

Unclassified

DAF/COMP/WP2/WD(2014)12

Organisation de Coopération et de Développement Économiques  
Organisation for Economic Co-operation and Development

13-Jun-2014

English - Or. English

DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS  
COMPETITION COMMITTEE

## Working Party No. 2 on Competition and Regulation

### FINANCING OF THE ROLL-OUT OF BROADBAND NETWORKS

-- Note by France --

16 June 2014

*This document reproduces a written contribution from France submitted for Session IV of the 57th meeting of the Working Party No. 2 on Competition and Regulation on 16 June 2014.*

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**JT03359353**

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## FINANCING OF THE ROLL-OUT OF BROADBAND NETWORKS IN FRANCE

1. The deployment of very high speed internet<sup>1</sup> in France constitutes a major stake for economic development, integration of outlying territory and anticipated development of digital usage. For several years, the government has been strongly committed to the policy through the introduction of a clear legislative and regulatory framework aimed at Internet operators and, more recently, of a so-called “France Très Haut Débit”<sup>2</sup> plan (hereinafter the “FTHD plan”) which formulates the procedures for the public and private financing of the deployment of the network. The FTHD plan is in line with the European digital agenda, launched through the Europe 2020 strategy, determining the objective of very high speed connections to all European households by 2020.

2. The Autorité de la concurrence indicated its support from the outset for the creation, by the government and local authorities of an incentive arrangement for the deployment of a very high speed network throughout France. It is important, however, that fibre-optic cable is deployed quickly for the benefit of consumers and to improve national competitiveness, but it should not be done in such a way as to create a private monopoly or to the detriment of competition in the infrastructure where this is economically possible. The Autorité de la concurrence has thus ensured through the numerous opinions it has rendered at the request of the sector regulator concerning proposals for “symmetrical” and “asymmetrical” regulation that it preserves the spur of competition, distinguishing in its analysis as to whether an economic area exists with complete competition in its infrastructure or whether specific local conditions require greater pooling, or even government intervention in local markets.

3. By late 2013, the number of subscriptions to high and very high speed internet in France reached 24.9 million. Out of this total, the number of high speed subscriptions was 22.8 million with 2.1 million for very high speed<sup>3</sup>.

4. Three types of technologies are currently available for very high speed Internet access in France. Cable represents 68% of the offer, fibre-optic 24% and VDSL2, 8%. The deployment of very high speed via cable and fibre-optics requires that operators construct or modernise a completely separate network from the existing telephone copper cabling network, to be built by the historic operator France Télécom and based on VDSL2 technology. The copper cable network also supports ADSL technology which offers a high speed Internet service. That is the main internet option on offer in France today.

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<sup>1</sup> The Autorité de régulation des communications électroniques et des postes (“ARCEP”) and the European Commission define very high speed as a download speed (receiving data) of more than 30 Megabits per second.

<sup>2</sup> Plan submitted by President of the French Republic François Hollande, in February 2013. It is the successor to the “National very high speed programme”, launched in 2010 under the presidency of Nicolas Sarkozy.

<sup>3</sup> Representing a penetration rate of 9% for very high speed for all Internet subscriptions.

5. Under the Law for the Modernisation of the Economy of 4 August 2008<sup>4</sup> (known hereinafter as “LME”) the French authorities have instituted a secure legal framework for the deployment of a fibre-optic network in France. This reliable technology has the special advantage of not suffering any reduction in speed due to distance, unlike copper cabling, and offers a symmetrical speed<sup>5</sup>.

6. The deployment of a fibre-optic network has led the Autorité de régulation des communications électroniques and des postes (“ARCEP”), after consultation with the Autorité de la concurrence, to implement a “symmetrical” and “asymmetrical” regulatory framework. As part of the measures for asymmetrical regulation, the ARCEP has required the historic operator France Télécom to offer access for all operators to its cable sheathing installed by civil engineers and used for its copper cabling, so that they can use it for their own fibre-optic networks<sup>6</sup>. Due to the marked interest of alternative operators to deploy their fibre-optic networks in France, several symmetrical regulations have also been introduced. The purpose of these measures is limit the possibility of operators who are rolling out a very high speed network making architecture choices that limit access to this network by competitors. The arrangements for the deployment of very high speed vary especially with respect to the areas defined by the ARCEP based on the population density in the territory in question.

7. In areas with a high population density, described as being “very dense”<sup>7</sup>, it is economically viable for several operators to roll out their own networks. They will thus deliver competition via the infrastructure.

8. In areas defined as “less densely populated”<sup>8</sup>, namely the rest of French territory, private operators may not necessarily have an economic interest in deploying a fibre-optic network. Consequently, a call for statements of investment intentions was launched in 2010<sup>9</sup> with the aim of listing operators’ deployment proposals within a five-year period (see Schedule I). When an operator displays an interest in rolling out a network in a less densely populated area, it is unlikely that another operator will also occupy the territory. Consequently, operators are encouraged to share their network through joint financing. In order to prevent any distortion of competition, the deployment of the network must take place under non-discriminatory and technologically neutral conditions.

9. In areas in which no operator wishes to invest, local authorities must take the initiative to deploy a very high speed network, known as a “Public Initiative Network” (or “PIN”). This deployment, which will occur as a minimum at departmental level, will benefit from public financing. If this finance falls within the definition of state aid, it must receive authorisation from the European Commission. Furthermore, tenders from local authorities for implementing these Public Initiative Networks have been the subject of recommendations by the Autorité de la concurrence for the purpose of avoiding the risk of distorting competition (see below).

10. The French very high speed plan, launched in February 2013, is based on the legislative framework laid down by the LME law and ARCEP’s regulatory measures. The intention is that by 2022, the whole of French territory will have very high speed coverage, 80% of it through the so-called “FTTH”

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<sup>4</sup> Law no. 2008-776 of 4 August 2008 for the Modernisation of the Economy.

<sup>5</sup> i.e. an identical speed for receiving (download speed) and sending data (upload speed).

<sup>6</sup> Decision no.2008-0835 of 24 July 2008.

<sup>7</sup> Decision no. 2009-1106 of 22 December 2009.

<sup>8</sup> Decision no. 2010-1312 of 14 December 2010.

<sup>9</sup> Operators had until 31 January 2011 to indicate their commitments.

technology<sup>10</sup>. The plan is based on an investment of 20 billion euros made over a ten-year period and shared between private operators and local authorities. The FTTHD plan introduced two financing and support solutions for the very high speed roll-out in France.

11. The so-called “agreement” areas: these cover both the densely populated areas and the less densely populated areas for which at least one operator has shown an interest in developing a network. Within these areas, deployment occurs within the context of agreements signed between operators, the government and the local authorities concerned.

12. The so-called “non-agreement” areas: these are areas for which no operator has indicated an interest in investing. In these cases, the local authorities will be taking the initiative to deploy “Public Initiative Networks” (or “PINs”).

13. Finally, it should be noted that the deployment of very high speed networks in France is partly dependent upon the development of the use of the copper cable network. In fact, the coexistence of high speed and very high speed services could be perceived as being liable to curb the deployment of technologies requiring an independent network. In this context, the French government is currently considering how to transition to very high speed networks and make the copper cable network obsolete<sup>11</sup>.

14. The present contribution makes a distinction between the agreement areas (I) and the non-agreement areas (II), to the extent that each of these areas present specific features both in respect of financing as well as competition problems.

### **1. The competitive impact of the complete financing by private operators of very high speed in the agreement areas**

15. The Autorité de la concurrence is careful to maintain a dynamic and competitive balance between operators deploying a fibre-optic service on French territory. In particular, the Autorité’s policy is designed to avoid the pitfalls of a copper network monopoly. Thus, on the one hand, it favours competition through infrastructure in areas in which the market permits, and on the other hand it ensures that access to a pooled network will be effective for all operators.

#### ***1.1 The agreement principle, an initiative coordinated by the government, the local authorities and the operators.***

16. Within the agreement areas, the deployment of a very high speed network will occur in the context of the so-called “tripartite” agreements signed between the government, the local authorities and the operators. They aim at the smooth coordination and even coverage of the territories for all deployments initiated by private operators. Each agreement will be signed at the level of the département, as a minimum, and will thus cover both densely populated and less densely populated areas.

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<sup>10</sup> “FTTH” for “Fibre to the Home”. This consists of deploying fibre-optic cable right into individual residences. FTTH networks make it possible to benefit from all of the technical advantage of fibre-optics, such as the ability to support virtually unlimited very high speed connections even in very remote locations (since it is unaffected by distance) with symmetrical data flows (from and to the network) and a high quality of service.

<sup>11</sup> The task force for transition to very high speed networks superseding copper cabling, presided over by Mr Paul Champsaur, produced an interim report in January 2014 which explains the complex challenges, both legal and technical, linked to migration from copper to fibre. At this stage, it suggested analysing three possible scenarios going forward, from the least to the most interventionist, the latter involving the planned national closedown of copper cabling.

17. Under these agreements, the operators will be making “programming commitments and monitoring the deployment of the network”. These commitments should be deployed credibly and guarantee that the local authorities are kept regularly informed of the state of progress of the deployment. The local authorities for their part undertake to take specific measures to facilitate deployment by the operators. These measures can consist for instance of setting up a one-stop shop to facilitate works in the public domain, assistance with the setting up of technical offices, making civil engineering utility cable sheathing available, access to social housing as well as communication with jointly owned properties, property management companies, communes and the general public.

18. These agreements also provide for priority deployment areas<sup>12</sup>. These areas, defined through consensus agreements between the parties, mainly involve territories with very low speed networks, areas of economic activity and locations of general interest (especially locations connected with administrative departments, health and education).

19. In October 2013, France’s very high speed<sup>13</sup> mission published a “Programming and Deployment Monitoring Agreement” template that local authorities and operators could adapt to specific local needs.

20. This agreement model is an incentive for the signatories to an agreement to use the Schémas Directeur d'aménagement numérique (SDTAN) [area master plans for digital provision]. These master plans, for which implementation is defined in the General Code of Local Authorities, “*list the existing electronic communications infrastructure and networks, identifying the areas they serve and presenting a development strategy for these networks, that mainly concern very high speed fixed and mobile networks, including satellite communications, that will ensure coverage of the territory in question. These plans, for information purposes only, are designed to promote consistency in public initiatives and their smooth connection with private investment*”<sup>14</sup>.

21. Finally, in the agreement areas, the government and the local authority signatories do not support Public Initiative Networks (PIN) financed partly by public subsidies provided that that the commitments made by operators have actually been respected. Where there is a failure by an operator with respect to deployment and/or transparency commitments made under the agreement, especially where there is a delay in the deployment or failure to comply with priority area requirements, under such circumstances the government may financially support the creation of a PIN.

## **1.2 Deploying networks in very densely populated areas: competition through infrastructure**

### *1.2.1 The definition of very densely populated areas and the issue of pockets of high and low density*

22. Very densely populated areas are defined as “*communes with a high population density, for which in a significant part of the territory it is economically viable for several operators to deploy their own infrastructure, in this case their fibre-optic networks, as close as possible to dwellings*”<sup>15</sup>. The list of communes with a high population density currently stands at 106 French communes, covering about 5.5 million homes.

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<sup>12</sup> Only in the less densely populated areas covered by the agreement.

<sup>13</sup> This mission, assigned to Ms Axelle Lemaire, Secretary of State for Digital Affairs, is the “strong arm” of the FTHD plan. The mission will be replaced by a public body during the course of 2014.

<sup>14</sup> Article 1425 of the Code général des collectivités territoriales [General Code of Local Authorities].

<sup>15</sup> ARCEP Decision 2009-1106.

23. The heterogeneous nature of these densely populated areas leads to distinguishing pockets of low density, consisting mainly of small buildings and detached houses, for which the plan adopted more closely resembles that of “less dense” areas, especially those that require the pooling point to be situated further away. Schematically, access to the terminal of fibre-optic networks in densely populated areas occurs, for pockets of high density, at the pooling point at the foot of a building and, for low density pockets, at a pooling point covering 300 homes (see below). These differences in the rules for connection between different “pockets” in high-density areas could constitute a complication in the design of the technical architecture of the product offered by the operator which owns the pooling points. In this respect, the Autorité de la concurrence agreed to close a dispute procedure involving Orange following its decision to change its connection offer in 20 towns and cities by proposing a single technical architecture, based on pooling points serving at least 300 homes, without knowing whether these homes were in a high density or low density pocket. This change to the technical architecture, which generally has economic advantages for operators, should facilitate the deployment of fibre-optics in the towns and cities in question<sup>16</sup>.

1.2.2 *Multi-fibre architecture, a solution that favours the maintenance of effective competition through infrastructure in very densely populated areas*

24. The location of a pooling point<sup>17</sup> mainly depends on economic considerations. In fact, the more operators deploy their network in areas of decreasing density, the more their viability reduces and the pooled part of their network will tend to increase. Thus, in the most heavily populated areas, the pooling point should be located as close as possible to the customer. Conversely, in certain areas, the low population density can involve most of the network being pooled, in which case the pooling point will be found much further away (see Schedule II).

25. The densest areas are characterised most particularly by a pooling point at the foot of a building or in the immediate vicinity, each operator being assumed to deploy its own “horizontal” fibre-optic network as close as possible to the customer. When an optical network is deployed in a building, an agreement is entered into between the owners (or residents management committee) and the designated operator in charge of installing the fibre-optic cable in the building, who is known as the “operator for the building”. Once the agreement has been signed, the operator for the building is required to inform the other operators so that they are able to ask it for access to the building so they can market their own retail offers. Article L34-8-3 of the Post and Electronic Communications Code requires operators for a building to agree to reasonable access requests by other operators. This access must be provided “*under transparent and non-discriminatory conditions, permitting effective connection under “reasonable” economic, technical and accessibility conditions*”.

26. A statement of interest by third-party operators may occur when the building is connected to the fibre-optic network, through joint financing of the installation, or subsequently, in which case the operator’s contribution is determined through using a “*rate of return on capital that takes account of the risk run and grants a bonus to the operator for the building*”. Thus for the same offer the operator for a building could be in a position to require different contributions. In this respect, the Autorité de la concurrence considered in its Opinion 09-A-47<sup>18</sup> that “*it cannot be considered that an operator which*

<sup>16</sup> See the press release of the Autorité de la concurrence dated 25 July 2013 concerning closure of a case covering the conditions for access to Orange’s civil engineering infrastructure: [http://www.autoritedelaconcurrence.fr/user/standard.php?id\\_rub=482&id\\_article=2230](http://www.autoritedelaconcurrence.fr/user/standard.php?id_rub=482&id_article=2230).

<sup>17</sup> The pooling point is defined as “*The place in which an entity establishing or that has established in a building or that is operating a very high speed fibre-optic electronic line of communications allows other operators access to the lines*”. (ARCEP Decision 2009-1106).

<sup>18</sup> Opinion 09-A-47 of 22 September 2009 concerning the procedures for pooling the terminal parts of very high speed fibre-optic networks.

*jointly financed the terminal part of a network, even before it was installed, is in the equivalent situation to that of an operator formulating a request for access several months or years after the installation of such a network. Such a difference in situation justifies the remuneration received by the operator for the building not being the same in both cases”.*

27. With respect to the access itself, third-party operators have two options. On the one hand, they can ask the operator for the building for access to the optical fibre network that it has installed (shared fibre), in which case the pooling principle is applied. On the other hand, the third-party operator can ask for the installation of an additional fibre connection for each dwelling in the building for its own network, in which case the multi-fibre (or dedicated fibre) architecture principle is applied.

28. The Autorité has indicated that the multi-fibre architecture option has a large number of advantages with respect to an analysis of the competition aspect. In fact, this architecture *“enables operators firstly to remain as independent as possible from each other, each benefiting from a continuous fibre-optic connection between the customer’s premises and its own equipment. With respect to the competitive dynamic, it works as if each operator had deployed its own network to reach the subscriber. The terminal part of the network, which all operators deploying FTTH networks have to use, is thus not controlled by a single entity, i.e. the operator for the building. The risk that the latter could exploit its privileged position to artificially win market share, for example, would thus seem to be relatively low”*<sup>19</sup>.

29. Furthermore, according to the Autorité, a multi-fibre architecture has been shown to be more favourable to consumers. In fact, in a configuration of this type, consumers *“can change operators quickly and without interruption to the service, since it not necessary to perform any physical changes to the network”*<sup>20</sup>.

30. In general, recourse to multi-fibre architecture creates a unique opportunity for avoiding the creation of a bottleneck at the terminal point of FTTH networks, especially at individual building level. In this respect, alternative operators are capable of extracting themselves to a greater extent from the infrastructure of the historic operator in comparison with the situation prevailing in the copper cable network, with its need to go through an unbundling of the local loop. This architecture thus offers better guarantees in terms of the independence of the operators, technological neutrality and flexibility of the market to the benefit of the consumer. The Autorité thus put pressure on the ARCEP to implement symmetrical regulatory measures in order to open up the option to each operator of making a request to the operator for the building for the installation of an additional dedicated fibre-optic connection<sup>21</sup>.

31. Finally, information from third-party operators with a view to enabling them, where applicable, to exercise their option to request access to the building should not favour collusion on the part of the companies currently active on the market. Consulted for their opinion in respect of the Law for the Modernisation of the Economy, the Conseil de la concurrence<sup>22</sup> [Competition Council] stated decidedly that *“information about operators constitutes an important shield against the risk of the operator which deployed the terminal point capturing the end customer. Without information being provided quickly, the operator who provided the terminal would be, for a while, the first and only provider able to offer very speed services and consequently risks capturing most of the potential customer base”*<sup>23</sup>. It stressed the need

<sup>19</sup> Opinion 09-A-47, point 44.

<sup>20</sup> Opinion 09-A-47, point 45.

<sup>21</sup> ARCEP decision 2009-1106.

<sup>22</sup> Prior to March 2009, the Autorité was named the “Conseil de la concurrence”.

<sup>23</sup> Opinion 08-A-06 of 6 May 2008.

however to restrict this information in a manner that would limit recourse to recurrent bilateral contacts between competitors while ensuring the widest transparency, both in areas in which the current operators are active and with respect to new entrants into the market.

*1.2.3 Guarantees of access to civil engineering infrastructure by the historic operator, a prerequisite for the construction of independent very high speed networks.*

32. Orange (formerly France Télécom) inherited the former public civil engineering infrastructure (pipe sheathing, underground chambers, aerial connection points, etc.) supporting the telephone network and capable of hosting new fibre-optic networks. Although the “symmetrical” measures permitted under the Modernisation of the Economy Law (see above) have mainly reduced at this stage the relevance of the imposition of additional “asymmetric” obligations on the historic operator, the question of access to civil engineering works has required specific intervention by the industry regulator, which in this instance is supported by the Autorité de la concurrence.

33. The regulation of Orange’s civil engineering works is necessary in order to enable any operator wishing to invest in an FTTH network to be on an equal footing with the historic operator. The Conseil de la concurrence found this to be the case in 2007 when an alternative operator, Free, approached it, accusing France Télécom of having abused its dominant position by refusing to make an offer to its competitors of access to its civil engineering infrastructure enabling them to deploy their own fibre-optic telecommunications network.

34. In fact, to install optical local loops, operators have two possible solutions. They can either dig trenches in the streets, or use the existing infrastructure. The latter solution very significantly reduces costs and the time taken for deployment, and none of the existing infrastructure (in Paris, for example, the sewers or the cable operator network) is comparable to what is available to France Télécom which has a 350,000 kilometers network of civil engineering works inherited from its former status as a public monopoly. That is why the Conseil de la concurrence considered that France Télécom’s ownership of civil engineering structures was liable to give it special responsibility, consisting in not distorting the competition on the very high speed markets that were emerging at the time by reserving for itself the use of this infrastructure that it was denying its competitors or by allowing them access in a discriminatory fashion.

35. Following this complaint and the Conseil’s decision rejecting the request for interim measures while they were investigating the substance of the case<sup>24</sup>, the ARCEP imposed a set of obligations on the historic operator, i.e. the requirement to provide access to its civil engineering infrastructure, coupled with an obligation for transparency, absence of discrimination, publication of a model tender, cost accounting and accounting separation, as well as matching rates to costs. These obligations were automatically renewed and reinforced, especially in respect of their limitations, in the third and fourth cycles of analysis of contracts for offers of wholesale access to the infrastructure covering the subsidiary local loop (or “market 4” in the terminology of the European Commission).

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<sup>24</sup> Decision 08-D-02 of the Conseil de la concurrence [Competition Council] of 12 February 2008 concerning an application for interim measures submitted by Free SAS and concerning access to France Télécom’s civil engineering infrastructure in the context of the deployment of residential optical FTTH-type local loops.

### 1.3 *Deployment of the network within the less densely populated agreement areas: the pooling principle*

#### 1.3.1 *The definition of less densely populated areas*

36. The less densely populated areas are defined in contrast to the very densely populated areas. They thus constitute the whole of French territory with the exception of the very densely populated areas. The ARCEP sought the opinion of the Autorité de la concurrence concerning the proposed decision specifying the arrangement for access to very high speed fibre-optic electronic communications lines outside the very heavily populated areas<sup>25</sup>.

37. In the context of this opinion<sup>26</sup>, the Autorité estimated that “*the less densely populated areas are characterised by a lesser desire for companies to invest in the projects. These companies should therefore be encouraged to provide their very high speed services by using the same fibre-optic local loop. Like the ARCEP, the Autorité de la concurrence is of the opinion that these specific situations require a suitable regulatory framework, designed to reconcile an incentive to invest with maintaining competition*”.

38. Thus, the less heavily populated areas will tend more naturally to witness the development of a single network. In this context, the aim is avoid recreating a natural monopoly such as exists currently with the copper loop in the context of high speed internet. By calling for symmetrical regulatory measures to be introduced, the ARCEP has determined the procedures for deploying the networks and the conditions for opening them up.

#### 1.3.2 *Pooling between operators in less densely populated areas: a response to the risks of recreating a natural monopoly on the optical local loop*

39. In less densely populated areas, there is less of an incentive to deploy fibre-optics than in very densely populated areas. On the one hand, when a density decreases the costs of deployment increase and alternative operators’ market share reduces, so that it is no longer viable for them to deploy their own fibre-optic network when they can make savings on rental of a copper cable network from the historic operator. The “*ambiguous nature of France Télécom’s interest in deploying a new fibre-optic network, liable to challenge its position on the copper cable network*<sup>27</sup>” should also be taken into consideration. In these areas, an operator installing a fibre network will thus have little chance of seeing a competitor’s network installed. The fibre-optic local loop would thus constitute a natural monopoly.

40. In this context, the ARCEP has determined the procedures for the deployment and opening up of networks within less densely populated areas to third-party operators who wish to acquire a long-term right of usage for the network.

41. As for the conditions for opening up the networks, the ARCEP requires the operator installing the fibre-optic cable to offer third-party operators that so wish the option of acquiring long-term usage of the network, either on the basis of a joint investment with cost-sharing at the time of construction, or subsequently through a fixed contribution paid to the operator which has invested in the network.

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<sup>25</sup> Decision 2010-1312 of 14 December 2010.

<sup>26</sup> Opinion 10-A-18 of 27 September 2010 concerning the deployment of the fibre-optic network outside very densely populated areas.

<sup>27</sup> Opinion 10-A-18.

42. Furthermore, with respect to the procedures for rolling out the network, the architecture is subject to several constraints, once again to ensure transparent and fair access that does not discriminate against third-party operators wishing to market a very high speed retail offer in the area in question.

43. Firstly, while in densely populated areas, the pooling point is as close as possible to homes, in less densely populated areas, the point need to serve a larger number of user homes or businesses. This pooling point also needs to be capable of hosting third party operator equipment in a technologically neutral manner.

44. Secondly, the ARCEP is responsible for determining the procedures for coverage of the area in question and especially the obligation of the operator deploying the network to install a “horizontal” network within a reasonable timeframe that is extensive enough in area behind the pooling point, to enable a service to be provided to all of homes and businesses in the area.

45. Thirdly, the ARCEP foresees a circumstance in which several operators will want to deploy fibre-optic cables in the same town or city. In order to prevent duplication or gaps in coverage, the ARCEP is implementing the principle of coordination between operators and local authorities in order to establish a common “linkage” of the territory.

46. The Autorité de la concurrence was asked for its opinion, which it gave concerning the proposed ARCEP decision determining the procedures for deployment of the network as well as the conditions for opening it up to third-party operators. As for the possibility offered to third party operators to contribute a lump sum, from the outset or at a subsequent stage, to the cost of the fibre-optic network, the Autorité estimated that “*it can but fully support the proposal which is of such a nature as to reconcile investment with the preservation of competition*”<sup>28</sup>.”

47. While stressing that France Télécom is the only operator liable to invest significantly in private funding of these areas, the Autorité indicated, in its opinion 10-A-07, that “*sharing infrastructure between economic stakeholders, or more generally the pooling of resources, in theory restricts the independence of those involved as well as the number of applicants or bidders for the contract. But although it is liable to thus restrict competition, the implementation of resources is not in itself prohibited under competition law, especially when it can be established that it produces positive effects on competition.*”<sup>29</sup>”

48. On the basis of this finding, the Autorité has developed several essential points designed to maintain competition within the context of pooled fibre-optic network architecture.

49. Firstly, the Autorité drew ARCEP’s attention to the issue of the size of the pooling points. Indeed, pooling points that are too small would not enable a sufficient number of operators to serve the market under satisfactory conditions, and would thus hamper the development of competition on the network. Consequently, a minimum pooling point size<sup>30</sup> was fixed<sup>31</sup> based on the deployment architecture used so as to permit the operator “*to reconcile the aims of cost efficiency for the deployment and the obligation to offer third-party operators passive access to the pooling point under reasonable economic conditions*”.

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<sup>28</sup> Opinion 10-A-18, paragraph 39.

<sup>29</sup> Opinion 10-A-07 of 17 March 2010 concerning the national “very high speed” plan.

<sup>30</sup> The size varies between 300 and 1000 households depending on the area.

<sup>31</sup> ARCEP decision no. 2010-1352.

50. Secondly, the Autorité insisted on the necessary technological neutrality of the pooling points, particularly so as to enable the various connection options (Point-to-Point or PON) to compete on the market (see Schedule III), it being noted that the choice of technology had repercussions especially on the installation or otherwise of active equipment at pooling point level. In its decision no. 2010-1352, the ARCEP specified that *“when this request is reasonable, the requirement to host passive and active equipment is a necessary condition for enabling all operators, regardless of the technology they are using, to access the terminal part of the fibre-optic network under reasonable economic conditions. The operator for the building would have to consult the third-party operators, prior to installation of the pooling point, to ask them whether they would like to accommodate passive and active equipment there”*.

51. Thirdly, the Autorité dealt with the issue of the situation of small operators and new entrants who had less of an investment capacity and could not afford to take much risk. In fact, in the case of the latter, the issue of a separate wholesale offer, for example for “rental per line”, arises as opposed to the possibility of purchasing long-term usage of the network<sup>32</sup>. In fact, joint investors in the network would have no collective interest in small players entering the marketplace. Furthermore, it is not clear that they would have an individual interest in making wholesale offers. In fact, since joint investor operators would be sharing the same infrastructure, they might well stipulate the insertion of clauses introducing forms of “follow-on rights”, leading to a share of the wholesale income, on the assumption that a third-party operator might eventually join the pooling point. Such a wholesale revenue-sharing arrangement would not be conducive to joint investors offering to make wholesale offers such they would only benefit partially from the corresponding income<sup>33</sup>. To remedy the risk of the expulsion of small or new entrants in the areas in question, the Autorité recommended that a wholesale offer, separate from the pre-installation joint investment or a post-installation contribution, be guaranteed. This recommendation was repeated in the ARCEP’s regulatory decision covering less densely populated areas<sup>34</sup>.

52. The plan adopted will thus make it possible to promote risk-sharing between operators, enabling the largest number of them to have a share in the investment. Both joint investment and making long-term usage rights available will favour investment and provide guarantees to operators for their access conditions to the network.

53. Currently, numerous agreements between operators cover joint financed fibre-optic deployment in less densely populated areas. These agreements avoid overlapping deployments while offering maximum coverage of the areas in question.

## **2. Joint financing of very high speed deployment in areas not covered by an agreement: challenge of extensive coverage of the territory**

54. The local authorities play a decisive role in the financing and deployment of Public Initiative Networks. First of all, the French authorities notified the European Commission of the measures to provide public finance for the FTHD plan. Secondly, the Autorité de la concurrence, concerned that the deployment of these networks should not occur to the detriment of alternative operators, issued several recommendations especially covering the tendering procedure.

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<sup>32</sup> Opinion 10-A-18, paragraph 56.

<sup>33</sup> Opinion 10-A-18, paragraph 60.

<sup>34</sup> In its decision 2010-1352, the ARCEP indicated that *“as a minimum, to guarantee the possibility of operators with low investment capacity and little ability to cover risk entering the market, a passive line rental service should be offered by the operator for the building for whom there should be a rate of return on capital granting a premium due to the risk run”*.

## 2.1 *Public Initiative Networks*

55. Areas not covered by an agreement, for which no credible plans exist to deploy very high speed led by private initiative, represent 43% of the population. The deployment of very high speed internet in these areas represents an overall investment of 13 to 14 billion euros, broken down as follows:

- 50% of the investment is financed by the proceeds of RIP operation and the joint financing by private operators;
- 50% of the investment consists of dual financial support for the local authorities consisting, on the one hand, of a subsidy package for the amount of 3.3 billion euros<sup>35</sup>, the amounts granted varying according to the extent of rurality and the rate of dispersal of homes (see Schedule IV), and, on the other hand, the availability of a package of long-term loans (up to 40 years) at a very low rate of interest (2.25% to date).

56. As mentioned above, the strategic objective of France Très Haut Débit (FTHD) is to have 100% of French households connected to very high speed internet by 2022 through the priority use of fibre-optics. While in the areas subject to agreements, the plan makes it compulsory to deploy very high speed connections using “FTTH” technology; in the areas not subject to an agreement, characterised by a lower population density, the plan provides for recourse to a technological mix. It is thus able to call upon “FTTH” technology whenever possible, on increased connection speeds<sup>36</sup>, on VSL2<sup>37</sup> technology, or even, in the most rural and remote areas, on radio wave technology<sup>38</sup>.

57. The public initiative network deployed by the local authority can be established and operated directly thereby or could be delegated to a private operator. Depending on what the local authority decides, the legal framework used could assign the operating and marketing risks to the local authority or the operator (see Schedule V).

58. In its opinion 12-A-02 concerning the framework for intervention by the local authorities for the deployment of very high speed<sup>39</sup> networks, the Autorité de la concurrence indicated that, “*the procedures for access to these Public Initiative Networks are both a condition for the correct competitive operation of the very high speed market in the areas in question and a factor of the attractiveness of the network under consideration and thus the success of the public initiative*”. To this end, the Autorité has indicated the possibility “*of introducing variable pricing into the catalogue of public network services*<sup>40</sup>.”

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<sup>35</sup> The Commissariat général à l’investissement (CGI) is an administration under the authority of the Minister for the Economy, Production Recovery and Digitisation; it is responsible for government investment policy, including the implementation of a programme of investments for the future, which has set aside €3.2 billion for the development of the digital economy via a dedicated fund, known as the Fonds national pour la Société Numérique (FSN) [National Fund for a Digital Society]. The FSN is administered operationally by the Caisse des dépôts and consignations (CDC) [Deposits and Consignments Fund].

<sup>36</sup> Deployment of fibre-optic cable as close as possible to the subscriber then the terminal part of the copper or coaxial cable network.

<sup>37</sup> Technology that relies on France Télécom’s copper cable network.

<sup>38</sup> Recourse to satellites, terrestrial relays (Wifi) and 4G.

<sup>39</sup> Opinion 12-A-02 of 17 January 2012.

<sup>40</sup> For example, volume discounts based on the linear network used or the number of inputs subscribed to by the client operator.

59. The Autorité has thus emphasised the fact that “*competition law does not require the rates for access to the infrastructure to be uniform, and price variations are possible. But these variations can only be compatible with competition law under strict conditions: (i) variations must be justified, for example in terms of differences in cost or taking account of external factors (ii) variations should be proportionate to the reasons provided for them, (iii) finally the rate and its variations should be transparent and changes thereto foreseeable*”.

60. Public subsidies paid by the government for financing a Public Initiative Network are liable to constitute state aid. They are required to comply with the relevant European legislation.

## **2.2 The compatibility of a public subsidy for the deployment of fibre-optic cable with state aid provision**

### *2.2.1 Notification to the Commission of the FTHD plan*

61. The deployment of very high speed internet is part of European Strategy for 2020, which aims at achieving a “*smart, sustainable and inclusive economy*”. The European Commission, in the form of the EU guidelines for the application of rules concerning state aid in the context of the rapid deployment of high speed communications networks<sup>41</sup>, indicates that “*the objectives fixed through the digital strategy cannot be achieved without the support of public resources; furthermore the Member States are advised, as part of the digital strategy, to call upon public financing methods that comply with EU regulations relating to competition and state aid*”. These guidelines explain precisely the criteria used by the Commission for the purpose of assessing national aid measures in the deployment of very high speed broadband.

62. In 2010, France obtained the European Commission’s permission for its specific framework arrangement for the “very high speed” national programme<sup>42</sup>. This arrangement made it possible for projects that were part of this framework and that complied with the procedures to be exempt from the individual notification procedure. A request to amend the arrangement is currently before the European Commission in order to take account of the Commission’s new guidelines and incorporate the changes resulting from the new FTHD programme which in February 2013, became the successor to the national “very high speed” programme.

63. For the sake of consistency, the essential points of the Commission’s authorisation decision should be stressed to the extent that they validated the principle of public financing for the deployment of the very high speed network in France in areas that are not viable for private investors, and that the main guidelines for deployment should remain unchanged between the two plans.

64. The local authority is under several obligations when it implements a PIN. These obligations include a requirement for the local authority to first produce a detailed map indicating to what extent the geographical area in question is already covered or otherwise by very high speed broadband. It also needs to launch an open invitation to tender, in accordance with the normal rules applicable to public contracts. Concerning the use of the existing infrastructure, the historic operator ought to provide access to its infrastructure, in such a way as to allow other operators to rely thereon in order to submit their bids when tenders are issued in the context of the notified plan. Finally, the PIN development plan can only cover areas that have not been the subject of interest for investment for the deployment of a very high speed network in the medium term.

<sup>41</sup> EU guidelines for the application of state aid rules in the relation to the rapid deployment of broadband networks dated 26 January 2013 (2013/C 25/01).

<sup>42</sup> Commission Decision of 19 October 2011 (N 330/2010).

65. In order to declare the part of the national programme for the introduction of very high speed broadband that will receive public subsidies compatible with the state aid scheme, the Commission has provided the following specific reasons.

66. The assistance complies with European Union policy. The Commission stressed that “*the measure notified shall remedy a gap in the market in view of the fact that it targets NGA blank areas where, due to difficult geographical conditions and/or low population density, very high speed networks do not exist, and in which no private investor intends to deploy such an infrastructure in the near future*”.

67. The aid is proportionate. In its authorisation decision, the Commission indicated that “*the French authorities have designed the measure in such a way as to limit recourse to state aid to the necessary minimum and the distortions of competition liable to result therefrom*”. The Commission considered that “*the French authorities intend to undertake [...] an in-depth analysis of the existing high speed infrastructure, in order to determine the areas in which public intervention is necessary. In consulting the existing operators openly and transparently, the French authorities guarantee that public funds will be used solely in those areas in which it is necessary, which will enable the avoidance as far as possible of any exit of private investment and distortions of competition*”. It also revealed that “*the measure in question does not favour any particular technology or network platform, since the commercial operators have been permitted to offer the required broadband services to end-users by using the technological solutions they judge to be the most appropriate*”.

68. The Commission thus concluded that “*the measure notified will compensate for geographical and commercial disadvantages and is objectively justified to remedy the absence of improved broadband services due to the commercially unattractive nature of the modernisation of existing broadband services in the areas in question*”.

#### 2.2.2 Financing in the context of a Service of General Economic Interest (SGEI)

69. Financing the PIN can also be considered as part of a service of general economic interest. For public financing not to constitute state aid, the four criteria of “Altmark”<sup>43</sup> case law must be met.

70. In its guidelines, the Commission states that the supplier of an SGEI must deploy a network infrastructure in the non-profitable areas as well as in the profitable areas, “*provided that it can be shown that private investors are not able to provide, in the near future, adequate coverage for all citizens or users and that consequently a large share of the population will remain without a connection*”.

71. In its opinion 12-A-02, the Autorité de la concurrence indicated that “*in the implementation of this type of project, the Autorité de la concurrence considers it imperative that any eventual compensation should only cover the costs of deployment of the infrastructure deployed in non-profitable areas. It is in this context that an equalisation process implemented solely in the profitable areas in the direction of the non-profitable areas is of such a nature as to minimise the amount of public compensation for the non-profitable areas. Conversely, equalisation should in no way have the purpose or effect of arranging a transfer of the non-profitable areas to the profitable areas, which would result in distorting the competition and increasing the need for public finance in the areas in which private investment might have been possible*”.

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<sup>43</sup> Judgement of the CJEC dated 24 July 2003 “Altmark”, case C-280/00.

72. The Autorité also recalled that feedback is currently limited with respect to compatibility of NGA projects with the rules of competition. The Commission's decision practice remains rather undeveloped, in fact, since the arrangements for aid destined for broadband networks have only been considered as an SGEI in very rare cases.

73. In a recent case, the General Court of the European Union<sup>44</sup> confirmed the Commission's decision concerning the definition of a Public Initiative Network in Hauts-de-Seine, situated in profitable and non-profitable areas, as a service of general economic interest. Noting that, for this département, no commercial operator had deployed a very high speed network covering all residential and business users, the Court considered that the Commission had not committed an error of law by noting the existence of a gap in the market, prior to its definition of the area as a SGEI.

### **2.3 Recommendations by the Autorité de la concurrence against the risks of distortion of competition concerning tenders**

#### *2.3.1 A possible distortion of competition created by vertically integrated operators*

74. In its opinion 12-A-02, the Autorité de la concurrence established recommendations designed to avoid the risks of distortion of competition in the context of tenders issued by local authorities for implementing Public Initiative Networks.

75. Certain operators responding to tenders issued by local authorities on the wholesale market also operate as internet service providers on the broadband retail market; these are known as "integrated" operators (in France, they are mainly Orange and SFR). Other players respond to these tenders only in the capacity of "pure player", solely on the wholesale market. Under these conditions, the Autorité has noticed a difficulty resulting from the fact that the "pure players" have as their main potential clients integrated operators, who are also their competitors in the context of public tenders.

76. In fact, the Autorité has indicated that *"only an integrated operator such as Orange or SFR is capable of dealing with a local authority so there is at least one major operator using the FTTH public network, namely itself. On the other hand, a "pure player" is not able to engage with the local authority with respect to the arrival of retail operators on the network, except to obtain the "undertaking of presence" from the ISP itself. There is thus a risk that the ISPs, and especially Orange and SFR, will not use their undertaking to a presence as a strategic instrument to distort competition in the tenders issued by local authorities"*.

77. In order to avoid this potential distortion of the competition, the Autorité recommended that *"a vertically integrated operator wishing to bid for a tender issued by a local authority must therefore always inform the local authority in advance of the conditions under which its retail branch would be liable to use the public network. These conditions must be objective and could, for example, cover the rates for network access, the network's technical architecture or the information system and delivery process as well as the after-sales service provided for access. Conversely, there is no reason to force an ISP who does not wish to bid for a tender to provide this information, which would appear to be nothing more than a strategic instrument in the context of public procurement."*

78. Thus, in practice *"this information could be required systematically by the local authority as part of the public procedure"*.

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<sup>44</sup> CEU decision of 16 September 2013 "Colt Télécommunications France vs. Commission", case T-79/10.

2.3.2 *The issue of equal access to information for the various potential candidates*

79. In its opinion 12-A-02, the Autorité indicated that the intervention of local authorities in the form of concessions or delegation of a public service posed the question of equal access to information for the various potential candidates. Different types of information would be collected by the candidates.

80. The Autorité noted *“this might initially involve information available to an operator due to its position as a private investor in the call for manifestations of an intention to invest. A specific knowledge of the areas involved and the technical conditions for deployment in the profitable areas could in fact constitute an advantage in responding to a public invitation to tender involving additional territories”*.

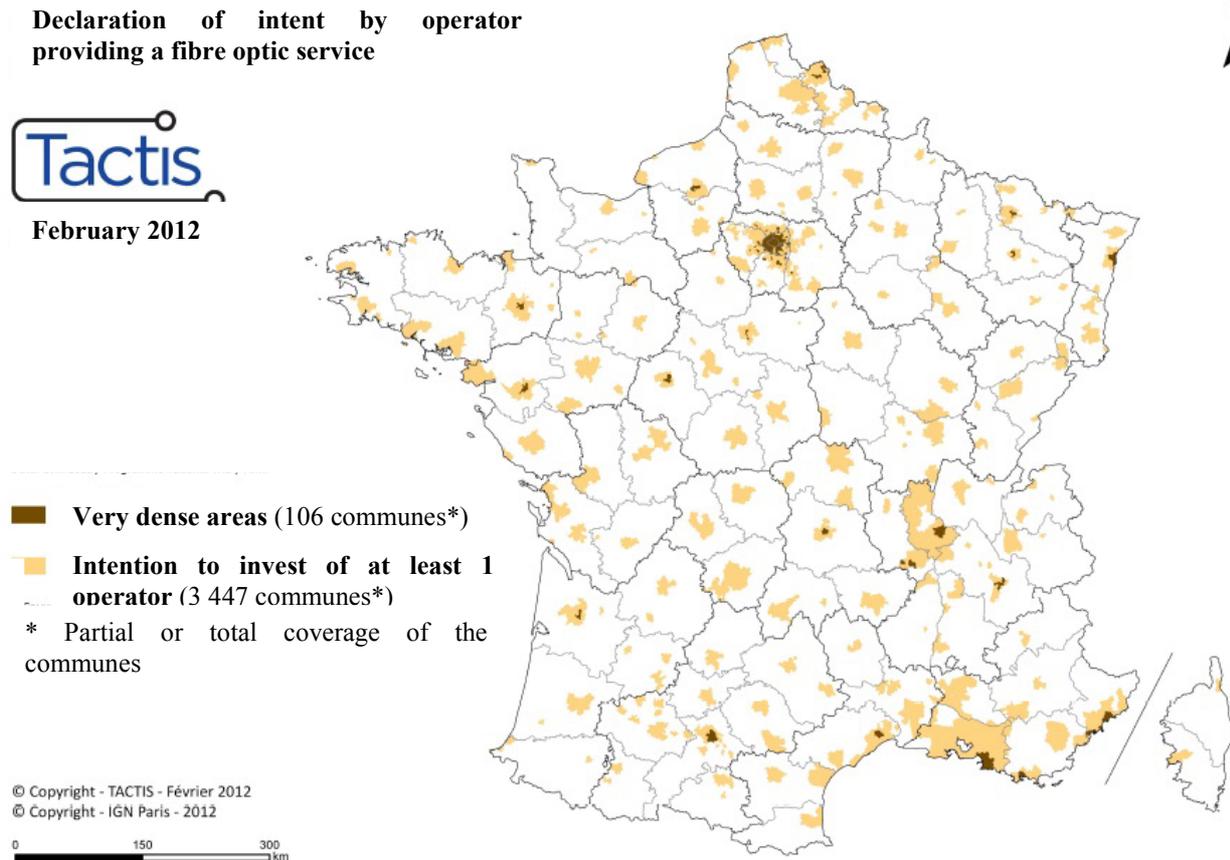
81. Furthermore, *“an operator already in partnership with a local authority for the supply of a Public Initiative Network (such as a collection system) might have information about local needs that could give it an advantage in an invitation to tender for broadband services”*.

82. Finally, *“the historic operator will have information about existing infrastructure (the civil engineering pipe sheaths, poles, collection networks, etc.) could facilitate the deployment of new networks and give this operator an advantage in the context of public procurement procedures”*.

83. Under these conditions, the Autorité recommends that buyers in the public sector *“should make available any useful information prior to the introduction of competitive procedures, with the same degree of precision and within the same deadlines for all potential candidates. To this end, the operators possessing such information should supply it to the local authority prior to the issue of invitations to tender. If the resources at the disposal of the local authorities to gather such information prove to be inadequate, the Autorité is of the opinion that the sector regulator should be capable of requiring operators, and first and foremost France Télécom, to supply such information in application of its ex ante regulatory powers”*.

## SCHEDULE I<sup>45</sup>

84. Map of French territory showing densely populated and less densely populated areas. In less densely populated areas, a distinction should be made between on the one hand the areas targeted by one or more operators which will be the subject of a tripartite agreement and on the other hand the rest of the territory in which fibre optic cable will be deployed via Public Initiative Networks (PINs).

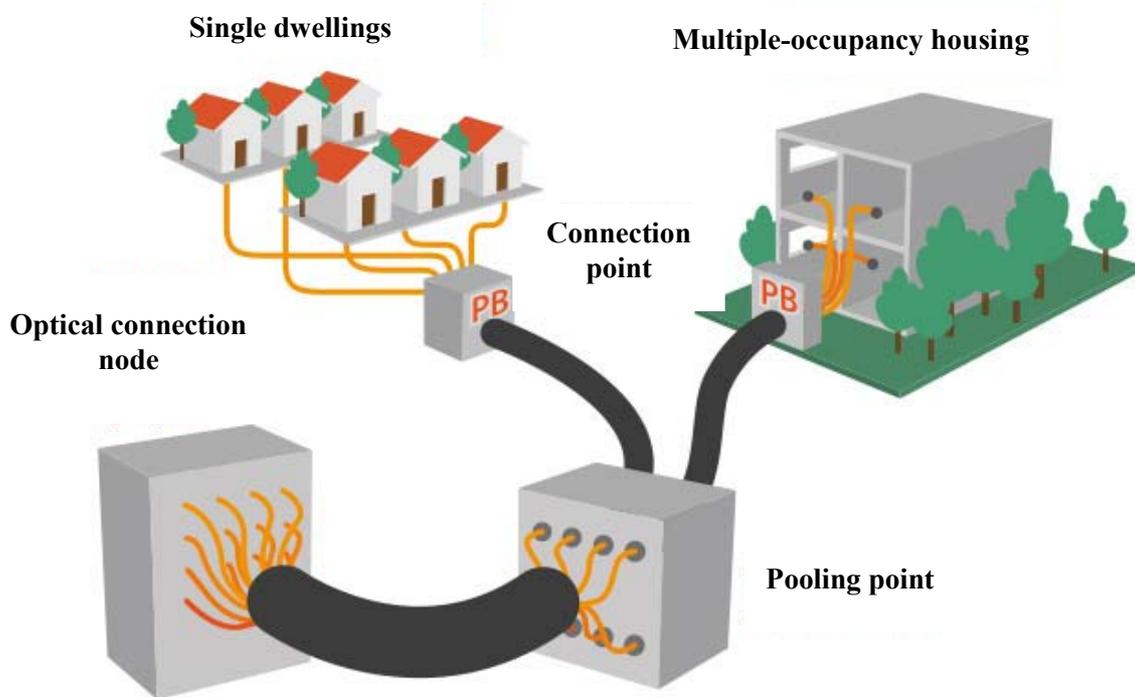


<sup>45</sup>

Source : TACTIS - an independent firm specialising in digital town and country planning for the territory. This map does not take into account ARCEP's decision 2013-1475 which reduced the number of communes located in very densely populated areas to 106.

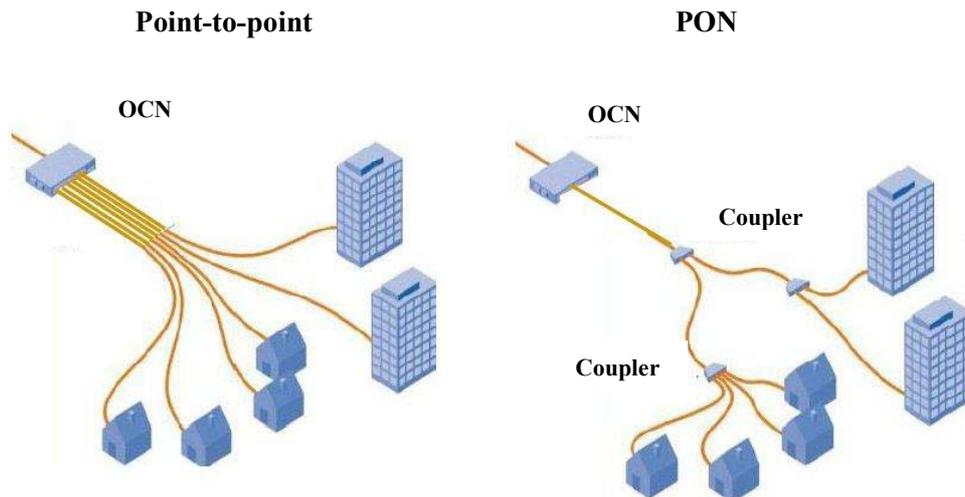
**SCHEDULE II**

85. Explanatory diagram of how a fibre-optic network works. The proximity of the pooling point to the dwelling increases with the population density. In certain buildings in areas with a high population density – at least 12 dwellings or commercial use buildings or those served by a drainage system large enough to be entered (such as the Paris sewers) – the pooling point can be located inside the building itself. It is then possible for operators to create a so-called “multi-fibre” architecture in which each operator deploys its own fibre optic network right up to the dwelling.



**SCHEDULE III<sup>46</sup>**

86. Explanations as to how these two categories of technology make it possible to deploy optical local loops of the FTTH type: point-to-point and point-to-multipoint of the Passive Optical Network (PON) type.



87. A point-to-point local loop is similar to the configuration used by France Télécom for its copper cable network in that, in order to cover an area, a fibre-optic cable is dedicated to each subscriber from end-to-end, i.e. between their location and operator's first active equipment located in its fibre-optic distributor (OCN or Optical Connection Node).

88. This technical solution is generally rather expensive in terms of initial investment since it requires a large number of elements in the network that are dedicated to each subscriber (fibre, siting on the active equipment) involving larger amounts of infrastructure (cables occupying a greater amount of sheathing and the optical distributors are larger). In fact, when an operator deploys this type of network in an area, a street for example, it will generally choose to install a capacity that makes it possible to cover all households. The installation of additional capacity in the future will considerably increase the total cost, to the extent that it will require the installation of new cables in new sheathing. The considerable investment cost is nevertheless compensated by the relatively low operating cost throughout the life of the network.

89. A PON is characterised by its tree structure. At the outlet to the distributor, a single fibre does not serve a single subscriber, but can serve up to 64. The signal transmitted through this fibre is split between eight other fibres through a PON coupler (or filter), then through another eight fibres, and the signal can once again be distributed through eight other fibres.

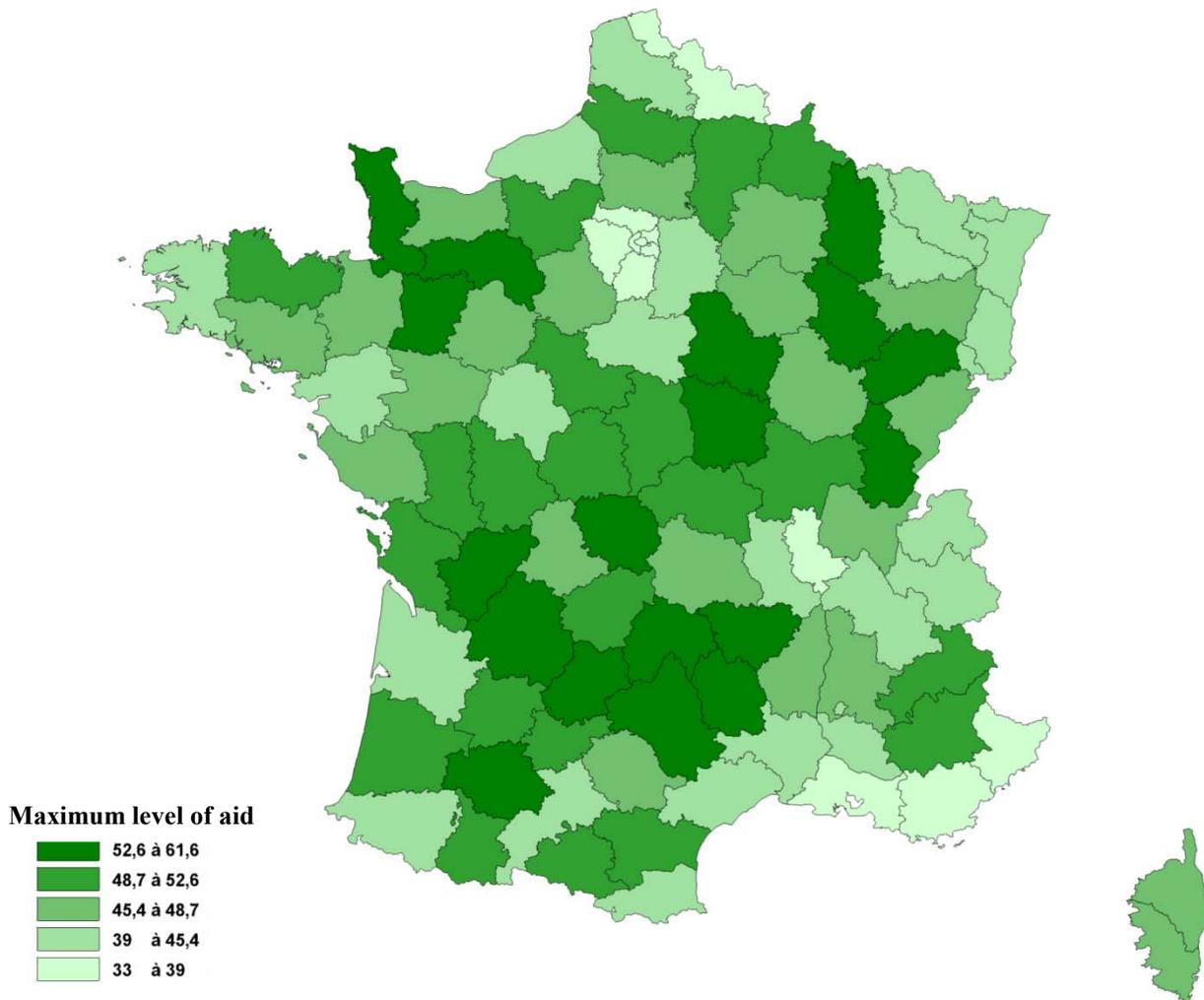
<sup>46</sup> Image and text extracted from the abovementioned Opinion 09-A-47.

90. The logic of deploying a network in this way is thus rather different from that used for a point-to-point network. It is based on an initial investment that is both lower and more progressive because it supports an increase in the network's potential. The profitability of this configuration is in fact dependent on the ability of the operator to maintain a high rate of fill for its equipment. This optimisation of the investment costs of the network, however, involve relatively high operating costs.

91. The co-existence of these two technologies specifically means that once the terminal part of the network has been installed, a point-to-point operator has the option of not having to send out a technician to connect up new subscribers, something that a PON operator will generally be required to do. In fact, in a PON network, the number of fibres installed behind the last coupler generally depends on the operator's market share and not merely on the number of dwellings in a building. Since an operator cannot know in advance who its future customers will be, it is necessary to have a switching facility in order to ensure optical continuity between the vertical and horizontal parts of its network. When a customer subscribes to the network, a technician needs to visit the site in order to connect up the new subscriber by means of a fibre-optic jumper cable.

**SCHEDULE IV**

92. Map showing the level of state aid to local authorities, as it varies with respect to the level of rurality and extent of dispersal of dwellings.



**SCHEDULE V**

		<b>Creation of the infrastructure</b>	<b>Operation/marketing of the infrastructure</b>
	<b>Concession</b>	Infrastructure created, operated and marketed by a concession-holder at its own risk.	
<b>Contracts for delegation of a public service</b>	<b>Leasing</b>	Infrastructure created by a local authority <i>through</i> public contracts for the works and/or services.	Infrastructure operated and marketed by the contractor at its own risk.
	<b>Authority involved</b>		Infrastructure operated and marketed by the lessee for a consideration, but the local authority accepts the commercial risk.
<b>Joint venture contracts</b>		The construction, operation and marketing are performed by the private partner on behalf of the public partner who accepts the commercial risk.	
<b>Direct ownership</b>		Infrastructure created by the local authority with direct ownership thereof. The risk is borne entirely by the local authority.	Infrastructure operated by the local authority and under its direct control. The commercial risk is borne entirely by the local authority.