



**industry &
market update**

¿Hola to FTTH?

Spain played host to Europe's biggest ever FTTH conference last month, but will it lead to an accelerated rate of fibre deployment in the last mile?

The *Europe at the Speed of Light* conference, held in Barcelona last month and organised by the FTTH Council Europe, demonstrated that Europe is becoming more serious about optical fibre deployment in the last mile.

If attendance can be used as a barometer to gauge how successful a conference is, then this annual event — now in its fourth year — appears to be going from strength to strength. More than 1,200 delegates, representing both operators and suppliers, attended the two-day event to hear about different FTTH business models, different FTTH architectures, and ways to lower costs and maximise return on investment.

By way of contrast, last year's FTTH conference — held in Vienna — drew 800 delegates. The inaugural event, held in Brussels in the summer of 2004, attracted just 200 attendees.

But while the FTTH Council Europe can perhaps draw some comfort from an increased interest in last-mile optical fibre deployment, the limited number of FTTH rollouts in the region is still a source of frustration.

"Europe lacks a collective broadband vision and there is still no regulatory clarity surrounding fibre-to-the-home investment," said Hartwig Tauber, president of the FTTH Council Europe, in the opening address of the conference. "There are few FTTH deployments by incumbents and most of the Web 2.0 initiatives are coming from Asia and the US. Europe needs to accelerate FTTH deployment and show more dynamism if it is to avoid lagging behind other parts of the world."

Coinciding with the first day of the conference, the FTTH Council Europe published the latest FTTx rollout figures compiled by

the IDATE consultancy. (IDATE defines FTTx as either fibre-to-the-home or fibre-to-the building and excludes FTTN+VDSL.)

And for Europe's FTTH protagonists, the numbers make for pretty depressing reading. According to IDATE, there were only around 820,000 FTTx subscribers and 2.74 million homes/buildings passed by fibre in EU 28 (EU 25+ Norway+Iceland+Switzerland) as of the end of June 2006. Compared with June 2005, the number of homes passed increased by 13 percent (but there was a 26 per cent growth between June 2004 and June 2005).

While the number of FTTx subscribers grew by 32 percent in Europe compared with June 2005, the overwhelming majority of that number (96 percent) are still concentrated in five countries: Sweden, Italy, Denmark, the Netherlands and Norway (**Figure 1**).

The good news for the FTTH camp is that France Telecom and the Iliad Group (which runs the 'Free' broadband service in France) both announced extensive FTTH plans in late 2006, which should boost the IDATE FTTx figures when they are published next year. Even so, Europe looks destined to remain in the FTTH

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shadow of Japan and the US in the short- to medium-term.

In his opening presentation, Tauber pointed out that the number of FTTH subscribers in Japan had already exceeded seven million (with more than 280,000 new subscribers per month). And in the US, where an FCC ruling in October 2004 removed local loop unbundling obligations for incumbents on fibre-based local loops, there are now more than six million homes passed by fibre with just over one million FTTH subscribers as of September 2006. The FTTH subscriber growth rate in the US compared to September 2005 is more than 200 percent.

But Tauber was convinced that increased customer demand for bandwidth, combined with the campaigning work of the FTTH Council Europe to accelerate optical fibre adoption, could result in a tenfold increase in the number of FTTH connections in Europe within the next 3-5 years (equivalent to about two million connections per year). It seems an ambitious target given that there was no clear consensus by the delegates at the *Europe at the Speed of Light* conference on which was the optimum business model or which was the most appropriate FTTH architecture.

'Open access' the best way?

Does it make economic sense to roll out two or more national FTTH infrastructures (as they are doing in France) or to have a single network infrastructure that can be used by rival service providers?

The open access argument was given a good airing in Barcelona, helped by the fact that those speaking in favour of it could actually point to some success in

the field. Christer Karlsson, vice executive president of Fiberdata, described the rapid spread of open access that is helping to boost FTTH penetration in Sweden. "There are around 150 city networks run by independent operators in the country but owned by municipalities," he said.

"We're now seeing the emergence of regional FTTH networks as these city networks start to connect with each other."

By using the so-called 'horizontally-integrated' model, local municipalities own the fibre and ducts but companies like Fiberdata actually run the network. In

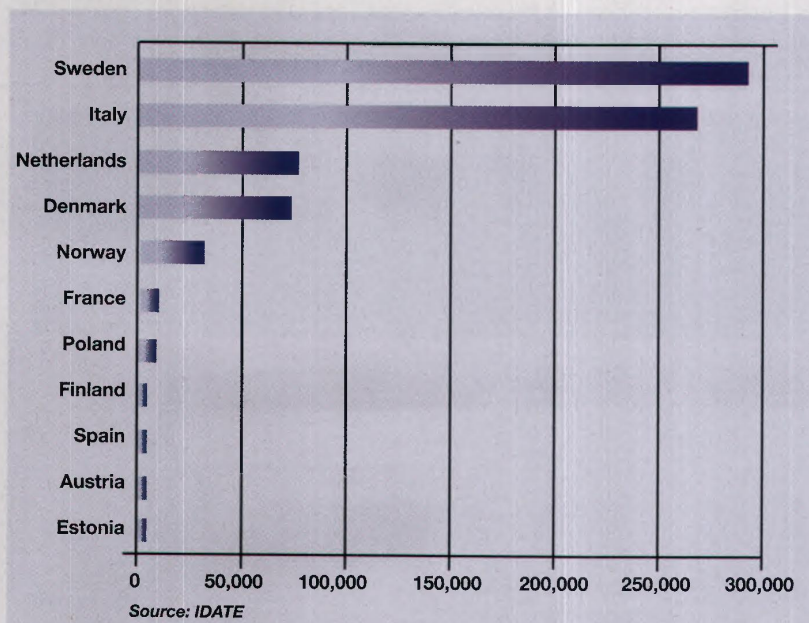
"Europe lacks a collective broadband vision"

Hartwig Tauber, FTTH Council Europe



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► Fig. 1 FTTH subscribers in Europe (June 2006)



turn, they help service providers target customers who have signed onto the FTTH network (a nominal charge of €6 per month in the case of Fiberdata.) "We like to have at least two service providers competing with the same type of service on the network," explained Karlsson, "which helps to keep prices down for the customer."

Using open standards and partnering with a variety of vendors, it is possible for customers to sign up to different providers for different services — one service provider for high-speed internet access, for example, and another for VoIP. "We can allow customers to change service providers in under one minute," added Karlsson. He added that due to the high level of competition between service providers it was possible to get a 20Mbps internet access service for around €20 per month (which includes the €6 subscription fee to Fiberdata).

Fiberdata currently runs seven city networks in Sweden and Karlsson maintains that it is a business model that works well

for everyone involved. Using the City of Orebro as an example, Karlsson said the local municipality needed to invest €25 m to connect 30,000 apartments with fibre. "By getting a share of the revenue [network subscription and services] the City is now generating a free cash-flow of €500,000 per year," he said.

The FTTH architecture debate

Predictably, delegates in Barcelona deliberated on which is the most optimal FTTH architecture. While point-to-multipoint GPON is arguably the favourite to be adopted by Tier One operators in Europe (it's the FTTH route selected by France Telecom), the argument for an Ethernet Point-to-Point (EP2P) solution was put forcefully by Dominique Lancrenon, chairman of the management board at CiteFibre, a Paris-based FTTH operator that is now part of the Iliad Group.

One of the main EP2P benefits, Lancrenon argued, is greater flexibility than point-to-multipoint architectures to scale up bandwidth beyond 100Mbps in order to

meet future demand. "Fibre is going to be around for the next 30 to 50 years and so we need to get the FTTH architecture right from day one," he said. "We don't want to go back to our investors and shareholders in a few years and say that we now need to review the choices we made."

In broad terms, the main difference between an EP2P and GPON architecture is that the former runs dedicated fibre connections between the central office and the end-user while customers on a GPON share bandwidth on one fibre connection.

While EP2P proponents claim they have greater flexibility (and security) to scale up bandwidth than GPON, GPON supporters argue that EP2P architectures have far higher capex and opex requirements due to the need for dedicated optical ports in the central office and more outside plant. Alcatel-Lucent, a heavy-weight GPON vendor, argues that an EP2P architecture — on a like-for-like basis with a GPON for serving 16,000 subscribers from one central office — requires 30 percent greater capex than a point-to-multipoint architecture.

"GPON has the winning hand," Dirk Van den Berghen, president of Alcatel-Lucent's access solutions, told the delegates in Barcelona. "It adds an economical rationale to the picture."

But Lancrenon, in conversation with *Telecommunications*® International, went as far as to argue that GPONs could even be harmful to the FTTH market as a whole. "With point-to-multipoint PONs, it's very difficult to do full unbundling," he said. "Costs and quality of service are also harder to control, and innovation much harder to achieve. Point-to-multipoint PONs will stifle competition."

The views of Tauber and the FTTH Council Europe, which is committed to a neutral outward stance on these issues, remained frustratingly elusive during the conference. ◀

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