

# **Firms and Markets**

## **FTTx: The Leading Operators' Strategies (\*)**

**Roland MONTAGNE, Didier POUILLOT & Valérie CHAILLOU**  
IDATE, Montpellier, France

### **Global overview of FTTx as of June 2009**

While the rate of deployment for very high-speed offers (number of homes passed) is tending to slow (6% increase between January and June 2009, compared to 24% during the previous six months), the rise in the number of FTTH/B subscribers is holding relatively steady: 17%, compared to 19% in the previous six months, which translates into roughly 4.9 million additional customers worldwide.

The distribution of FTTx subscribers around the globe has long tilted heavily towards Asia which accounts for almost 80% of customers, all FTTx technologies combined (including FTTx+LAN, which is the configuration of choice in China), or 10 times more than in Europe (West and East, including Russia).

In Europe, the rate of growth for FTTx subscribers is much lower, even though some operators are enjoying increasing success with their offers. On the whole, however, there are far fewer homes passed, and potential customers have still not been wooed by available solutions as many are still satisfied with their existing DSL services.

---

(\*) This paper is a summary of a market report published by IDATE in the framework of its DigiWorld catalogue. For more information, see: [www.idate.org](http://www.idate.org)

## **Reasons for deploying FTTx**

There are a number of reasons to invest in FTTx rollouts, starting with competitive and/or regulatory pressure, followed by a desire to capitalise on industrial assets, seizing an opportunity... For some operators, it can be a combination of several factors. In most cases, however, issues concerning demand (e.g. end users' need for added capacity) are still only secondary and seen as future justifications for the appeal of superfast broadband.

Japan's incumbent carrier, NTT, and the top two telcos in the US, AT&T and Verizon, initially invested in FTTH/B or FTTN to take back broadband market share. In South Korea, incumbent carrier KT is also working to consolidate its position in a highly competitive market through investment in very high-speed access.

Meanwhile, in Europe, the reasons for investing in superfast broadband are more open ended. The continent's pioneers, Italy's FastWeb and Sweden's B2, took advantage early on of opportunities to gain access to passive infrastructure. The owners of the infrastructure may also be tempted to capitalise on their networks through diversification, as Swedish power utility Mälarenergi did. Of course we also find competition and regulatory considerations in the latest rollout announcements. In Germany, Deutsche Telekom cites both competitive pressure coming from cablecos, city carriers and utilities, along with increased demand for ever-higher speeds and greater bandwidth.

The reasons for undertaking fibre rollouts can also be political. Mälarenergi, for instance, cites the particularly positive climate for IT developments in Sweden in the early 2000s, with the launch of a strategic government support programme. Korea Telecom also speaks of the commitments it made as part of the national government's BcN programme to deploy a convergent broadband network.

## **Are players in line with initial targets?**

A number of outside elements can affect the rate and scope of FTTx rollouts, including technical and/or financial difficulties, a shift in market rules or a market momentum that diverges from initial expectations. In most cases, this results in scaling back initial targets. Portugal Telecom provides us with a good example of technical constraints. NTT, on the other hand, scaled back its targets because of reactions from the market. As customer

take-up was slower than expected, the Japanese incumbent first reduced its targets in late 2007, from 30 to 20 million customers by the end of 2010. Meanwhile, in the United States there have also been delays, or risks of seeing the country's top two carriers push back their initial targets, even though they have already been decreased. AT&T was covering 19 million households as of mid-2009, but its goal of 30 million by the end of 2010 has been pushed back a year. Meanwhile, Verizon had 14.5 million homes passed for FTTH at the end of September 2009, and it will need to maintain a steady pace with its rollouts to achieve its target of 18 million by the end of 2010.

Added to these particular constraints are those caused by the recession which poses the dilemma for operators of whether to focus on short-term management issues (reducing investments is one way to improve the balance sheet immediately, and especially cash flow) or on long-term outcomes (maintaining investments to prepare for the future). It can be difficult to decide which is best...

### **Could FTTH weaken competition in the fixed access market?**

On the whole, competition in the ultra-fast broadband market is similar in structure to what we find in classic broadband markets. This is particularly true in the best developed markets. In South Korea, for instance, all of the country's fixed telcos are involved in ultra high-speed access, and most of Korea Telecom's competitors already offers solutions running at 100 Mbps.

In Scandinavia, the arrival of new players, namely utilities, into the fibre access market appears to be expanding the solutions on offer: these operators are organized by region or by municipality, and do not generally compete with one another. Plus, market consolidation has already begun, notably in Denmark where, in November 2009, TDC announced its takeover of DONG Energy, the utility that leads the way in FTTH rollouts in the country.

In addition to regional development, there are also concerns over how to handle competition inside shared buildings, the goal being to limit the quantity of infrastructure installed indoors and the amount of work performed, as residents are often reluctant to agree to several requests to perform installations on the premises, while guaranteeing that tenants and/or property owners have access to a choice of operators. In its "Fibre Suisse" programme, Swisscom plans to install four fibres for each household, one for

itself and the other three for alternative ISPs – a deliberate move to shield itself from overly stringent regulation, while also reducing costs and protecting its market share.

### **The FTTx business model: what positioning for market players?**

The position assumed by an incumbent carrier such as Portugal Telecom, for instance, is clearly aimed at monetising content and services, even if the access market, particularly via wholesale offers, can provide added revenue (and may also be an obligation). Its prime target is multiple dwelling units as it can be harder to earn a return on single family dwellings, although this depends on the penetration rate.

Another incumbent carrier, as is the case with NTT in Japan, may be clearly working to regain its dominant position in the fixed market. It has essentially been the carrier's mobile arm, DoCoMo, that has enabled NTT to finance its FTTH/B rollouts since 2001, and the Japanese incumbent does not expect to reach the breakeven point for its fibre deployments until 2011.

Utilities generally take a different stance, however Mälarenergi, for instance, views its positioning as horizontal, contrary to telcos which are devoted more to vertical integration.

### **Does FTTx need help from the State? From local authorities?**

Given the sums involved, it is the private sector that will be shouldering the bulk of investments. But, generally speaking, operators believe that public monies will be needed for fibre rollouts in rural areas where the market is not big enough to earn a return on investments within a reasonable timeframe.

Aid can come from public authorities at different levels (local, regional, national and even supra-national, such as the European Commission) and rollout projects need to be selected based on purely economic considerations, without looking at the candidates' past and future investments nor their position in the market, according to Deutsche Telekom.

The incumbent carriers in Switzerland and Portugal share the view that public and/or regulatory interference needs to be kept to a minimum as it can act as a disincentive to invest. Swisscom goes even further than Portugal

Telecom here, stating that, even in rural areas, the role of public authorities needs to be confined above all to promoting suitable private investment solutions: public financing must only ever be a last resort when all other means employed to provide incentives for private investment have failed.

**Open access networks:  
are they the solution for stepping up FTTH take-up?**

One of operators' primary questions is what is an open network: a public network? A shared network? "None of the above," says Deutsche Telekom which feels that the best way to maintain a network's open nature is to develop infrastructure-based competition.

Swisscom fully shares this view of infrastructure-based competition. Unlike the Portuguese and Germany incumbents, however, it has implemented a scheme for sharing physical infrastructure, based on the installation of multi-fibre networks.

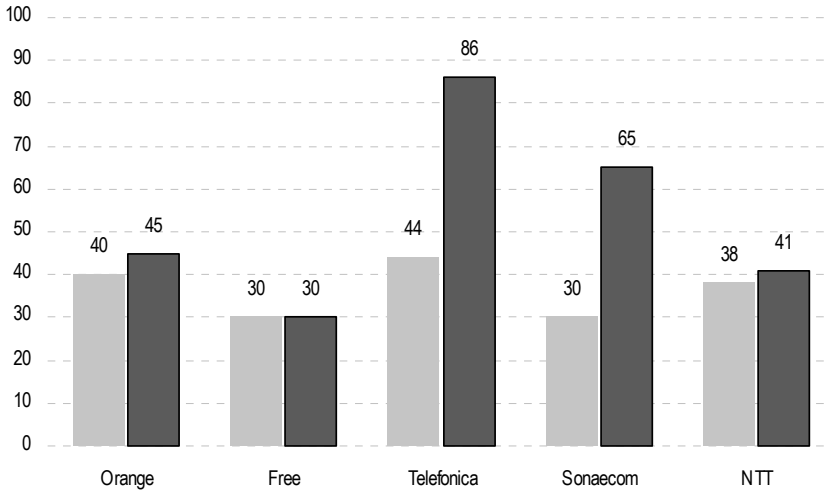
Korea Telecom, meanwhile, has deployed its own network and does not share its fibre with other operators. Inside of buildings, the incumbent's fibre is pulled directly to the cabinets where the copper pairs were installed, and is connected from there to the ONT.

**FTTx and pricing strategies: in line with DSL or disruption?**

In most cases, superfast broadband access prices are in line with those charged for regular broadband access, or slightly higher to factor in the added capacity being provided. But they can be exactly the same as broadband access prices – especially with vendors, such as Free and SFR in France, which have a single price point.

In many cases, operators are proceeding as though their ultimate goal is to gradually switch their ADSL customers over to FTTH/B: as it stands, there are only minor differences in terms of associated services, and fibre solutions offer lower per-Mbps prices. But we also find considerable differences in some pricing schemes, with certain operators, including Telefónica and Sonaecom, charging up to twice as much for fibre access.

**Comparison of the price of a selection of ADSL2 and FTTH bundles at 100 Mbps (EUR/month)**



Source: IDATE

### FTTx and content policies

Korea Telecom believes that FTTx serves the Internet access market first and foremost, with other services and advanced applications, such as IPTV and SoIP (Storage over IP), etc. being add-ons. As a corollary to this, partnerships in the area of content are not based on size or genre-related criteria, but rather on concerns over quality of service and reliability.

Through its FiOS TV solution, Verizon is working to expand its target clientele by focusing on new niche markets. To this end, it views cultural diversity as a niche market ripe for innovative services, offering multilingual programming, for instance.

Cultural, social, etc. aspects need to be taken into account when planning programming, to persuade consumers to subscribe. Verizon offers a package called "Connexion Latina", for instance, which includes 70 channels in English and Spanish, and another called "International Premium" that includes 33 channels in 19 different languages, which subscribers pick and mix themselves.

Ultimately, then, Verizon's selling points are clearly centred around the options it offers customers in the realm of new services, and especially TV services, which allows the company to meet its initial challenge, namely rivalling cable companies' market dominance by offering equivalent or better services, using a different technology.

## **FTTH and LTE**

There are several ways to view the relationship between fixed and mobile NGA (new generation access). We can view it in terms of network synergies, for instance, with a potential to generate savings on transport/backhaul. We can also view it in terms of complementarity/competition, as each type of access can support, at least to a degree, the same services and applications: choosing between one or the other could therefore come down to the features of the terrain that needs to be covered, each operator's original positioning, etc.

Korea Telecom is examining fibre's potential as a backhaul network for LTE solutions, but does not expect very strong synergies in terms of CAPEX or OPEX.

For Portugal Telecom, the two solutions are complementary: a common IMS control platform already makes it possible to create a gateway for content between fibre and mobile access, currently HSPA+ and LTE down the road. From a technical perspective, fibre networks can also provide backhauling solutions for 3G+ and 4G mobile services – a configuration that is being tested by the Portuguese incumbent.

Swisscom already uses optical links for backhauling traffic from HSPA stations when needed. It will be able to take increasing advantage of connection to the FTTH network as it is deployed.