



FttH in France : orientation of regulation

- access to ducts
- sharing of the last part of the optical loop

Bertrand Vandeputte, LLU & Fttx division, ARCEP

OCDE

Workshop on Fibre Investment and Policy Challenges

10-11 April 2008



Context

Access to civil engineering

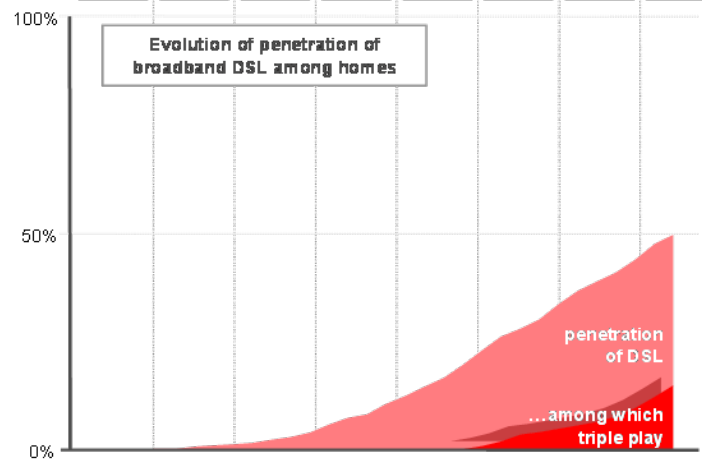
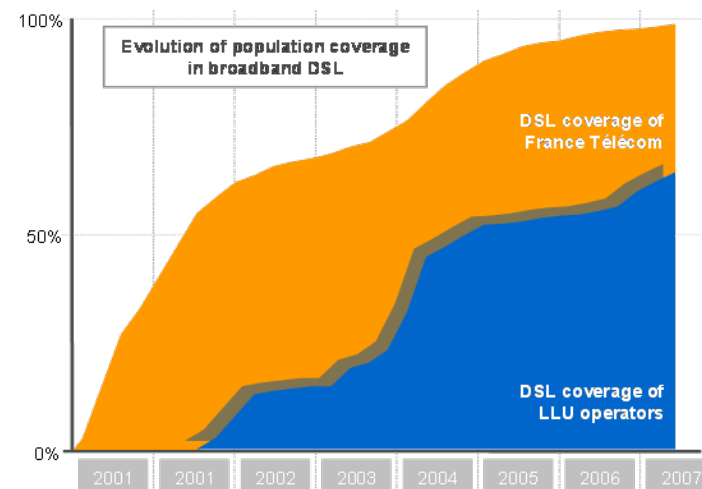
Access to buildings

Sharing of the last part

Conclusion

The regulation of broadband has encouraged investment by all operators

- Competition through infrastructures has fostered the development of broadband:
 - the geographic extension of local loop unbundling has encouraged France Telecom to equip all of its MDF (Metallic Distribution Frames) for ADSL
 - France has joined European leaders in terms of penetration...
 - ...and is in first place for DSL "triple play"
- Regulation has made this increase in investments possible
 - local loop unbundling gives operators technical and economic control
 - "bitstream" serves as a geographic complement
- Municipal intervention assists this dynamic especially in low density regions



Very high bandwidth opens a new investment cycle

- No doubt Fttx is the technological evolution in the medium term
 - to meet growing demand for content
 - to assist the concomitant rise in speeds
- the main DSL operators have begun to roll out FttH networks in the main cities :
 - for the alternative operators, FttH is an opportunity to switch from renting the copper with LLU to their own infrastructure :
 - Home Run FttH for Illiad
 - GPON for Neuf Cegetel outside Paris
 - for France Télécom, FttH is an opportunity to be more competitive in the main cities
 - GPON for France Télécom
- the cable operator is rolling out fibre to upgrade its coaxial network (FttLA)
- Investments are significant and will need to be spread over several years
 - several hundred euros per connectable home in the densest areas
 - at a rate of one to two million homes per year
- The concern is to ensure that this investment is borne by all operators as much as possible





Context

Access to civil engineering

Access to buildings

Sharing of the last part

Conclusion

Alternative operators require access to civil engineering

- For an operator rolling out a fibre optical network, access to existing civil engineering changes the economic equation considerably
- All operators are not on an equal footing:
 - alternative operators have begun to roll out optical fibre only in limited cases like Paris, where sewers can be visited and pass under every building, or Montpellier, in the ducts of the municipality
 - France Telecom rolls out optical fibre in its civil engineering ducts inherited from the former monopoly
 - Numericable is progressively replacing coaxial cable with optical fibre
- Access to France Telecom's civil engineering must be guaranteed to allow all operators to invest
 - France Telecom's ducts are an essential infrastructure
- Globally, France Telecom's civil engineering infrastructures has availabilities :
 - several networks can be rolled out, not only GPON but also Home Run FttH in the distribution loop
 - rules have to be specified to avoid preemption by the 1st operator
 - availability is however heterogeneous, and works may be needed in some areas



Regulation of France Telecom's ducts has been initiated

- The regulation framework is that of the market analysis
 - to guarantee access to the essential infrastructure: France Telecom's civil engineering
 - the new Commission recommendation includes ducts regulation
- In its market analysis on broadband which has been put under public consultation, ARCEP proposed to regulate the access to France Télécom's ducts.
- France Telecom has already communicated a first ducts offer to the operators at the end of last year
- Operators are experimenting the process of this offer
- ARCEP will be vigilant to ensure that all operators have access quickly to civil engineering under equivalent conditions.
- It requires:
 - to have appropriate engineering rules that optimize the available space and the usage of the ducts : obligation of results for the 1st operator to guarantee the arrival of others
 - to have non discriminatory process in the ducts offer : alternative operators do not have to bear constraints that France Télécom does not have for its own deployment
 - to have cost oriented tariffs



Context

Access to civil engineering

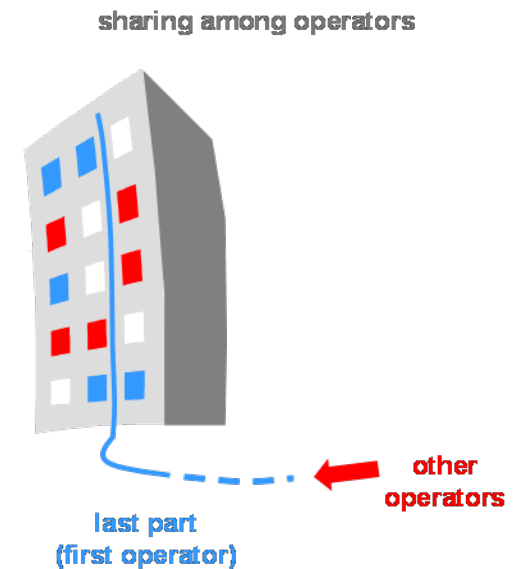
Access to buildings

Sharing of the last part

Conclusion

For all players, access to buildings is the main problem

- Fibre deployment to the home means that private properties, in particularly MDUs, have to be equipped. Operators are prepared to bear the cost of this installation in the centres of major cities
- However, condominium owners, landlords and MDUs managers fear that monopolies will be created by building or neighbourhood
 - they want to limit the number of agents in common areas...
 - ...but want to be able to choose their operator, without having to move house
- So, sharing among operators is necessary
 - the first operator installs the fibre in the building then gives other operators access to its network at a Fibre Aggregation Point (FAP)
- In practice, operators have not yet applied sharing
 - operational issues within the MDUs are under discussion
 - there is no agreement on the level of sharing, i.e. the localization of the FAP



Legislative measures are under process

- The current framework doesn't include sharing
 - operators are contacting condominium owners and landlords so as to deploy their fibre within the buildings
 - they are assuring them that their fibre will be sharable...
 - ... but conditions of sharing are still under debates among the operators
- Regulation appears to be a relevant tool, which the law project assigns to ARCEP
 - require operators to share the last part of their fibre network
 - make ARCEP responsible for defining clear means of sharing and guarantee operators respect them
 - this would be like extending "symmetrical" regulation (obligations applicable to all operators), which is currently limited to interconnection
- A balance needs to be found between operators' rights and obligations, so that fibre deployment in MDUs can be simplified
 - "antenna rights" could be extended to fibre
 - in new buildings, pre-equipment standards will have to be changed in the medium term



Context

Access to civil engineering

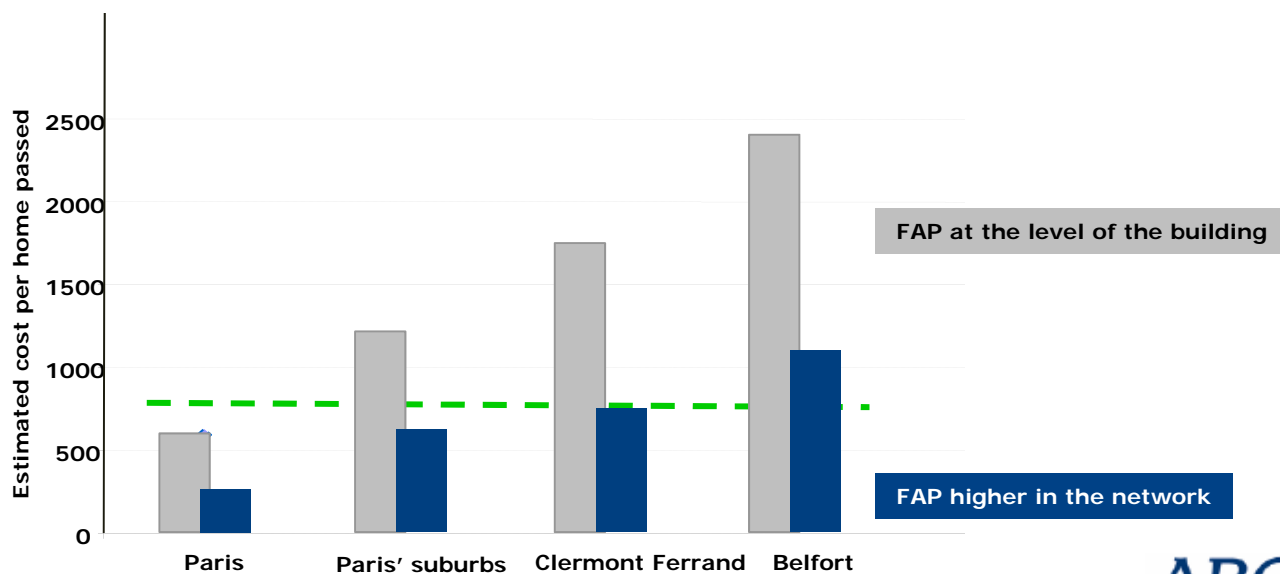
Access to buildings

Sharing of the last part

Conclusion

Means of sharing must encourage competition through infrastructures while answering economical and operational concerns

- Sharing implies that the 1st operator gives access to its fibre to other operators :
 - France Télécom rolls out GPON : FAP has to be installed at the level of the last splitter
 - Iliad rolls out Home Run FttH so as to provide sharing at the level of its Optical POP
- The localization of the FAP, chosen by the 1st operator, is determinant for the topography of the networks of the other operators :
 - with a FAP at the level of the building, it may not be possible for several operators to roll out their networks outside Paris and the densest cities
 - having a FAP a bit higher in the network enable to increase significantly the areas where several deployments are possible





Context

Access to civil engineering

Access to buildings

Sharing of the last part

Conclusion

The measure includes two tools, which can be adapted to market developments

- Two tools are needed
 - regulation of the ducts inherited from the former public monopoly, which concerns France Telecom (“asymmetrical” regulation)
 - sharing of the last part of the fibre networks, which concerns all operators (“symmetrical” regulation)
- A good balance needs to be found between encouraging investment and preventing the creation of local monopolies
 - the initial situation is different with respect to the regulation of broadband because France Telecom’s dominant position is on the civil engineering and not on the local fibre loop
- ARCEP will evaluate this measure in one year
 - France Telecom’s wholesale civil engineering offer
 - the implementation of sharing
 - based on operator deployments on the horizontal and vertical parts