

CHAPTER 6

Regional development

A. State of national coverage

1. Broadband

State of broadband development across the country

As of 31 December 2007:

- ◆ there are 15.5 million broadband connections in France, of which there are 14.8 million via DSL ;
- ◆ France Telecom has unbundled 2,965 exchanges, enabling alternative operators to potentially connect 68% of the population;
- ◆ all France Telecom exchanges (MDF or subscriber connection points) are equipped with ADSL.

1.7% of the population (550,000 households) nevertheless remain ineligible for broadband due to the length of their phone line. This means that, in a *département* of 500,000 inhabitants, there are still around 5,000 households that will remain in dead zones if no action is taken.

1 - Source: ARCEP
Broadband observatory,
figures as of
31 December 2007,
available at www.arcep.fr.

2 - Law No. 2004-575
of 21 June 2004
concerning confidence in
the digital economy (LEN),
JO of 22 June 2004.

3 - Cf. Article L. 1425-1
of the local and regional
collectivity code, CGCT
(Code Général
des Collectivités
Territoriales), introduced
by the Law on the digital
economy of 21 June 2004.

In 2007, local authorities, and primarily regional authorities and their economic interest groups, became increasingly proactive in their drive to compensate for the insufficiencies of private initiative. With the adoption of the Law of 21 June 2004, concerning confidence in the digital economy, local authorities are endowed with wider powers in the area of telecommunications. Since the law was enacted, these powers have allowed them to establish active networks, engage in the business of operator and provide services to end users under certain conditions, when private initiatives prove inadequate over the long term³.

The notion of broadband dead zone covers a relatively broad spectrum: an entire village can be in a dead zone, as can a business park, which means that no household or business in that zone is eligible for ADSL. There can also be “black spots”, particularly in sparsely populated rural areas located too far from the nearest town which does have ADSL service. And, finally, it is not unheard of to find black spots between coverage zones in densely populated urban areas.

1.1 Identification of broadband dead zones

The notion of dead zone needs to be analysed on a finer scale, at the very least at the neighbourhood level in densely populated areas, and at the locality or isolated enterprise level in rural areas. To remedy the lack of coverage in dead zones, their identification thus needs to be as precise as possible.

The majority of available data is supplied by France Telecom, in the form of maps of regional DSL coverage down to the municipality level. France Telecom also publishes the location of its exchanges on its website, along with the code of the town to which it is attached. Local authorities can refine the data by combining them with cadastral information.

Having the location of the exchanges makes it possible to pinpoint zones where signal attenuation will be an issue, by drawing concentric circles around the exchanges. Beyond a distance of four or five kilometres, there is a high presumption that an inhabitant is located in a dead zone – at least theoretically.

Another solution that makes it possible to determine whether a residence is in a dead zone involves querying an eligibility server. France Telecom provides client operators that use its wholesale offers with attenuation data for each of its lines, and a forecast timetable for DSL service installation on each MDF. These data are not publicly available, however, which means that local officials do not have access to them. The leading access providers have their own eligibility servers but they only cover zones where service is already available, thus making it impossible to perform forward studies.

France Telecom provided additional information in 2007:

- ◆ following discussions with the Authority, France Telecom published in June 2007 new ADSL dead zone data on a sub-municipal scale, on its website. Maps are now available that indicate the blocks of ineligible lines. While they do provide the players with a clearer idea of the volume of lines to be addressed in a given part of the country, the knowledge they supply is still very limited as they do not make it possible to pinpoint ineligible households. A further lack of precision comes from the fact that although the maps display the blocks of ineligible lines centred, whenever possible, at the concentration point, they often simply place them at the centre of the municipality;
- ◆ since summer 2007, the incumbent carrier has been supplying local authorities with information on the number of ineligible lines by sub-distribution cabinet, as part of its “NRA ZO” (dead zone subscriber connection point) offer, but does not provide the location of the sub-distribution cabinets.

These new elements thus help to complete the information that was previously available, but they do not make it possible to draw up an operational map of the country's dead zones.

Given the limited information that is available to local authorities, and at their request, the Chairman of ARCEP submitted a proposed decree to the Minister responsible for Industry, on 2 February 2007, that sought to demand that operators comply with the obligations included in the regulatory framework⁴. These obligations should allow local authorities to obtain proper data on broadband coverage.

4 - CPCE Article L.33-1.

The goal of this regulatory change⁵ is to require operators to publish detailed maps of the state of broadband coverage nationwide. To be effective, this information must be sufficiently precise and tailored to the needs of local authorities and consumers.

5 - Completing CPCE Article D.98-6 with further provisions pertaining to the regional and urban development objectives set out in Article L.33-1 of the same code.

On 16 April 2008, during a hearing of the National Assembly delegation devoted to regional planning and sustainable development, ARCEP Chairman, Paul Champsaur, thus reiterated that, *'it is not right that a municipality does not know what ADSL coverage is available to its citizens'*. The members of the delegation went on to confirm the need to include France Telecom's obligation to provide local authorities with a map of ADSL coverage in their region in the next law on modernising the economy. The Authority would thus be responsible for checking the exactitude of the information provided.

1.2 Technical solutions for covering dead zones

Several technologies can be employed for covering dead zones: wireless solutions (Wi-Fi, WiMAX, satellite) and wired solutions (reconfiguration of the France Telecom local loop).

Wi-Fi is currently the most widely deployed wireless solution. It provides a response to residential market and small business coverage needs. As with all wireless technologies, it enjoys a structural advantage in rural zones, given the low rollout costs involved.

WiMAX, for which frequency licences were awarded by ARCEP in July 2006, began to be deployed in 2007⁶ – with a number of networks being the result of public initiative.

6 - Cf. Part 4, Chapter 4, Para. A.3.

Several operators of satellite-based solutions have announced plans to provide new two-way solutions (data transmission and reception) that could cover dead zones rapidly, offering services whose speed and price are comparable to what is available in the ADSL market.

As concerns the reconfiguration of the local copper loop, France Telecom has, since June 2007 been capable of offering local authorities a solution that makes it possible to move DSL signal transmission equipment closer to end users. It is aimed at sub-distribution cabinets that are serving a large number of ineligible lines, and involves shortening the lines to make them eligible for broadband by reconfiguring the sub-distribution cabinet into a DSL subscriber connection point – referred to as a “dead zone” subscriber connection point (NRA ZO). Transforming the sub-distribution cabinet into a subscriber connection point is paid for by the local authority using the offer.

To prevent possible competition issues, the Authority held talks with France Telecom which led to a change in the reference unbundling offer. As a result, a service is now included in the incumbent carrier's offer that allows any unbundling operator to request that a sub-distribution cabinet be reconfigured into an “NRA ZO”. This means that any alternative operator would thus be able to offer an “NRA ZO” solution under the same conditions as France Telecom. The system allows local authorities to issue calls for candidates, and so stimulate competition between

the different operators. Reconfiguring the sub-distribution cabinet into a DSL subscriber connection point also allows all operators to benefit from access to the site according to the terms of the reference unbundling offer.

2. La téléphonie mobile

2.1 The “dead zone programme

The dead zone programme (programme zones blanches), launched by the government in 2003, aims to provide mobile telephony coverage in the 3,000 towns of France where none of the three operators were present when the national agreement was signed on 13 July 2003. Mobile calling services are to be available to 99% of the national population by the programme’s completion date, which is scheduled for the end of 2008. The original deadline was set for the end of 2007, but was not met.

The dead zone programme is broken down into two phases:

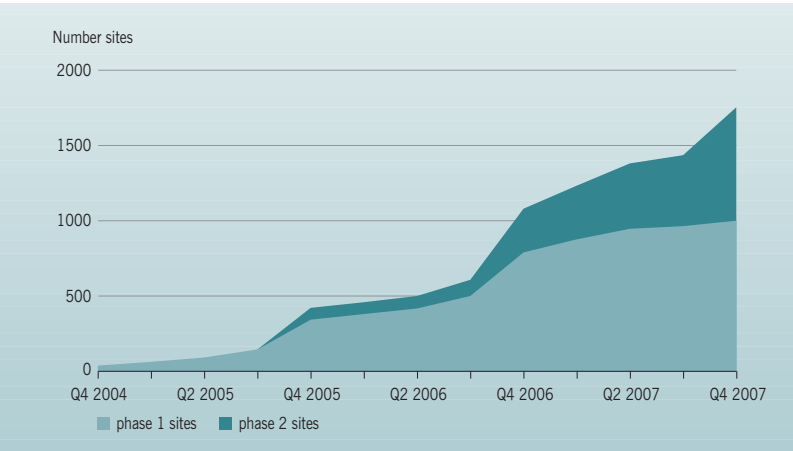
- ◆ Phase I, to which public funding of 44 million has been allocated for passive infrastructure, and whose target is to cover some 1,800 towns with 1,250 sites;
- ◆ Phase II, which is funded entirely by the operators, has the target of covering 1,200 towns with around 930 sites.

As a signatory of the national agreement in 2003, the Authority is an active member of the programme’s technical steering committee, which met on four occasions in 2007 to define concrete actions to be undertaken to help the programme run smoothly.

At the end of 2007, 2,687 towns had been covered as part of the plan, or more than 90% of the towns identified in 2003 (92% of the Phase I towns and 91% of the Phase II towns). Most of the remaining 200 sites are expected to become operational in 2008.

A steering committee of all of the players involved in the project – in other words the French Ministry of Industry (DGE), the Association of French *départements* (ADF), the French Mayors Association (AMF), the inter-ministerial delegation for regional development and competitiveness, DIACT (*Délégation interministérielle à l’aménagement et à la compétitivité des territoires*), and ARCEP – must analyse all of the results more closely, and render their conclusions in the first half of 2008, notably on the terms of the programme’s completion.

Eradicated “dead zones” of the 2,200 sites planned



ARCEP will provide its analysis of the programme's completion in its report on coverage, which is scheduled for 2008.

2.2 National 3G coverage

All three mobile operators in Metropolitan France were operating commercial 3G networks in 2007: Orange and SFR have been offering third-generation services since 2004 and Bouygues Telecom since 30 November 2007.

In accordance with the obligations contained in its UMTS licence, Bouygues Telecom was required to launch its commercial 3G services on 30 April 2007 at the latest, providing coverage to at least 20% of the population of Metropolitan France.

When the deadline was reached and compliance with the obligation verified, the mobile operator was reporting coverage of 12% of the population – in the cities of Paris, Lyon, Nantes and Grenoble – and marketing an offer that allowed some of its business customers equipped with a PC connection card to access its 3G network.

The Authority noted that Bouygues Telecom was behind schedule in its network rollout and lacked a consumer 3G offer, despite it being technically possible to implement. On 10 July 2007, the Director General of ARCEP sent the operator an official order to comply with its rollout and commercial launch obligations by 30 November 2007.

As Bouygues Telecom complied with the order, the Director General of ARCEP stated that there was no need to continue the sanctions procedure against the operator.

On the whole, 3G mobile coverage depends on the deployment efforts made by the mobile operators, according to a set timetable and list of objectives.

By the end of 2007, SFR had covered 70% of the population of Metropolitan France. Orange is expected to reach this target by the end of 2008 and Bouygues Telecom by the end of 2009.

The Authority believes that providing the entire French population with third-generation mobile services is a key objective in furthering regional development, and that reuse of the 900 MHz frequencies for 3G is central to achieving this⁷. This is why, on 27 February 2008, ARCEP amended the Orange and SFR licences to allow the operators to deploy 3G in Metropolitan France in the 900 MHz band, in accordance with the guidelines that had been defined in July 2007. Requested by the Authority to comment on the subject, Bouygues Telecom indicated that it would also be deploying UMTS in the 900 MHz band by the end of 2009, and that it would request amendment of its licence in due time.

2.3 Transparency with respect to coverage

Providing the French population with mobile coverage – which now extends to a very sizeable portion of the country – is a central component of regional development.

This is why, when renewing their GSM⁸ licences, the Authority imposed an obligation for operators to provide greater transparency on their network coverage, notably through the publication of detailed information on national coverage and the performance of annual coverage surveys, in accordance with methods specified by the regulator⁹.

7 - Cf. Part 4, Chapter 4, Para. A.2.

8 - The SFR GSM licence was renewed on 31 January 2006 (ARCEP Decision No. 06-0140); Orange's licence on 14 February 2006 (ARCEP Decision No. 06-0239) and Bouygues Telecom is expected to have its licence renewed in 2009.

9 - ARCEP Decision No. 07-0178 of 20 February 2007.

The objective here is two-fold:

- ◆ to inform consumers;
- ◆ to encourage operators to increase their national coverage.

Since 1 October 2007, operators have been publishing coverage maps on their respective websites which are detailed enough to be able to measure each operator's coverage in each municipality:

- ◆ Bouygues Télécom : www.couverture.bouyguestelecom.fr ;
- ◆ Orange : couverture-reseau.orange.fr ;
- ◆ SFR : www.sfr.fr/assistance/reseau-sfr-france.

Providing coverage data down to the district level, this information is validated in the field according to a public-survey protocol. Operators are responsible to ARCEP for the reliability of the information. Every year, they must perform a coverage survey in several districts chosen by the Authority. As the survey protocol is public, any person or local authority can perform a complementary survey.

10 - ARCEP Decision
No. 07-0230 dated
13 March 2007.

In 2007, these audits required Orange and SFR to test their network coverage in 242 districts in 11 regions selected by ARCEP¹⁰. Having entered the market at a later time, Bouygues Telecom has committed to begin performing field surveys in 2008, in anticipation of the renewal of its GSM licence which is due to occur in late 2009.

11 - Available in
the appendix on the ARCEP
website: www.arcep.fr.

Orange and SFR submitted the results of these audits to ARCEP in early 2008¹¹. They revealed that their existing maps were reliable – to a degree of 95.9% for SFR and 95.6% for Orange – but could be more detailed. The maps and measurements were not clear enough in four districts for SFR and in 12 for Orange. The Authority thus requested that the errors be corrected and that a new survey of these districts be performed in 2008.

12 - ARCEP Decision
No. 08-0288 dated
11 March 2008.

ARCEP has established a new list of 250 districts to be audited by the operators in 2008¹², located in the 11 regions that were not covered by the field surveys performed in 2007. The process must be completed by the end of October 2008, and is expected to involve all three mobile operators.

2.4 Major transportation arteries

13 - See above.

The obligation for mobile operators to cover the major transportation arteries was one of the principles included in the “dead zone programme” agreement of 15 July 2003¹³. This obligation was also included in the Orange and SFR GSM licences that ARCEP renewed in 2006¹⁴.

14 - Renewal of Bouygues
Telecom's GSM licence is
scheduled for late 2009.

On 27 February 2007, the signature of a national agreement for mobile telephony networks to cover the country's main roadways defined the notion of “major transportation artery” to enable the application of the provisions contained in operators' GSM licences.

By 2010, operators must have completed their coverage of roads and motorways where traffic exceeds an average 5,000 vehicles a day, and on the roadways in each *département* that connect the prefecture (i.e. the *département's* administrative capital) to the sub-prefectures (secondary administrative centres). ARCEP will verify the progress being made with respect to the obligations at the end of 2008, at which point Orange and SFR must have completed half of their planned deployments.

B. Local authority actions

1. Local authority involvement

Local authority powers

Regional digital development is a key economic and societal issue.

With the adoption of the Law of 21 June 2004¹⁵ on confidence in the digital economy, local authorities are endowed with wider powers in the area of telecommunications. Since the law was enacted, these powers have allowed them to establish active networks, engage in the business of operator and provide services to end users under certain conditions, when private initiatives prove inadequate over the long term¹⁶.

15 - Law No. 2004-575 of 21 June 2004 concerning confidence in the digital economy (LEN), JO of 22 June 2004.

16 - Cf. Article L.1425-1 of the local and regional collectivity code, CGCT (Code Général des Collectivités Territoriales), introduced by the Law on the digital economy of 21 June 2004.

At the end of 2007, 86 local authority projects had been launched, each covering more than 60,000 inhabitants and representing a total investment of roughly €1.4 billion from both the public and private sector. By that time, a public service delegation (PSD) contract had been awarded for 55 of them.

During that same year, 13 public-initiative networks began operating and 22 markets were attributed, for a total investment of €764 million, of which €270 million in public funding.

In 2007, several local authorities became involved in a public-initiative network (Essonne, Lot-et-Garonne, etc.) while others awarded their PSD contract (Jura, Meuse, Hérault, Cher, township committees (*Communautés d'agglomération*) of Tours and Rennes). A number of networks were inaugurated, and so marking the commercial launch of the PSD (signature of the unbundling agreement by the delegate of the urban community of Bordeaux, network inauguration by the metropolitan area of Chalon sur Saône and the département of Seine-et-Marne...).

Local authority projects all include regional development objectives for providing consumers and businesses with network coverage, and are generally designed to stimulate the emergence of competition that will be beneficial to consumers.

The Aveyron departmental authority (conseil général) awarded a PSD contract that will allow it to cover the département with a service delivering a minimum speed of 2 Mbps to residential users and of 2 to 20 Mbps to businesses. The network will employ several technologies: it will ensure service in six MDF areas and 83 business parks with 140 kilometres of optical fibre and 108 towers for wireless links (micro-wave links and WiMAX).

The Jura departmental authority (conseil général) plans on offering a service running at over 2 Mbps to more than 90% of its population, operating in 52 MDF areas and 46 business parks with a 450-km fibre optic network and 48 towers (of which 28 have yet to be built).

One outstanding fact of 2007 is that several local authorities announced plans to contribute to the development of ultra-fast broadband (FTTH, or fibre to the home) through their projects.

Some local authorities, whose initial goal was to improve broadband coverage within their *département*, have thus added an ultra-fast broadband component to their projects (departmental authorities of Oise and La Manche), to bring fibre optic technology to consumers in urban areas.

This trend is also translating into PSD contracts for ultra-fast broadband. The project instigated by the Hauts de Seine departmental authority aims to connect more than 800,000 households to the fibre optic network which will represent an investment of €422 million, including a public subsidy of €59 million. Meanwhile, a project launched by the joint local planning committee for electricity and communication networks in the Paris suburbs, SIPPEREC (*Syndicat intercommunal de la périphérie de Paris pour l'électricité et les réseaux de communication*), which comprises 86 municipalities, plans on deploying a public ultra-fast broadband network in 13 municipalities that are not equipped with a cable network.

In 2007, local authorities also expressed the need to be provided with better information on the infrastructure and networks installed in their area, to be able to better coordinate their plans with those of operators and better facilitate ultra-fast broadband rollouts. This supposes the adoption of laws and regulations that include provisions requiring operators to supply the necessary information (network routes, fill rates for civil engineering infrastructure, etc.). The motion to move forward with these changes was adopted in principle at the ultra-fast broadband steering committee meetings on 13 December 2007 and 13 February 2008.

2. Work performed by the public-initiative networks committee, CRIP

CRIP

The public-initiative networks committee, CRIP (*Comité des réseaux d'initiative publique*), is a forum that allows players involved in regional digital development to meet and discuss the issues at hand. Created by ARCEP in 2004, CRIP members include local authorities, telecom operators, State institutions and, more generally, relevant public actors. The work performed by CRIP results in publications: minutes, guidelines and handbooks for all audiences.

CRIP met on four occasions in 2007.

The plenary meeting on 15 March 2007 provided an opportunity to take stock of the work performed the previous year and to discuss two topics in particular:

- ◆ wireless technologies and dead zone coverage;
- ◆ ultra-fast broadband networks in business parks and residential zones.

These topics were addressed in greater depth by two dedicated working groups: the “broadband dead zones” and the “FTTH” group.

CRIP also devoted efforts to a very specific issue: the Minister responsible for Industry mandated the committee to study the modalities of creating an “ultra-fast broadband” label that could be applied to business parks.

The work performed by CRIP also led to the production of a legal guide aimed at local operators.

2.1 Coverage of broadband dead zones

The “broadband dead zone” working group met on three occasions in 2007, which led to discussions with WiMAX operators on the status of their rollouts and the means by which they plan on collaborating with local authorities.

Similarly, the examination of solutions for reconfiguring the incumbent carrier’s local loop (*NRA-ZO*) gave rise to hearings with France Telecom.

Several recommendations were thus provided to local authorities wanting more detailed information on the digital development outlook for their region, and on the tools available to them.

2.2 Ultra-fast broadband fibre optic networks (FTTH)

Focused on the issues surrounding ultra-fast broadband networks, the “FTTH” working group met on four occasions in 2007. It continued its work based on ARCEP publications, namely:

- ◆ *Guidelines for ultra-fast broadband equipment of business parks*¹⁷;
- ◆ *Guide for developers and local authorities on broadband and ultra-fast broadband telecommunications infrastructure equipment*¹⁸.

Several operators and local authorities expressed great interest in the development of ultra-fast broadband (investment announcements, PSD projects) in 2007.

Local authorities are now considered to be among the key players in FTTH network deployments: they can be involved in installing the basic infrastructure (civil engineering works, buildings) that is likely to be made available to operators. They can also plan on deploying a fibre optic collection and/or access network to the subscriber¹⁹.

In 2007, the work performed by the “FTTH” group aimed to elucidate local authorities on the issues surrounding their role in the equation:

- ◆ facilitating the civil engineering work that is indispensable to operator rollouts, such as the installation of ducts with excess capacity when performing road works;
- ◆ creating a gearing effect for private investment;
- ◆ preventing the duplication of basic infrastructure, which is shared between operators, and enabling effective competition to emerge

This work will continue in 2008, culminating in the publication of Guidelines for local authority involvement in ultra-fast broadband networks (*Points de repère sur l'intervention des collectivités dans les réseaux très haut débit*).

2.3 Creation of an “Ultra-fast broadband business park” label

In June 2006, the Minister responsible for Industry requested that the Authority Chairman mandate CRIP to define the eligibility criteria for an “Ultra-fast broadband business park” label. On 8 March 2007, the Chairman of ARCEP submitted the committee’s conclusions to the minister, which included proposed specifications on the label itself and on the methods for awarding and managing it.



17 - Published in March 2006. Available in the appendix on the ARCEP website: www.arcep.fr.

18 - Published in December 2006. Available in the appendix on the ARCEP website: www.arcep.fr.

19 - In accordance with the powers afforded them by Article L.1425-1 of the local and regional collectivity code, CGCT (Code Général des Collectivités Territoriales).

The goal of this label is twofold

- ◆ to inform potential clients, in other words enterprises that are contemplating installing a locale in the business park, of the availability of ultra-fast broadband services;
- ◆ to stimulate the offer by pre-equipping business parks, which means that operators need to be encouraged to deploy fibre optic networks in these areas.

To achieve these objectives, the specifications include:

- ◆ the presence of passive infrastructure that is open enough to enable effective competition;
- ◆ commitment from operators with access to this infrastructure to satisfy demand from potential customers;
- ◆ documentation on the terms of occupation of this infrastructure.

It should be possible for various types of entity to be label appointees. In principle, however, the ultra-fast broadband business park “ZA THD” label is aimed at local authorities that are responsible for the business parks that carry the seal of approval. The appointed entity can then assign the completion of the project and its management to its representatives: business park managers, greenfield developers or the public service delegations in charge of the public-initiative networks.

2.4 Local operators

When deploying public-initiative networks, those awarding PSD contracts will often seek to stimulate the emergence of local operators, whether operators devoted to covering dead zones in the residential market or operators focused on serving businesses. The directors of these companies expressed a need for support in obtaining knowledge on the legal environment that pertains to their operations.

As a result, CRIP produced a handbook for that specific purpose²⁰. This informational booklet, released on the occasion of the CRIP plenary session of 15 March 2007, is an accessible guide to the rights and obligations attached to the business of operator. It was produced in collaboration with outside players, including the association of ISPs (AFA) and several operators.

20 - Legal guide for local operators and local authorities on the rights and obligations of operators and service providers (Guide juridique pour les opérateurs locaux et les collectivités sur les droits et obligations des opérateurs et des fournisseurs de service), published in March 2007. Available on the ARCEP website: www.arcep.fr.

