



Wireless Technologies and New Entrants in the Broadband Rural Market

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***Porto, Portugal
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Agenda

- ***Presentation of the ART***
- ***Overview of the broadband market***
- ***Solutions***



ART Autorité de
Régulation des
Télécommunications

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The Chairman and the Executive Board (Commissioners)

- ***Members appointed by the President of the Republic :***
 - ***M. Paul Champsaur (Chairman).***
 - ***M. Dominique Roux***
 - ***M. Michel Feneyrol***

- ***Member appointed by the President of the Senate :***
 - ***M. Jacques Douffiagues***

- ***Member appointed by the President of the National Assembly :***
 - ***Mrs. Gabrielle Gauthey***

ART : an Independent Regulatory Authority

- ***For regulation to be equitable, it must be ensured completely independently from the different operators present on the market.***
- ***As with all EU member States' legislation, French law has established this separation by creating an independent regulatory body, the French Telecommunications Regulatory Authority.***

ART : objectives

- ***The objective of neutrality: within the State, which has committed itself to preserving France Telecom's status as a public enterprise, the same Authority cannot be both a shareholder in the public operator and regulator.***
- ***The objective of continuity: the regulator has a mission to encourage lasting development of the market to the advantage of users.***
- ***The objective of efficiency: an independent authority may be granted competence in areas that do not usually fall within the jurisdiction of the executive.***

ART : competencies

- ***Draw up and manages the national numbering plan and assigns frequencies and numbering resources,***
- ***Issues licenses for opening and operation of private network,***
- ***Approves reference interconnection offer (RIO) of the public networks operators whose market share greater than 25% ,***
- ***Power for conciliation and settlement of disputes between operators,***
- ***Power to impose penalties on operators for any breach of legislative or regulatory provisions.***

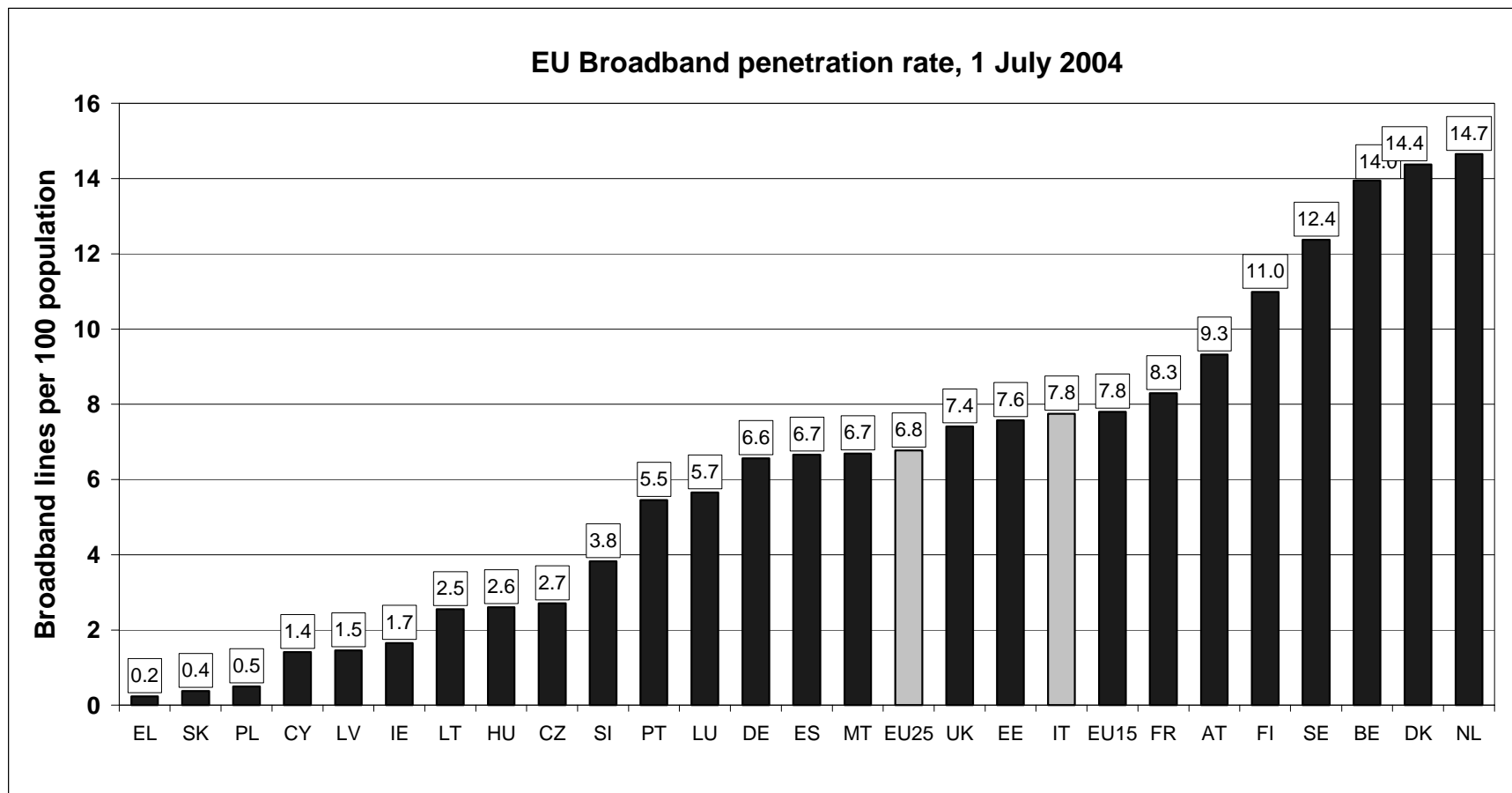
Agenda

- ***Presentation of the ART***

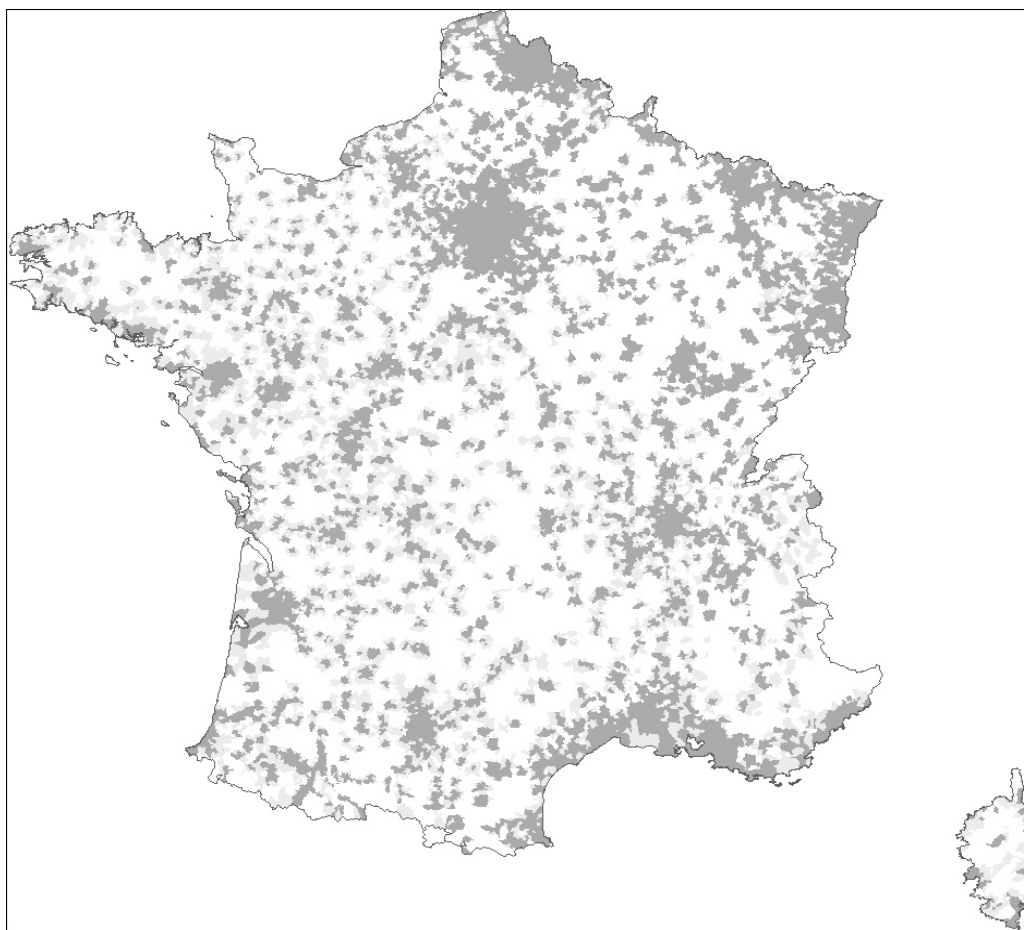
- ***Overview of the broadband market***

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Penetration rate of broadband



Areas not served by France Telecom represent 70 % of the territory

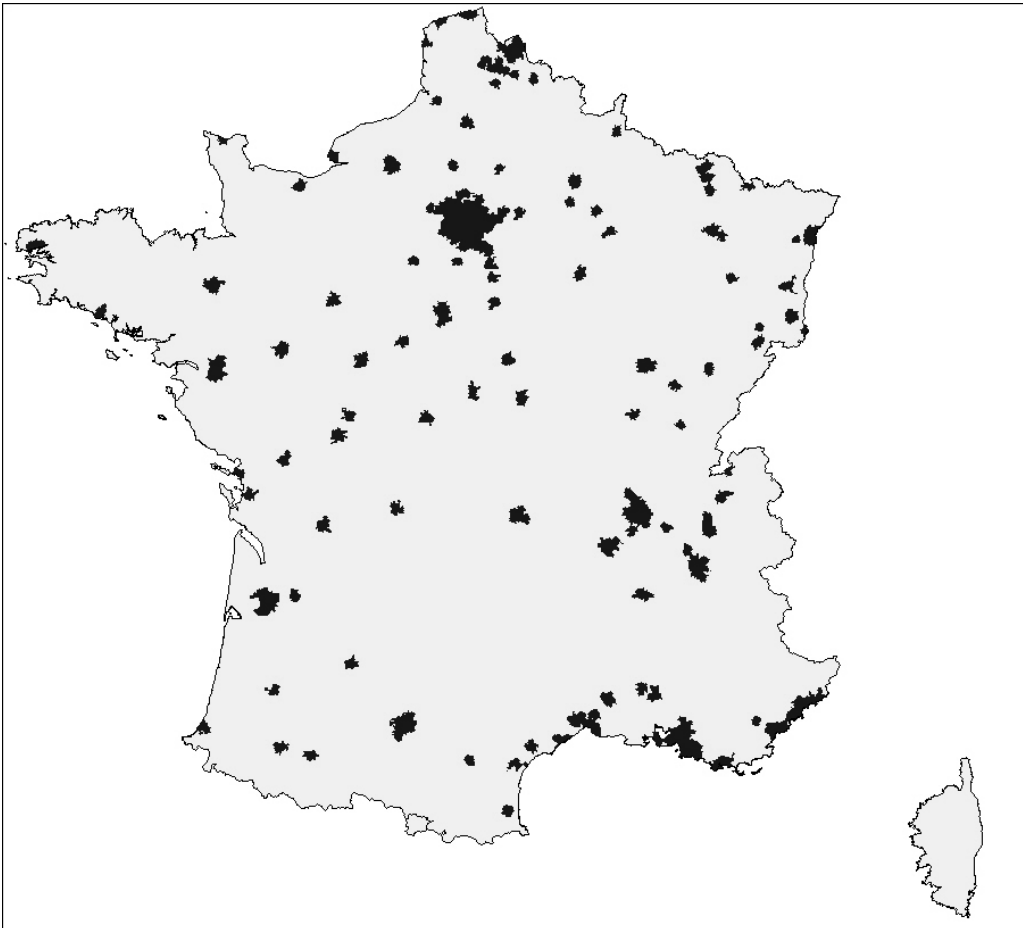


Points of attention:

- The coverage in DSL cannot be exhaustive. Certain areas of activity, notably, are far from the main distribution frames.
- Wireless technologies are adapted in certain areas.
- The coverage of the territory in DSL is not enough to bring the most innovative services and the lowest prices everywhere.

85 % of the population at the end of 2004, 30 % of the territory

Competition is an instrument of economic development



Points of attention:

- The development of broadband access is a factor of augmentation of the productivity of firms.
- The competition is the only lasting means to favour innovation and to bring down prices.
- Certain firms need very high debit side. DSL is not then enough.

43 % of the population, 5 % of the territory

France Telecom's goal

- ***To deliver high-speed internet access to 96 per cent of the French population by 2005***
- ***To equip all exchanges of over 1000 lines (about 2000 inhabitants) with DSL access by 2005***
- ***To upgrade local exchanges to provide DSL access as rapidly as possible when service is requested by at least 100 customers in a given local area***
- ***To conduct trials with WiFi in rural areas and satellite broadband access for backhaul***

ART recalled the general principles

Respect of the general principles of neutrality, openness and equality requires that :

- ***The information gathered by a local authority to respond to an operator's demand must be made available to all operators***
- ***Actions undertaken to inform users about and promote broadband must be carried out in a neutral manner and must not promote the services of a single operator or ISP***
- ***Financial subsidies must be awarded in a way that is compatible with French and European Union rules***

Situation of rural areas

- ***Rural areas are unlikely to attract new entrants***
 - ***high cost areas to serve***
 - ***insufficient demand***
- ***Incumbents are reacting to broadband wireless developments in two ways :***
 - ***to extend DSL ahead of schedule***
 - ***to adopt the technology themselves***
- ***Incumbent providers are conducting trials using WiFi or WiMAX to provide broadband access services to areas where it is not economical to upgrade DSL***

WiFi

- ***Technology is relatively simple***
- ***Cheap to deploy***
- ***Capable of transmitting data at far higher speeds than current wireless networks***
- ***The momentum around Wi-Fi continues to grow, with a recent surge in operators deploying Wi-Fi networks.***
- ***The use of WiFi wireless access to the Internet is also growing rapidly in France, where there are about 5,000 hotspots***

Broadband Power Lines (BPL)

- ***BPL is an interesting idea for providing fast Internet connections in rural areas.***
- ***The cost of the service should be competitive with cable or DSL Internet service, though you will need equipment that interfaces to your wall power outlets.***
- ***RTE was forming a partnership with the General Council of La Manche Departement for the development of access to digital technologies in the Department.***

Wireless Local Loop - WiMAX

- ***The aim of this measure is to respond to requests from manufacturers and operators for temporary testing in order to prepare, on a technical level, for the new authorisation allocation phase for wireless local loop (WLL) in the 3.4-3.8 GHz band***
- ***The conditions of this long-term allocation will be established by ART upon completion of the public consultation. The purpose is to prepare the means of allocation of the available resource***
- ***Experimentations will be maintained for public wireless LANs until the end of 2004, in order to enable new services on this emerging market.***

New entrants : Wireless Internet Service Providers (WISPs)

- ***WiFi (100 operators)***
- ***Wireless Local Loop operators recently licenced :
Altitude Telecom with a national licence and Mediaserv***
- ***Power lines broadband (3 operators)***
- ***These technologies can be combined (satellite and WiFi technologies can be used in tandem)***
 - ***WLL + WiFi : Sillé-le-Guillaume (Sarthe)***
 - ***WiFi + satellite : Felletin (Creuse), La Cavalerie (Aveyron)***
 - ***Power line + satellite : Pays Chartrain (Chartres - Eure et Loire)***



Current Applications in rural areas

- ***Telemedicine***
- ***Public Safety***
- ***Public Schools***
- ***Community Networks***
- ***Community Learning Centers***
- ***Residential and Small Businesses***
- ***Touristic products***
- ***Teleworking***

The market in rural areas

- ***Demand for broadband access is often higher than the national average***
 - ***Prices on offer are sometimes lower than those available in urban areas using DSL and performance often superior***
 - ***Market in rural areas is generating innovative broadband services and responding to increasing demand in those areas.***
- => Public and private wireless LANs are proliferating in remote regions and the growth of Wireless Internet Service Providers (WISPs) is important***

Lessons learned

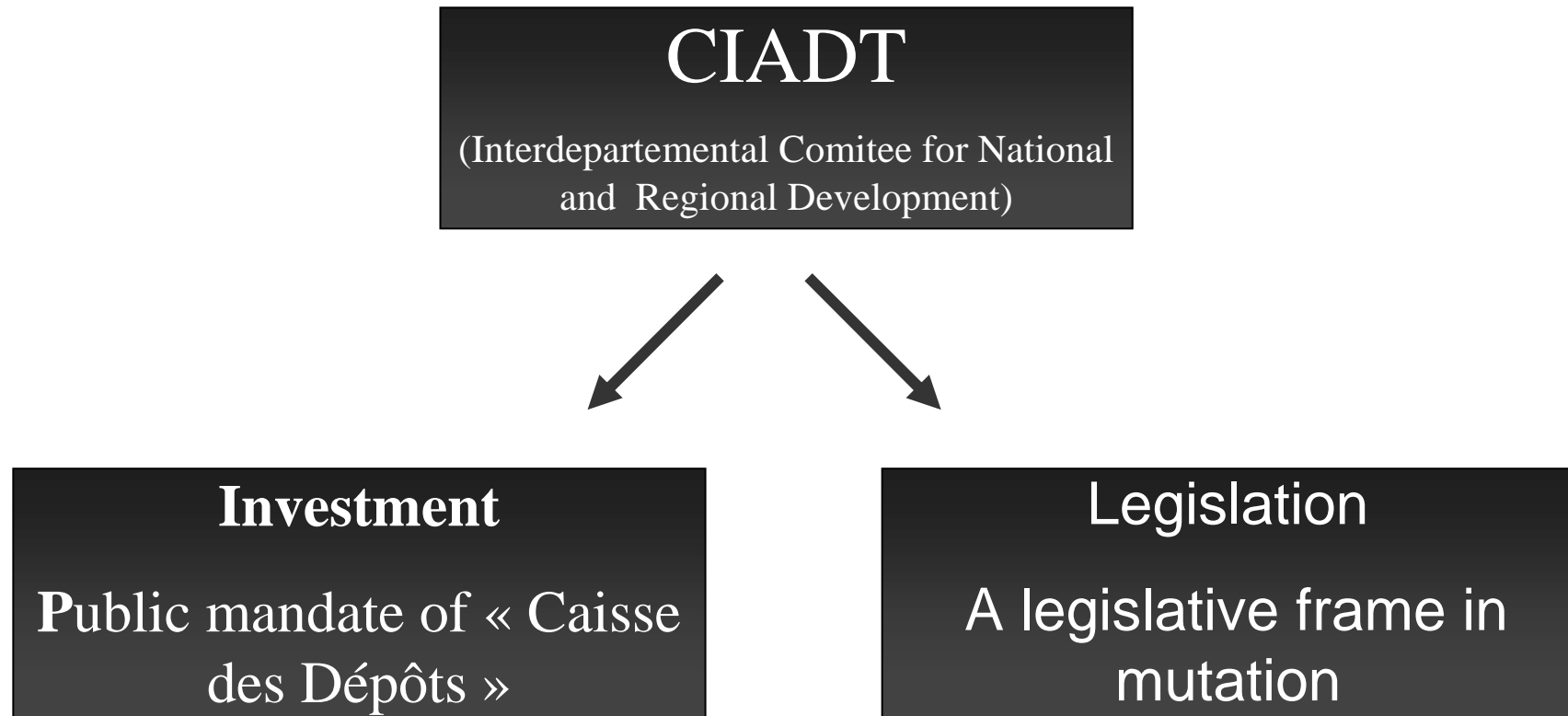
- ***Develop partnerships***
- ***Never underestimate the need for broadband to any rural area***
- ***Convergence of talents***
- ***Business plan necessary (focus on profitability)***
- ***Customers expect more than just a connection (quality, assistance, high level of service and fast deployment)***
- ***Work with community leaders to find opportunities***
- ***Expandable services***

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A strong governmental will



The French Broadband Strategy

- ***Promote competition***

- ***DSL and Unbundling***
- ***Cable***
- ***Broadband Wireless***

- ***Specific measures for rural areas***

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The French Government has set an aggressive target of increasing broadband availability



The French Broadband Strategy 2005

- ***The broadband coverage with a 500 kbits/s access will concern at least 95% of the national population and 70% of each French department***
- ***85% of the inhabitants will have a 2 Mbits/s broadband access***

The French Broadband Strategy 2007

- ***10 million high-speed Internet subscribers by 2007***
- ***A broadband access available in every district of France***
- ***Each local authority will have to dispose of connecting offers permitting to 80% of his residents to have access to the Internet to 2 Mbits***
- ***Rural local authorities will have to have access to at least an Internet connection to the Town-hall and in another point (school, commerce) to permit to their residents to have access to publics services on-line***



CIADT 2003

- ***The French Government announced a number of measures to further boost rural broadband development, including the promotion of alternative platforms such as WiFi, satellite and electrical power lines***
- ***A funding of 100 million euros has been earmarked for investment dedicated for the development of local broadband Internet services***

CIADT 2004

- ***To develop new technologies complementary to the ADSL and the Cable, in particular in rural zones, the Government launched projects on alternative technologies :
5 million euros***
- ***Other projects were launched on the uses of the Internet :
6 million euros***
- ***Addition of Research Ministry
2 million euros***

CIADT 2004

- ***For 2007, rural communities (less 500 residents) will have at least a connection to the town-hall and in another point (school, commerce) to permit to the public to have access to different public utilities***
- ***Publication of a guide to the use local partners***
- ***Establishment of data bases and of a cartography of broadband***
- ***Setting up of a national network of telecentres***
- ***Help to the little companies to utilise numeric technologies***

The role of Caisse des Dépôts et Consignations

- ***The State-owned bank « Caisse des Dépôts et Consignations » assists local authorities in the development of their projects***
- ***Investments up to 235 millions euros in local projects over the next 5 years in public/private partnerships***
- ***Financing of the feasibility studies (600.000 euros)***

A range of broadband initiatives

The French Government launched at the beginning of August, 2003 a handful of projects until July 31st, 2006 to kick-start the initiatives.

December 2003

10 projects

810000 euros

April 2004

17 projects

1264000 euros

October 2004

projects ?

Total : 4,5 million euros over 3 years for the implementation of experimentations + 600000 euros (CDC) for studies

Combinations of alternative technologies

- ***Were retained technologies of access CPL, the satellite Internet in bidirectional mode, technology known as WiFi***

- ***The combinations of alternative technologies were privileged being able to make it possible to bring the Internet high flow in the zones excluded from the plans of deployment of the operators of telecommunications***

New players : The Local Authorities

- ***The promulgation of the new law for trust in the digital economy now makes it easier for local authorities to take part in the establishment and operation of telecommunications networks.***
- ***The new article L. 1425-1 of the General Regional Government Code (Code général des collectivités territoriales), allows regions, departments and municipalities to establish or subsidise the establishment of telecommunications networks, in particular when private investments are not sufficient to equip their areas with digital networks.***



New players : The Local Authorities

- ***Like any operator, local authorities will be covered by sector regulation as exercised by ART in accordance with the Post and Telecommunications Code.***
- ***Local authorities can choose between different legal structures for building and operating their network.***
- ***They must ensure that the infrastructure is made available to operators under transparent and non-discriminatory conditions.***

Guidelines for conducting projects

ART is offering the opportunity to dialogue and compare their analyses and intervention strategies in a public consultation. Some of the subjects which will be discussed are :

- ***The objectives of the intervention of local authorities***
- ***Various technical, legal and economic packages***
- ***Competition issues***
- ***ART's place in the programme***

=> To establish a number of guidelines in order to help local communities best reconcile public action and competition.

Role of Authority opposite local authorities

- ***To give information points (public consultation) and clarify the intervention of the local authorities***
- ***To monitor what is done abroad, for instance by benchmarking best practices of foreign local authorities***
- ***To inform local authorities on the expectations of operators***
- ***To inform on the possible risks of dispute***

Conclusion

- ***Lasting improvements for rural and remote areas will require concerted efforts by governments, industry and community stakeholders***
- ***The market will probably not deliver broadband to 100% of the population without some form of public intervention***
- ***The appropriate level and mechanism to intervene will need to be considered in the context of the long-term impact and competition***
- ***The next few months are likely to be crucial for local authorities and their intervention in the broadband market***



Thank you very much

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