – i.e. draft decision, public consultation, stakeholders' responses, Competition Authority's opinion, etc. – on the Commission-run Circa website.

In the case of a market definition and the designation of an SMP operator (Article 7), the European Commission, BEREC and the other national regulators have one month to submit their remarks. This one-month period can be extended by an additional two months if the Commission expresses "serious doubts" – which will result in a period of examination commonly referred to as a "phase II" procedure. BEREC must issue an opinion, and the Commission must take it into utmost consideration. Once these two months have elapsed, the Commission can either withdraw its "serious doubts" or veto the draft decision – and so preventing the NRA from adopting it. The national regulatory authority also has the option of voluntarily withdrawing its draft measure. This veto power was not extended to the remedies listed in the market analyses. For this stage in the market analysis procedure (Article 7 (b)), the

Commission can issue a "serious doubts" letter that will result in an additional examination period of three months. BEREC then has six weeks to issue an opinion on the serious doubts letter, which the Commission must take into utmost consideration in its final decision. If BEREC shares the Commission's view, the NRA, BEREC and the Commission must work together during the standstill period to identify the most appropriate and effective measure for the NRA to take. In any event, in the month following this additional standstill period, the Commission can issue a recommendation requesting the NRA withdraw its measure, and include specific proposed remedies that must take the opinion of BEREC into account.

In 2011, the different European NRAs notified 137 draft decisions on a market analysis procedure to the Commission, or roughly the same number as in 2010 (135). The most commonly analysed markets were unbundling (23) and bitstream (20), followed by mobile call termination (19) and fixed call termination (18), call origination on the public switched telephony network (15) and capacity services markets (12). Some markets which are not among those listed in the recommendation were also notified – including SMS call termination by ARCEP, Danish regulator NITA (now called DBA) and Polish regulator, UKE, which ultimately withdrew its draft analysis – as were markets listed in the former recommendation of 2003, including transit services on fixed networks (10) and broadcasting transmission services (2).

A significant number of notifications concerned additional remedies, such as accounting separation, and specific points of cost models and methodologies, particularly for fixed and mobile call termination and the copper pair.

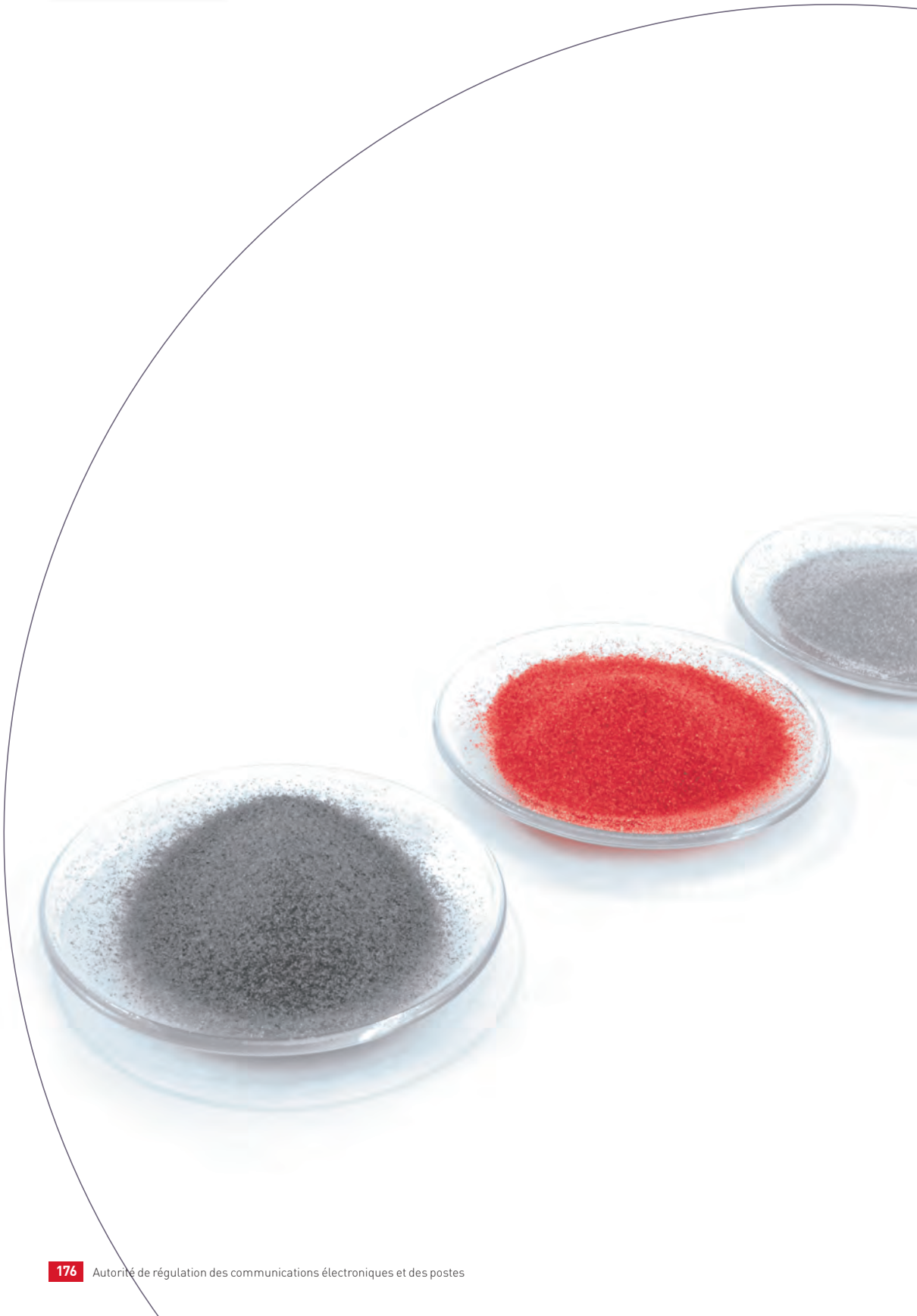
There was a mere 11 notifications in the first part of 2012 (January to mid-March), six of which concerned fixed and mobile call termination and two the wholesale market for the supply of network infrastructure access at a fixed location.

The Commission has issued a "serious doubts" letter on eight notifications[17] since late 2011 – all of which concerned call termination (fixed, mobile or SMS). If two draft documents[18] were ultimately withdrawn, the others provided an opportunity to test the provisions contained in Article 7 (b) of the new Framework directive. In all of these instances, BEREC shared the Commission's doubts, and provided the NRA with suggested changes to draft decision.

The Polish case concluded in early 2012 with a joint statement from the three parties (Commission, BEREC and the Polish regulator, UKE) whereby UKE committed to withdrawing its draft measures and performing new notifications in 2012. As to the Dutch case, which involves legal questions over the hierarchy of standards – with a judgement from a national court departing from the European Commission recommendations – BEREC has not yet issued an opinion on the matter which, although central to the discussion, does not fall into its area of expertise. On the matter of the Danish case, BEREC stressed the likelihood of similar cases – i.e. competition issues resulting from the asymmetrical regulation of international SMS – arising with other NRAs in the near future, and so called for a long-term solution to prevent a host of such cases occurring.

17 - Namely, notifications concerning fixed call termination (ES/2012/1291 and NL/2012/1284), mobile CT (PL/2011/1255-1258, PL/2011/1260, PL/2011/1273 and NL/2012/1285) and SMS CT (DK/2012/1283), some of which were notified in late 2011, so the procedure spilled over into 2012.

18 - The Spanish NRA'S notification on fixed CT (ES/2012/1291) and a dispute settlements from Poland (PL/2011/1273): notified later than the other Polish draft measures in a phase II procedure, nonetheless also concerned mobile CT. Following the end of the procedure for these first cases, the NRA elected to withdraw all of its decisions.



Managing scarce resources

1. Spectrum

1.1. ARCEP's responsibilities

The national frequency allocation table assigns ARCEP the task of managing the spectrum used for electronic communications. It carries out this task as part of its responsibilities as the sector's regulator assigned to it by Law, which include monetising and making proper use of the radio spectrum.

ARCEP is responsible for assigning frequencies to a growing number and increasingly wide variety of applications . Spectrum users include operators, with a view to supplying services to the public, as well as local authorities, businesses and individuals for their own needs. Installations can include publicly available mobile networks (GSM, UMTS…), wireless local loop (WLL) networks, private mobile radio networks (PMR), live video feeds, radio links (for broadcasting services, mobile carriers' infrastructure networks, etc.), satellite communication systems, amateur radio and low-power and short-range devices (wireless microphones, wireless LAN, RFID, medical implants, remote controls, short-range radar for cars, meter reading systems, etc.).

The French Postal and electronic communications code (CPCE) thus endows ARCEP with a series of powers in the area of spectrum management:

a) Frequency regulation and planning

In the frequency bands for which it is responsible, ARCEP sets the type of equipment, network or service permitted to use those bands, along with the technical conditions of their use (transmission power, station deployment rules, etc.). These decisions are approved by the Minister responsible for electronic communications before being published in the Official journal (Journal officiel).

Along with the National Frequency Agency, ANFr (Agence nationale des fréquences), ARCEP is involved in drafting international regulation in this area and in managing the ongoing changes to frequency assignments defined by the national frequency allocation table, and implemented by an order from the Prime Minister

1 - This is a primary approach to all of the possible uses of spectrum, with the exception of those corresponding to broadcasting, which are managed by CSA, and to the needs of State administrations (defence, civil aviation, interior, research, weather, ports and maritime navigation, space).

b) Issuing frequency licences and designing award procedures

ARCEP is tasked with issuing licences to the users of the frequency bands for which it is responsible. For frequencies whose use is governed by individual licences, ARCEP can elect either to issues over time as the need arises or, when judicious use of the frequency band is required, to issue licences following a call for applications – in which case the selection criteria for the applicants will be defined by the Minister responsible for electronic communications, based on a proposal from ARCEP.

c) Monitoring licences

ARCEP is responsible for monitoring the use of the licences, and particularly for ensuring that operators are complying with the terms attached to these licences. These terms may include network rollout timetables, quality of service, licensing fees, terms governing the use of the frequencies and any commitments the licence-holder made when being issued the licence in response to a call for applications. ARCEP is also responsible for examining and supervising spectrum licence trades.

1.2. Measures taken in 2011

a) Concerning regulation and frequency planning

In 2011 ARCEP adopted a decision on the terms governing the use of frequencies, notably for GSM mobile communication services on-board ships, radio-frequency ID systems, ultra wideband ground-penetrating radar imaging systems and the use of audio equipment for services ancillary to programme-making and broadcasting (wireless microphones).

ARCEP also worked with the National Frequency Agency, ANFR, on an inventory of spectrum use, with the particular purpose of identifying any additional resources available to meet the expected rise in frequency requirements for ultra high-speed mobile networks. This work – which made it possible to draw up a preliminary list of the frequency bands that were susceptible to having their assignment amended between now and 2020 – is to continue on through the coming years to enable these bands to be designated at the global level, at the next World Radiocommunication Conference in 2015-2016.

As part of the work being done by the European Conference of Postal and Telecommunications Administrations (CEPT), ARCEP helped produce a draft decision aimed at harmonising the use of the 3400-3800 MHz band. It also participated in work being done in Europe on harmonising the technical terms of use for the 2.1 GHz band, employed by 3G systems, in a bid to introduce technology and service-neutrality, and on the future use of certain unused (TDD) blocks of spectrum in this band. This work has carried on into 2012.

The Authority has been involved, too, in work being done at the European level on:

- examining spectrum requirements for wireless microphones for professional use and mobile video links, which are employed heavily by broadcasters and media companies;
- examining spectrum requirements for security and emergency systems, and their impact on the future development of other private mobile radio (PMR) systems;
- the development of cognitive systems and the concept of shared spectrum access agreements: certain industry players have expressed an interest in the development of spectrum sharing to be able to gain access to new frequency resources under certain conditions.

b) On issuing spectrum licences and conducting calls for applications

One outstanding event in 2011 was the completion of the call for applications for 4G licences, which also marked the completion of several years of preparatory work for ARCEP. The procedure is explored in more detail earlier in this report (cf. page 105).

ARCEP also issued several licences in response to requests from undertakings. For those frequency bands for which licences are awarded as needed, ARCEP performed:

- for fixed service frequency allocations (radio): 11,033 new assignments, 3,638 amendments, 6,581 cancellations and 887 renewals, which represented 650 decisions;
- for fixed and mobile satellite service frequency allocations: 54 assignments and 33 cancellations, which represented 46 decisions;
- for professional mobile service frequency allocations: 1,570 network assignments, 880 amendments, 1,960 renewals, 1,560 cancellations and 1,680 temporary allocations, which represented 316 decisions.

c) On monitoring licences

Monitoring licences is a particularly significant field of endeavour for ARCEP.

This is especially true for licences issued in response to a call for applications as the commitments that future licence-holders make in their applications become obligations attached to those licences to use the frequencies. ARCEP therefore pays a great deal of attention to ensuring that licence-holders comply with their obligations. The process of ensuring that mobile operators and wireless local loop operators are complying with their coverage and quality of service obligations is examined in some detail on page 82 of this report.

In 2011, ARCEP collected, a total of around €1.24 billion – of which €936 from the allocation of 4G frequencies in the 2.6 GHz band – in spectrum licensing fees on behalf of the State.

1.3. The multi-annual radio spectrum policy programme and the World Radiocommunication Conference

a) The multi-annual radio spectrum policy programme

Over the course of 2011, ARCEP helped French authorities in their negotiations, within European Union institutions, in the first multi-annual radio spectrum policy programme – provided for in the European regulatory framework for electronic communications, commonly referred to as the Telecoms Package, which was amended in 2009[2]. In September 2010, the European Commission published a draft decision on the "*first radio spectrum policy programme (RSPP)*" which it then submitted to the European Parliament and Council. In late 2011, these last two bodies produced a compromise text which both then ratified. This text was officially adopted on 15 February 2012.

As part of the Digital Agenda for Europe, the RSPP reiterates the objectives of bringing ultra-fast broadband access to all households by 2020, to which radiocommunication must contribute: all EU citizens are to have a broadband connection of at least 30 Mbps by that time, and half of all households in the European Union are to have a broadband connection equal to or above 100 Mbps.

2 - *New article 8a, "Strategic planning and coordination of radio spectrum policy". Paragraph 3 stipulates that, "The Commission, taking utmost account of the opinion of the Radio Spectrum Policy Group (RSPG) […] may submit legislative proposals to the European Parliament and the Council for establishing multiannual radio spectrum policy programmes. Such programmes shall set out the policy orientations and objectives for the strategic planning and harmonisation of the use of radio spectrum in accordance with the provisions of this Directive and the Specific Directives".*

The RSPP invites Member States to take competition issues into consideration when awarding rights to use spectrum.
In particular, the RSPP reiterates that Member States can:

- reserve a certain part of frequency bands to new entrants;
- attach conditions to such rights of use, such as the provision of wholesale access, national or regional roaming;
- amend existing rights when this is necessary to remedy ex-post the distortion of competition by any transfer or accumulation of rights of use of radio frequencies (i.e. spectrum hoarding).

The RSPP stipulates that rights of use can be attached to national coverage obligations, and encourage spectrum sharing. The RSPP also asks that new resources be identified to satisfy future spectrum requirements, and sets an objective of identifying at least 1200 MHz of suitable spectrum for wireless broadband applications by 2015.

The European Commission is thus invited to perform an inventory of existing uses of spectrum in the European Union. The objectives of this inventory include:

- an inventory the current use of spectrum (from 400 MHz to 6 GHz) to help identify frequency bands that could be allocated or re-allocated in order to improve their efficient use;
- developing a methodology for the analysis of technology trends, future needs and demand for spectrum in Union policy covered by the RSPP.

b) World Radiocommunication Conference (WRC)

The latest World Radiocommunication Conference, WRC-12, took place from 23 January to 17 February 2012 in Genève.

2011 was therefore a time of preparation for this conference, and ARCEP contributed to the efforts carried out in France by the National Frequency Agency, ANFR (Agence nationale des fréquences). The world radiocommunication conferences, whose resolutions have the value of a treaty, are important events for ARCEP as they introduce essential technical and regulatory prescriptions that apply to all types of radiocommunications.

Among the main outcomes of this conference were the allocation of the 694-790 MHz band to mobile services, on a co-primary basis with the broadcasting service, and the identification of this band for international mobile telecommunications (IMT) in region 1 (Europe, Africa and a portion of Asia).

This allocation will come into effect after the next conference, which is scheduled for 2015. It is subject to a resolution inviting ITU to conduct a study on the possibility of adjusting the lowest channel allocated to the mobile service, and introducing terms to ensure harmonised use of the band for the mobile service and IMT in region 1. It will then be up to each member country to determine which service will use this band, i.e. broadcasting or mobile services.

This point was not on the agenda for the WRC-12, but rather came in response to strong requests from African and Middle Eastern countries to obtain additional frequencies below 1 GHz to develop mobile networks. Some African countries were indeed unable to take full advantage of the identification of the 790 – 862 MHz band for IMT in 2007, due to existing CDMA deployments in the 806-890 MHz band at that time.

ARCEP is also affected by several spectrum allocations decided at the WRC-12, which the Prime Minister could incorporate into the national frequency plan in the near future, including:

- an allocation of 7 kHz of spectrum in the 472-479 kHz band to the amateur service on a secondary basis, with a proviso of limiting the radiated power (EIRIP) of stations in the amateur radio service using these frequencies to 1 W within 800 km of the borders of the countries listed. Beyond these 800 km, the countries can authorise an EIRIP of up to 5W;
- allocation of spectrum to radiolocation services in the following bands: 4438-4488 kHz, 5250-5300 kHz, 9300-9355 kHz (except in region 2), 13450-13550 kHz, 16100-16200 kHz, 24450-24600 kHz (24650 kHz in region 2) and 26200-26350 kHz (26420 kHz in region 2) 39-39.5 MHz in region 1;
- allocation of spectrum in the 24.65-25.25 GHz band to the fixed satellite service (Earth-to-space) in region 1, with antennae of a minimum diameter of 4.5 m.

La CMR 2012, à Genève

There were also decisions not to make any changes to existing radiocommunication regulations on several additional issues such as cognitive radio systems (CRS), protecting radiocommunication services from the effects of short-range devices, assigning new spectrum resources to mobile satellite services, etc.

The WRC-12 also adopted the agenda for the next conference, scheduled for 2015. Among those points of order that are of particular interest to ARCEP are:

- identifying additional bands for international mobile telecommunications (IMT);
- reviewing the results of studies with a view to allowing mobile services to use the 694 – 790 MHz band.

2. Numbering

2.1. ARCEP's responsibilities

In accordance with CPCE Article L. 44, ARCEP is responsible for establishing the national numbering plan, for its operational management and management rules, and for allocating to operators the numbering resources needed for their business – in addition to working to ensure these resources are used judiciously, given their scarcity. The numbering plan corresponds not only to telephone numbers used by telephone services, but also to addressing resources for data networks, semaphore signalling points and MCC + MNC codes.

The Authority is also responsible for invoicing and collecting the taxes and fees due from operators[3]. The amount invoiced for the numbering tax in 2011 came to roughly €23.3 million.

3 - In accordance with the provisions of Articles L. 44 and R. 20-44-28 of the French Postal and electronic communications code (CPCE)

2.2. Situation in 2011 and changes to the national numbering plan

Status of numbering resources at the end of 2011	
Type of number	**Total numbers assigned**
Person-to-person communications	
Geographic numbers (starting with 01, 02, 03, 04, 05)	207 230 000
Non-geographic numbers (09)	30 300 000
Mobile numbers (06 and 07, incl. roaming)	107 560 000
Value-added services	
Special numbers (10XY)	40
Short numbers (3BPQ)	285
Six-digit numbers (118XYZ)	15
Non-geographic VAS numbers (08AB except 087B and 085B)	11 680 000
Codes	
E format prefixes	4
16XY format prefixes	33
Number retention prefixes (0Z0, 0600, 0840, 0842 and 0900)	1 972

2.3. Measures taken in 2011

In 2010, the Authority made 289 decisions on numbering:

- two decisions that were general in scope: one setting the list of numbers with a common purpose and making 3179 the a freephone number dedicated to information on number portability, and another identifying "51BP" prefixes for mobile number portability;
- 287 decisions on the day-to-day management of numbering resources, including: 232 allocation decisions, 26 operator-to-operator transfer decisions, three decisions amending previous decisions and 26 repeal decisions.

a) Questions arising from the development of machine-to-machine (M2M) applications

M2M communications have been developing swiftly, particularly in the mobile market. As of 31 December 2011 of the 68.6 million SIM cards in France, 3.15 million were M2M SIM cards. This tremendous growth can be attributed to the recent rollout of mass market applications (fleet management, remote meter reading, telemetry, etc.) of which some have been imposed by legislation or regulation – e.g. eCall emergency calling system for vehicles, ecotax for heavy vehicles, etc.

Following through on the work begun in 2010, ARCEP commissioned IDATE to produce a report whose purpose was to:

- better understand this market, its communication needs, its products, market forecasts and the current status of fixed and mobile number use;
- be apprised of the different possible addressing and numbering alternatives for M2M that could replace mobile numbers, with a view to introducing a dedicated numbering and/or addressing policy for these communications, if necessary.

The findings of this report helped to confirm and flesh out the Authority's initial conclusions, including, first, that growth will continue to be strong in the coming years and, second, that currently available numbering resources will not suffice to satisfy the needs of this type of application.
This work resulted in a decision to open a new block of numbers in the first half of 2012, to be able to meet the requirements of M2M communications.

M2M, connected devices and the internet of things:

To meet the numbering needs created by the development of machine-to-machine (M2M) communications, and the market for connected mobile devices – which could represent an additional 33.5 million SIM cards between the end of 2011 and 2020 – on 25 April 2012, ARCEP launched a consultation on a draft decision on reorganising the blocks of numbers starting with 06 and 07.

The goal of this consultation was to obtain feedback from stakeholders on:

- opening up a block of numbers whose length is extended to 14 digits, dedicated in particular to machine-to-machine (M2M) applications, so that this nascent market can develop in a clear and lasting fashion;
- opening two blocks of 10-digit numbers, starting with 073 and 074, for numbering needs in mainland France;
- opening blocks of 10-digit numbers, starting with 0691 and 0697, respectively, to meet numbering needs in Guadeloupe and Martinique.

This consultation will address the list of services that will need to use the longer numbers, as well as reserving blocks of 10-digit numbers for "traditional" mobile telephony uses. The final version of this decision is due to be adopted in summer 2012.

b) Reforming the pricing structure of special numbers used by value-added services

Following an assessment made in the second half of 2010, which revealed a strong decrease in the VAS market (45% over the past five years), in February 2011 published several proposals aimed at restoring consumers' confidence in value-added services delivered over the telephone.

They stressed the need to:

- revise the retail pricing structure to make it clearer;
- establish a common format for detailing pricing;
- improve market players' transparency;
- work to prevent unfair, and potentially fraudulent practices;
- to strengthen adherence to a code of practices through the creation of a body responsible for setting rules and enforcing their application.

These proposals were followed in the second half of 2011 by actions from the sector's stakeholders – i.e. the market's leading operators and consumer associations – working in tandem with ARCEP.

The agreed-upon areas for improving how this market operates were listed in document entitled, "*Changes in the numbering plan for numbers starting with 080*" which ARCEP submitted to public consultation in summer 2011.

The main directions being taken to improve the system concern:

- standardising the pricing methods used by wireline and wireless operators;
- the explicit dissociation of the price of the service delivered by the provider ("S") and the price of the call ("C") which is aligned with the price of calls to fixed lines;
- simplifying the range of time-based rates and creating a range of call-based rates (in other words regardless of the length of the call) for service providers;
- the development of freephone numbers for users calling from a fixed or a mobile line.

This work will be completed by the end of 2012.

Glossary

2G, 2.5G: mobile systems predating 3G. For 2G, they include GSM, and for 2.5G, GPRS and EDGE.

3G: third-generation mobile system. The gradual introduction of packet switching technology into mobile networks allows 3G networks to provide access to a wide range of new services, particularly high-speed Internet access.

3GPP *(3rd Generation Partnership Project):* cooperation between regional telecommunications standardisation bodies such as ETSI (Europe), ARIB/TTC (Japan), CCSA (China), ATIS (North America) and TTA (South Korea), whose aim is to produce technical specifications for 3rd generation (3G) mobile networks. 3GPP also ensures the maintenance and development of technical specifications for GSM mobile standards, notably for GPRS and EDGE.

4G: informal term for referring to fourth generation mobile telephony. Speeds will increase to roughly 40 Mbps in 2009-2010 and to 80 Mbps and perhaps more further down the road. Several technologies that are currently being deployed can also be put in this group, including WiMAX (IEEE 802.16 standard technology), iBurst (IEEE 802.20 standard technology)... (See also: LTE).

Access network: network to which users directly connect their terminal equipment in order to access services. (See "Core network".)

Accounting rates: system establishing the pricing principles to be used in interconnection agreements between international operators so that an operator in the country of origin and an operator in the country of destination may share international call revenue when cooperating to route international traffic. For calls to a given international destination, the operator in the country of origin sets the price charged to users (the retail price), which is called the collection rate. At the same time, this operator and the operator in the country of destination negotiate a per-minute accounting rate. Revenue is shared based on this rate according to a sharing formula that determines the portion (settlement rate) accruing to the operator in the country of origin and that accruing to the operator in the country of destination. This portion usually is equal to half of the accounting rate.

ADSL *(Asymmetrical Digital Subscriber Line):* ADSL is part of the xDSL technology family which allow end users to access a range of electronic communication services over its copper wire line – and especially telephony and internet access. The line's throughput it supports diminishes as the user's distance from the DSLAM increases.

AFA *(Association des Fournisseurs d'Access à Internet)*: French association of Internet service providers.

AFORST: French association of telecommunications network operators and service providers.

AFUT: French association of telecommunications users.

ANFr *(Agence Nationale des Fréquences):* agency responsible for managing the radio frequency spectrum, allocating frequencies to the various government departments and independent authorities that assign them (ARCEP, CSA, the Ministry of Defence, etc.), handling interference, and conducting international spectrum negotiations.

ARPU: Average Revenue Per User.

Asymmetrical regulation: a form of regulation that imposes certain obligations only on SMP operator(s) in a given market (e.g. France Telecom in the fixed telephony market), to enable the development of lasting competition.

ATM *(Asynchronous Transfer Mode):* technique for the asynchronous transfer of digital broadband communications using short, fixed-length packets. It remains a widely-used technique but is tending to be replaced by IP technology.

Backhaul: Backhaul is the section of an electronic communications network, built out at the departmental or regional level, that makes it possible to relay traffic to the local loop's concentration points (exchanges, neighbourhood cabinets, FDH, etc.). Most backhaul networks are fibre-based, but may contain wireless links and digital links over the copper pair.

Bandwidth: this denotes the transmission capacity of a transmission link. It determines the amount of information (in bps) that can be transmitted simultaneously. In computing, it is often confused with the transfer rate of a communication link, expressed in bits per second.

BAS *(Broadband Access Server):* equipment whose function is to manage ATM data transport for ADSL-based Internet access offerings. Each BAS in the France Telecom network aggregates ATM traffic from about ten DSLAMs. Thus, a BAS manages traffic for all ADSL lines in the coverage area of the DSLAMs to which it is connected. France Telecom calls the area covered by a BAS a plaque (coverage area). Two ATM circuits, one "upstream" and the other "downstream", are established between each connected customer and the BAS serving that customer.

Beauty contest *(comparative selection):* method of operator selection to award scarce resources. It is different from an auction in that it allows candidate selection to be based on multiple criteria and not just on price offered.

Bi-injection: Consists of sending DSL signals equally to both the local loop (as is currently the case) and the sub-loop. This supposes that the DSL signals sent from the neighbourhood cabinet will be technically alternated and attenuated so as not to disturb the remaining DSL signals being sent from the subscriber connection point. Thanks to "bi-injection", carriers can therefore continue to activate their connections at the original LLU exchange for the customers in question, but without the benefit of increased bandwidth.

Bitrate: amount of data transiting a network within a given timeframe.

Bitstream: refers to wholesale offers which may be used by alternative operators to market retail residential and business offers in zones where they have no broadband equipment of their own installed (sites which are too small or too far from their collection network). From a technical standpoint, France Telecom activates the copper pair to the end user with its own broadband access equipment, then routes the Internet stream up to the nearest connection point between its collection network and the alternative operator's collection network.

BSC *(Base Station Controller)*: GSM base station controller. Equipment that controls one or several BTS and manages radio resources.

BTS *(Base Transceiver Station):* GSM equipment comprising transmitters and receivers and constituting the interface between the BSC and mobile terminals.

Building operator: the undertaking responsible for establishing and/or managing one or several lines in an existing building, typically governed by an installation, maintenance, line replacement or management agreement signed with the building's owner(s) or co-op members. A building operator is not necessarily an operator as defined by CPCE Article L. 33-1.

Bulk mail: mail items produced in mass quantities by computer – at least 400 items per mailing – such as invoices, bank statements, addressed advertising and periodicals.

CAA *(Commutateur à Autonomie d'Acheminement):* local exchange (exchange to which subscribers are connected) on the France Telecom telephone network. The structure of the France Telecom network is

hierarchical and the CAA is the lowest-ranking exchange in the network. Thus, there are two types of exchange: subscriber exchanges (the CAAs) at the bottom of the hierarchy to which subscribers are linked via a subscriber line unit (called a unité de raccordement d'subscriber or URA), and transit exchanges (CTs) at the top of the hierarchy.

Cable networks: audiovisual distribution networks that offer electronic communication services.

Call-back: a calling process that operates as follows: the user dials a number in the country operating the call-back; since the call is not actually set up, there is no charge; an automatic device calls back the user, setting up the call on an international line; the user then dials the number of the called party; the call is billed at the tariff charged by whatever foreign operator is selected. This system thus enables users to take advantage of tariffs in the called country.

Carrier selection: option given to customers to choose among multiple carrier operators. Carrier selection applies to all calls (local, national long distance and international long distance). It can be exercised per call or by subscription.

CCCE *(Commission consultative des communications électroniques):* the advisory committee on electronic communications to the Minister responsible for electronic communications and the Authority. Composed of 24 members, the committee is consulted on any draft measures whose purpose is to set or amend the terms relating to the declaration, establishment or operation of electronic communications networks or services, particularly in the areas of interconnection, network access and the use of radio frequencies.

CDN *(Content Delivery Network):* a system of servers, deployed on different nodes of a network in the vicinity of end users. By storing temporary copies of Web content (i.e. principle of a cache server), the CDN allows for easier access to the data thanks to the reduction in the time and bandwidth needed for their distribution.

Circuit: bi-directional link between two terminal units over which a connection-mode service can be provided.

Cloud computing: a concept that consists of moving computer processes or data which have traditionally been run/stored on local servers or users' workstations to remote servers.

Collocation: under France Telecom's standard interconnection offer, physical interconnection is possible using three different techniques:
- collocation: The operator installs its equipment at France Telecom's premises.
- interconnection link: France Telecom installs its equipment at the operator's premises.
- in-span interconnection: a solution halfway between these methods of connection, where the connection point is located, for example, in the public domain.

For purposes of local loop unbundling, collocation consists of supplying the space and technical resources necessary to host and connect the technical equipment of alternative operators.

Commercial operator or vendor: the operator that the retail market customer chooses for the supply of her telecommunications service, or that an ISP chooses to supply its own customers with a telecommunications service.

Concentration point: the end point for one or several lines where the undertaking (typically the building operator) which is installing/has installed and operating optical fibre ultra-fast broadband electronic communications lines in an existing building provides other operators with access to these lines, with a view to serving retail market customers.

Concentration point operator: the building operator who operates a concentration point.

Convergence: convergence of the broadcast and telecommunications sectors, made possible by technological advances that allow different media (cable networks, terrestrial or satellite wireless networks, computer terminals and television sets) to be used to transport and process all types of information and services involving sound, images and data; since it derives from technological disruption (the digitisation of information), convergence has both economic and regulatory implications. (See also Fixed-mobile convergence).

Core network: the core or backbone network, consisting of all transmission and switching infrastructure beginning with the local exchange.

CPCE *(Code des Postes et des Communications Electroniques):* French postal and electronic communications code.

CSA *(Conseil Supérieur de l'Audiovisuel):* French national broadcasting authority.

CUG *(Closed User Group):* a CUG is an independent network for shared or private use. When the network is reserved for the use of the individuals or corporate entities that established it, it is called private, and when it is reserved for the use of multiple individuals or corporate entities organised as one or more closed user groups for purposes of exchanging commu- nications internal to the group, it is called shared. The Authority has clarified this definition by indicating that a CUG is understood to be a group based on a community of interest that is stable enough to be identifiable and which predates provision of the telecommunication service. The notion of a "closed user group" is not limited to independent networks but is used also to define, for example, a virtual private network on a public network.

Direct interconnection: also known as call termination service. For an operator, this consists of terminating a call to a France Telecom subscriber. The call is routed by the operator to the interconnection point; from that point, it is carried by France Telecom over the France Telecom network to the subscriber's customer premises equipment.

DSLAM *(Digital Subscriber Line Access 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 onto a single medium, which routes data to and from these lines.

DTT: Digital Terrestrial Television.

DVB-H *(Digital video broadcasting handheld):* a digital terrestrial broadcasting standard geared to enabling audiovisual content reception on a mobile handset (mobile TV).

EDGE *(Enhanced Data rate for Global Evolution):* EDGE is a third-generation mobile standard allowing data to be transferred at 384kbps. It evolved from the GSM and American TDMA standards.

E-SDSL *(Extended symmetrical digital subscriber line):* technology enabling symmetrical bitrates, but with a shorter range than classic ADSL.

Exchange: switching equipment permitting calls to be directed to their destinations by establishing a temporary connection between two circuits on a telecommunications network or by routing information organised as packets. France Telecom's network comprises a hierarchical system of switches. The higher the exchange is in the system, the greater the number of subscribers it serves.

FFT: Fédération française des télécommunications (French telecommunications federation).

Fixed-mobile convergence: also known as FMC, and which involves the convergence of the fixed and mobile telephony technologies used and services offered. FMC opens up the possibility for operators to offer all users the same services, regardless of the technology or network being used.

Flat-rate interconnection: denotes an offer for interconnecting third-party operators with the France Telecom network. Under it, the fees that third-party operators pay for the collection of local loop traffic are fixed on a per-circuit basis rather than billed per minute.
FTTB: Fibre to the building.

FTTH: Fibre to the home.

Full MVNO: a virtual mobile network operator that has its own SIM cards, its own customer database, or home location register (HLR), along with core network elements.

Full unbundling: or fully unbundled access to the local loop, which consists of making all of the frequency bands of the copper pair available. As a result, the end user is no longer connected to the France Telecom network, but rather to that of the new entrant operator.

GRACO: Discussion forum between ARCEP, local authorities and operators. An advisory committee

chaired by ARCEP whose members include Authority staff members, local elected officials and carriers, and whose purpose is to define the terms for the successful realisation of local authorities' regional digital development initiatives (fixed and mobile networks and services). Three technical meetings and one plenary meeting are held each year, drawing on the output of the working groups.

HDSL *(High-speed DSL):* bi-directional symmetrical transmission technique conceived primarily for business applications. This technology achieves bit rates of 2Mbps over distances of up to 2500m.

HLR *(Home Location Register):* central database of permanent subscriber information for a mobile network.

HSCSD *(High-speed Circuit Switched Data):* circuit-switched data system (see "Switching") allowing improved bit rates on GSM networks.

HSDPA *(High speed downlink packet access):* a 3G technology that can deliver downstream speeds of up to 1.8 and even 3.6 Mbps (N.B.: also referred to by some as 3.5G).

HSUPA *(High speed uplink packet access):* 3G technology derived from HSDPA that makes it possible to increase upstream bitrates (and not only downstream rates, as is the case with HSDPA).

IMT-2000 (International Mobile Telecommunications 2000): third-generation mobile systems supporting enhanced mobility services thanks to the introduction of new functionality. The ITU selected five terrestrial radio interfaces for third-generation mobile systems under the designation IMT-2000. UMTS was one of the five.

Indirect interconnection: also known as call-collection service, in which an alternative operator collects a call from a France Telecom subscriber. The subscriber dials a prefix to select the operator and the call is then carried by France Telecom from the subscriber's customer premises equipment to the point of interconnection, where the call is then carried by the alternative operator.

Insured item: a service that consists of insuring a postal item for the value declared by the sender against loss, theft or damage.

Interconnection: the linking of various telecommunication networks so that any subscriber of one operator may communicate with any subscriber of any other operator.

Interconnection agreement: private contract negotiated and signed by two operators to determine, on a case-by-case basis, the terms and conditions of interconnection between them. Generally, agreements signed with an operator that has significant market power are based on that operator's standard interconnection offer. Otherwise, the conditions are determined without reference to a standard interconnection offer.

Interconnection interface: the set of technical specifications necessary for the operational implementation of interconnection based on establishing dialogue between networks. It defines physical interconnection arrangements, services and advanced functions accessible by the networks concerned, the ordering mechanism for these services, and associated billing and operating arrangements.

Internet: a group of variable-sized networks interconnected by the Internet protocol (IP) over which a wide range of services can be provided.

Interoperability: also called interworking. Service interoperability refers to the seamless functioning of various services on different networks. With respect to interconnection, the technical functionality available at the interconnection interface determines partly whether a service will interoperate between different operators.

IP *(Internet Protocol):* telecommunications protocol that is used by the networks that support the Internet. It allows information to be packetised for transmission and the various packets to be addressed, transferred independently of one another, and reassembled into the original message on arrival. The switching technique therefore is referred to as packet switching. 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.

IRIS *(Ilots regroupés pour des indicateurs statistiques):* aggregated units for statistical information. A breakdown

of neighbouring municipalities with a population of less than 5,000 established by the INSEE for performing censuses with a view to mapping out the perimeter for the distribution of inter-city data.

ISP: Internet Service Provider.

Items of correspondence: postal items addressed to households and businesses. Includes both domestic items and items sent from abroad.

IVS: Interactive voice response system

LLO *(Local loop operator):* telecommunications company that operates subscriber lines.

Local loop unbundling: local loop unbundling, also known as unbundled access to the local network, consists of allowing new operators to use the incumbent operator's local copper-pair network to serve their subscribers directly. The new entrant of course pays the incumbent for use of the local network.

Local loop: the wired or wireless facilities between the subscriber terminal and the local exchange to which the subscriber is connected. The local loop therefore is the part of an operator's network that provides direct access to the subscriber.

Long distance carrier: telecommunications company which transports national and/or international long distance communications.

Main distribution frame (MDF): apparatus that connects subscriber copper pairs to the cables that connect to the local exchange. It allows several subscriber lines to be concentrated onto a single cable.

Managed services: solutions for accessing content/services/applications by electronic means, for which the network operator guarantees specific properties end-to-end and/or during a given period of time, thanks to the processes it implements either directly on the network it controls or through agreements with the operators in charge of routing traffic.

Mono-injection: consists of sending DSL signals to the sub-loop for all of the lines in the neighbourhood cabinet in question, with no particular technical restrictions. Here, activating the DSL connection for all of the subscribers downstream from the cabinet is no longer performed at the original exchange, but entirely at the neighbourhood cabinet level.

MSC *(Mobile Services Switching Centre)* and VLR *(Visitor Location Register):* on GSM and/or UMTS networks, the MSC is the exchange that manages incoming and outgoing circuit-switched calls. The switch is linked to a database (VLR) containing a copy of the user profile and terminal or handset location information.

Multi-fibre: under this model, the building operator pulls several fibres from the building to the concentration point. Connection to the commercial network operator is through either splicing or an optical jumper. This means that each operator owns a fibre and a dedicated port in each building. The appeal of this model is that, once the connection is installed in a building, a technician does not have to be sent out to the site and the risk of jumper error becomes nil. On the down side, this model requires a great deal of fibre, as much in the vertical as in the horizontal portion (for operators that opt for splicing) since a building can, in theory, be equipped with 400% capacity.

Multi-fibre: in the last metres of an optical fibre network, a multi-fibre configuration has several fibres (e.g. four) that connect the concentration point to the optical network unit (ONU) inside the customer premises. Access can therefore be supplied either over a dedicated or a shared fibre.

MVNO *(Mobile virtual network operator):* unlike mobile network operators (Orange France, SFR and Bouygues Telecom in Metropolitan France), MVNOs have no frequency resources of their own. To provide end customers with mobile services, they therefore use a mobile network operator's radio network.

Narrowband Internet: also referred to as dial-up. Internet access from the France Telecom public switched telephone network, which is used for routing conventional telephone calls.

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 and thus provides the interface between the switched telephone network and the IP data transport network.

Neighbourhood cabinet: a small exchange immediately downstream from the central office that makes it possible to split the copper lines that make up a portion of subscribers' lines. Unlike the central office, the cabinet contains no equipment capable of supplying a switched telephone service – this equipment is located higher up the network in the central office to which the cabinet is connected. It is at the neighbourhood cabinet level where access to the France Telecom sub-loop is made possible, once it has been reengineered. Broadband access can thus be supplied from this new network gateway, making it a broadband exchange. The switched telephone service continues to be supplied from the central office.

Network: totality of telecommunication resources employed including all switches and transmission links, whether wireline (metallic pair or cable or fibre optic cable) or wireless (terrestrial or satellite using electromagnetic waves).

Network sharing: Principle introduced by the Law on modernising the economy (LME) of 4 August 2008 to guarantee competition in the supply of ultra-fast broadband without increasing the number of undertakings required to do work on private property. The operator who installs the fibre in the building must therefore grant all reasonable requests from other operators to access the last metres of the network.

NRA: national regulatory authority.

NRA *(nœud de raccordement d'subscribers):* subscriber connection point. A term used by France Telecom to designate the main distribution frame (see "MDF").

Number portability: also referred to as number retention. A system that allows a customer to keep their telephone number (either fixed or mobile) when switching operators.

OLT *(also known as ONT):* point of convergence for the lines of FTTH network subscribers located in the same neighbourhood or the same town. It can be compared to the "NRA" (see above) in the copper local loop.

On-net and off-net calling: respectively, calls between two customers of the same mobile network and between two customers of different mobile networks.

PIN: Public-initiative network. An electronic communications built under a public service contract.

PMR *(Professional Mobile Radio):* Also known as Private Mobile Radio. Mobile radio networks for business users. In France the following distinctions are made:

- 3RP (Réseaux Radioélectriques à Resources Partagés): trunked private mobile radio network.
- 3RPC (Réseaux Radioélectriques à Resources Partagés Commerciaux): trunked public access commercial mobile radio networks using 3RP technology;
- RPN (Radiocommunications mobiles Professionnelles Numériques): digital trunked Professional Mobile Radio networks using Tetra or Tetrapol technology.
- 2RC (Réseaux à usage partagé à relais commun): trunked private mobile radio networks for commercial purposes.
- 3R2P: 3RP networks operated for the user's private purposes.
- RPX: local trunked networks (new category of network).
- RPS (Radio Professionnelles Simplifiées): Short-range business radio.

Point-to-point: a type of fibre optic network architecture whereby all of the customer premises are connected to the OLT by a dedicated fibre, from end to end.

PON *(Passive Optical Network):* a type of fibre optic network architecture. It is a tree architecture whose active equipment is all managed by the same operator. Unlike point-to-point technology, it cannot be "unbundled".

Reengineering operator: refers to either a local authority acting as an electronic communications operator, an operator working in tandem with a local authority under a public service contract, or an operator working on its own behalf, which is responsible for performing the required reengineering of one or several

neighbourhood cabinets to enable access to the sub-loop as a means of increasing access speeds.

Radio interface: system enabling a mobile terminal to communicate with the network. Standardisation of the UMTS interface was the subject of numerous discussions within ETSI during 1997. On 29 January 1998, the SMG (Special Mobile Group) committee adopted the UTRA (UMTS Terrestrial Radio Access) standard for the terrestrial interface (as opposed to the interface for satellite).
The UTRA standard is a compromise between two originally competing standards: WCDMA and TD/CDMA. UTRA was adopted by the ITU in March 1999 as a radio interface standard for IMT-2000.

READSL2 ***(Reach Extended Digital Subscriber Line):*** a technique that makes it possible to increase the range of the ADSL signal by injecting more power into certain frequency bands. Its chief purpose is to provide minimum service to subscribers located just outside the farthest reach of the normal ADSL coverage zone.

Registered item: a service that guarantees flat rate compensation for the loss, theft or damage of the postal item and which, when so requested by the sender, provides proof of deposit of the postal item and/or its delivery to the recipient.

Remote concentration point: the supply point for a remote connection solution when a concentration point serves fewer than 1,000 lines, as provided for in ARCEP Decision No. 2010-1312. In practice, this point may be combined with the operator's fibre distribution hub (FDH).

RFID: Radio Frequency Identification technology which takes the form of chips or electronic tags that contain information on the product in which they are inserted, and which are equipped with readers that make it possible to query the tags remotely (within a range of several meters).

RIO (relevé d'identité operator): operator identity statement. A unique identifier which is attributed to a mobile phone line and the customer contract associated with it, enabling better identification during the number portability process.

SCoRAN ***(Stratégie de cohérence regionale d'aménagement numérique):*** Strategy for consistent digital regional development. Describes the core, overarching objectives for a public initiative aimed at enabling fixed and mobile broadband and ultra-fast broadband rollouts. The strategy is designed by a regional cooperation body.

SCS ***(Société de commercialisation de services):*** a term specific to the mobile sector, designating a mobile communications service provider, a company that sells and manages mobile subscriptions on behalf of an operator.

SDTAN ***(Schéma directeur territorial aménagement numérique):*** Digital regional development blueprint drafted in application of Article L. 1425-2 of the Local and regional authority code.

Shared access: or partially unbundled access to the local loop, which consists of making the "high" frequency bands of the copper pair available to third-party operators, on which they will be able to build an ADSL service, for instance. The low frequency band (the one used traditionally for telephony) continues to be managed by France Telecom, which thus continues to supply subscribers with its telephone services, without unbundling having any effect on the service.

Short messages or SMS ***(Short Message Service):*** text messages which are transmitted over the GSM mobile network signalling channels and have a maximum length of 160 characters. Transmission of these messages on the GSM network is standardised. A short-message server integrated into the mobile network provides the interface between the mobile and fixed-network environments.

Signalling: on a telecommunication network, the signalling function performs the exchange of information internal to the network for purposes of call routing. Just as road signs on a roadway network direct the movement of vehicles, signalling information directs the movement of communications on the telecommunications network. This could involve, for example, the information necessary to recognise the caller for purposes of setting up call billing or displaying the calling number. This function can be provided directly by the network transporting the subscriber call.

Thus, it is generally integrated into the switches. It can also be performed by a separate network, called the signalling network.

SIM (Subscriber Identity Module): smartcard inserted into a mobile terminal and containing the subscriber data required to authenticate a user on the network (GSM standard).

Single fibre: a configuration whereby the building operator pulls a single fibre from the concentration point to the optical network unit inside the customer premises. Access is thus necessarily supplied over a shared optical fibre.

Single piece mail: mail items sent by individuals, businesses and high volume issuers, which are not subject to any special preparation. They are deposited in the collection boxes on the public thoroughfare or adjacent to sorting centres, or in La Poste points of contact.

SMP *(significant market power)* operator: an operator has significant market power (SMP) if, individually or jointly with others, it commands a position equivalent to a dominant position, i.e., it has considerable ability to behave without regard to its competitors, its customers and ultimately, consumers.

SMS *(Short Message Service):* see "Short Messages".

SNG: satellite newsgathering, refers to ground stations for temporary satellite video links.

Standard interconnection offer: also known as the interconnection catalogue. Technical and commercial interconnection offer that operators designated by the Authority as having significant market power, pursuant to Article L.3¬8 of the CPCE (the French postal and electronic communications code), are required to publish annually so that other operators may establish their own commercial offers and prices. The standard interconnection offer also sets forth the conditions governing physical interconnection between the SMP operator and other operators.

Switching: in a telecommunications network, switching allows temporary traffic connections to be established between two or more network points. This is carried out by equipment, called switches or exchanges, located at different points in the network. The basic structure of a telecommunications network therefore comprises transmission links interconnected by switches. Packet switching and circuit switching are two switching techniques used in telecommunication networks. The first is used by Internet (IP) networks for example and the second by traditional switched telephony networks.

Symmetrical regulation: a form of regulation that imposes the same obligations on all the operators in a given market in order to guarantee consumers network interoperability, a minimum quality of service, adequate information and streamlined operator switching procedures which, in turn, allow users to take the utmost advantage of market competition.

Terminal equipment: equipment allowing a user to send, process or receive information (e.g., telephone, fax, modem etc.).

Third-party billing: service by which new operators may entrust the incumbent operator with billing for the services they offer their customers via interconnection. In the case of special services, third-party billing can be used for charged services only (not for services that are free to the caller). As this market develops, third party billing becomes essential for effective competition.

Third-party collection: in the context of interconnection, a service enabling a network operator to collect traffic from the incumbent's network on behalf of an operator that has no infrastructure in the geographic area concerned. This service is used particularly by telephone operators who wish to provide their service over an extended area without deploying a network.

Traffic management: any form of technical intervention on a data stream which takes into account the nature of the traffic or the identity or quality of the stream's originator or recipient.

Transmission: in an electronic communication network, the transmission function transports information from one point in the network to another. The infrastructure supporting transmission may consist of copper or fibre optic cables or may be wireless. (See "Switching".)

Triple Play: a bundle of three services (broadband Internet access, unmetered calling and TV) delivered over an electronic communications network.

Ultra-fast broadband *(or ultra high-speed access):* a term that refers to Internet access capacities that exceed those of ADSL, when referring to fixed network access, and to those of UMTS, when speaking of mobile access. For fixed access, ultra-fast broadband is delivered via optical fibre while, on mobile, the technologies are referred to collectively as 3.5G (HSDPA) or 4G (LTE).

URA *(Unité de Raccordement d'Abonné):* on the France Telecom network, this is the subscriber line unit, the part of the telephone switch where subscriber lines connect and information is digitised.

USSD *(Unstructured Supplementary Service Data):* a protocol used by GSM systems for allowing a mobile phone to communicate with a server in real time, without the communication being logged as an SMS. It can be used for instant messaging, payment or tracking consumption, for instance.

UWB *(Ultra wide-band):* a wireless modulation technology for transmitting large amounts of digital data over a wide spectrum of frequency bands, but with very low power to prevent interference with other signals.

Very high-density areas: municipalities with a highly concentrated population where, in a significant portion of that area, it is economically viable for several operators to deploy their own infrastructure, namely optical fibre networks, close to customer premises.

VDSL *(Very high speed digital subscriber line):* xDSL technologies enabling better performance on local copper loop access networks, the goal being to supply higher speeds than classic ADSL.

VGAST *(vente en gros de l'abonnement téléphonique):* a wholesale line rental offer marketed by France Telecom which includes not only the subscription as such and services which are traditionally associated with the telephone subscription (caller display, incoming call signal, etc.) but also all person-to-person calls, calls to special numbers and narrowband Internet access. It is compatible with the simultaneous use of the high frequency band, notably in the case of wholesale broadband offers delivered at the regional or national level and shared access, regardless of the operator employing this high frequency band.

VPN *(Virtual Private Network):* a virtual private network involves the shared use of one or several public networks for the internal purposes of a closed user group, which is defined "as a group based on a community of interest that is stable enough to be identifiable and which predates the provision of the telecommunications service". It responds to a need for both internal communication (communication within the user group) and external communication (communication with public network users). It allows businesses with widely distributed sites to use the operator's network for emulated private network access that employs a numbering plan internal to the company: this emulation provides businesses with the functionality of a private automatic branch exchange (PABX) without requiring the investment .

VSAT *(Very Small Aperture Terminal):* satellite telecommunication service supporting two-way information exchange at low or medium speed via a small transmitter-receiver terminal that uses a narrow part of the total satellite bandwidth.

WAP *(Wireless Application Protocol):* standard that adapts the Internet to mobile telephone constraints, in particular by employing a suitable content format. This communication protocol is a component of the process for gradually migrating GSM mobile networks to the Internet.

WAPECS *(Wireless access policy for electronic communications services):* an initiative launched by European Union countries aimed at facilitating swift access to spectrum for new technologies, in a bid to promote competitiveness and innovation (by eliminating all of the obstacles impeding market momentum), and to ensure consistent licensing mechanisms, while upholding the principles of technological neutrality for services.

WDM *(wavelength-division multiplexing):* a technology that multiplexes several optical carrier signals onto a single fibre using different wavelengths, or colours, which makes it possible to increase datarates.

Wi-Fi *(Wireless Fidelity):* generic commercial name for IEEE 802.11b wireless local Ethernet network (WLAN) technology operating at 2.4GHz.

WiMAX *(Worldwide Interoperability for Microwave Access):* label certifying the interoperability of IEEE 802.16-standard equipment from different suppliers.

Wireline network: network based on metallic or fibre optic cable infrastructure.

WLAN *(Wireless Local Area Network):* wireless network operating over a limited area.

WLL *(wireless local loop):* local loop employing radio technology rather than the copper wire used in today's networks, thereby allowing for greater flexibility in infrastructure deployment.

WRC *(World Radiocommunication Conference):* its purpose is to ensure international coordination in matters relating to radiocommunication. This coordination is essential because frequencies cross borders and it is simpler to have the same types of services in the same bands. Organised by the ITU, this conference is held every three or four years. The results, once incorporated into radiocommunications regulations, constitute international treaty. Each WRC conference is preceded by a meeting of the Radiocommunications Assembly and is followed by a conference preparatory meeting (CPM), where the groundwork is laid to prepare for the next conference.

ZAA *(Zone à autonomie d'acheminement):* local exchange area. In the France Telecom network, every category of switch is associated with a technical service area which indicates the number of subscribers served by one or more switches at a given level of the network. The ZAA (Zone à autonomie d'acheminement) corresponds to the CAA or local exchange, and the ZT (Zone de transit) corresponds to the CT or transit exchange (Commutateur de transit).

ZLT (Zone locale de tri): local sorting area. The local loop operator sends calls to the carrier designated by the calling party only when the calls are destined for called parties outside of the ZLT; it keeps and routes calls internal to the ZLT regardless of the way in which the calling party dials the call. In France, the ZLT generally corresponds geographically to a départements.

ZT (Zone de transit): transit area. (See "ZAA").

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