

Global Symposium for Regulators (11-13 March 2008)
**Six degrees of sharing: innovative infrastructure sharing and open access strategies to
promote affordable access for all**

Together with other public authorities, regulatory bodies must respond to the challenges inherent in providing access to electronic communications for the entire population throughout any given country. In the case of France, where fixed telephony is concerned, the universal service compensation funds enable the operator designated to be the universal service provider to guarantee access to as many people as possible. On the other hand, where high-speed access is concerned, other arrangements conducive to the development of competition, investment in infrastructure and digital coverage of the territory have been put in place. ARCEP has thus sought to contribute, through the implementation of a proactive regulatory framework for high-speed access, to enabling the development of **infrastructure-based competition and the emergence of new innovative and efficient players at the national level**. With the emergence of very high-speed access, infrastructure sharing will become just as vital as the investments to be made in the deployment of fibre-optic networks are massive. **The involvement of local authorities** in facilitating such sharing will be an essential factor in the development of very-high-speed electronic communication services in all areas.

The implementation of a regulatory framework conducive to **infrastructure-based competition hinging on local-loop unbundling** has been one of the main factors in the development of ongoing competition in France's high-speed market. By enabling direct access to France Télécom's copper pair, which constitutes essential infrastructure, unbundling gives third-party operators mastery over DSL access, technical independence and control over a large part of the value chain, such that they are able to offer attractive and innovative packages such as broadband television. Alternative operators have thus, since 2001, been taking up the challenge of moving into local-loop unbundling, investing in **fibre-optic collection networks**, first national and then local, serving France Télécom's main distribution frames, with a view to installing their own DSL equipment therein. Such investment in fibre-optic collection networks has in particular been widely shared between the alternative operators through the availability of indefeasible rights of use (IRU) that enable them to optimize their deployment costs and hence increase their unbundling coverage. At 30 September 2007, unbundling had reached almost 70 per cent of the population.

By way of a complement that serves as a springboard to the unbundling offer, ARCEP has also required France Télécom to implement a further wholesale offer, namely **the bitstream offer, consisting in the availability of activated access facilities at a given regional point**. This bitstream offer enables alternative operators to propose high-speed offers in areas not yet unbundled, and thus to be present throughout the territory. By enabling alternative operators to build up a subscriber base using distribution frames that have not yet been unbundled, thereby preparing the ground for the arrival of unbundling, the bitstream offer can be seen as an essential link in the investment chain, having already injected genuine dynamism into France's high-speed market.

With the competencies they have had since 2004 in regard to the establishment and operation of electronic communication networks, local and regional authorities have given impetus to the development of unbundling coverage by taking over the private investment of alternative operators in the establishment of fibre-optic collection networks, through public initiative networks that contribute to the digital development of their communities. At 30 September 2007, one-third of

unbundled distribution frames had been unbundled thanks to **public initiative networks deployed by local and regional authorities**, covering over four million households.

The combination of innovative players, a proactive regulatory framework governing high-speed access and government action in favour of digital development has resulted in the success of the high-speed sector in France. With over 14 million high-speed DSL subscribers at 30 September, France has now joined Europe's frontrunners in terms of penetration, and holds first place when it comes to the development of triple-play offers combining high-speed Internet with broadband telephony and television services.

With the coming of age of new access technologies based on optical fibre, several high-speed players – not only the incumbent operator but also the main alternative operators with their unbundling subscriber bases – have now embarked upon the **deployment of very-high-speed fibre-to-the-home (FTTH) networks**. Faced with the new problems generated by the deployment of such networks, which call for massive investment, ARCEP intends to introduce regulations favouring the development of infrastructure-based competition, while at the same time seeking to bring about, to the greatest extent possible, **a significant degree of investment sharing among operators**.

First and foremost, it is the **civil engineering works**, particularly the installation of underground ducting and cable connection pits, that constitute the main cost item where the deployment of such new networks involves reconstruction. For an operator deploying a very-high-speed network, having access to existing civil engineering infrastructures therefore has a major bearing on the economic equation. Thus it was that the first notifications by alternative operators were for the deployment of FTTH in Paris, which has a network of accessible sewers through which fibre-optic cables can be drawn to each building. However, with the exception of Paris and a number of other cities, there is no existing civil engineering infrastructure apart from the ducting which France Télécom inherited from the former monopoly.

ARCEP considers in this regard that **access to France Télécom's civil engineering must be assured so as to permit the establishment of alternative FTTH networks**. Basing itself on the European Commission's new list of relevant markets, ARCEP has thus proposed, in its analysis of wholesale high-speed and very-high-speed markets that it has recently put to public consultation, that **access to France Télécom's ducting be regulated** with a view to enabling operators to invest in the establishment of FTTH networks under equivalent conditions. France Télécom, moreover, anticipating such a regulatory framework, contacted alternative operators at the end of last year with a preliminary offer for access to its ducting. Trials are currently under way to validate the offer's main operational aspects.

Secondly, the deployment of fibre-optic networks direct to the subscriber calls for the fitting-out of private premises. In the central areas of major towns and cities, operators are ready to bear the cost of such installation work. Joint property owners and landlords fear, however, that in the case of apartment blocks local monopolies may set themselves up at the building level as soon as a single operator has received reasonable authorization to carry out the necessary works to deploy its optical fibre within the building's common areas. **It is thus necessary to mutualize the terminal part of fibre-optic networks among operators**. ARCEP could be called upon to assume regulatory powers in regard to the terminal part of fibre-optic networks, to be applied symmetrically to all the operators.

The arrangements for such mutualization must favour infrastructure-based competition while at the same time meeting short-term concerns. Mutualization at the building level, consisting in the sharing of the internal fibre-optic networks deployed within buildings, would appear necessary within the context of infrastructure-based competition, with operators then deploying their own fibre-optic networks up to each building. Nevertheless, this level of mutualization may be inadequate during the startup phase. Other mutualization arrangements could thus be defined for the purpose of ensuring the maintenance of a satisfactory level of competition, for example **mutualization at a point further upstream in the network, or sharing among operators of the investments necessary for the establishment of the fibre-optic networks.**

Finally, **local authorities have a key role to play when it comes to fostering the deployment of very-high-speed access and development of competition.** Where high-speed access is concerned, they have shown themselves to be major players in regard to the digital development of their territories in recent years. Their intervention, be it to facilitate deployments, encourage infrastructure-sharing or mutualize investments, can therefore be decisive when the focus is on very high speed. Local authorities are in a position to exercise leverage in the areas both of civil engineering, being responsible for the public domain, and of the terminal component, particularly vis-à-vis social landlords.