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FTTH catches on in Barcelona

Balmy Barcelona played host to the fourth FTTH Council Europe Conference last month. Even though FTTH remains at the fledgling stage in Europe, the event at the Palau de Congressos de Catalunya attracted a substantial 1200 attendees. In fact, this year's FTTH Europe get-together was the largest so far, having grown every year since its debut in Amsterdam in 2004, which attracted fewer than 500 visitors.

The two-day series of keynotes and breakouts from FTTH experts and practitioners worldwide was entitled Europe At The Speed of Light – rather an optimistic tagline considering that the FTTH revolution has been “about to take off” across Europe for at least 10 years. But even if the pace of change – at least in Europe – is still slow, many people in Barcelona appeared to be quietly confident that the photonic tortoise may yet catch the electronic hare.

Cheerleading from the speakers aside, the financial evidence of such optimism was apparent in the exhibition held alongside the conference, which featured some 40 suppliers that are eager to play a pivotal role in any such FTTH revolution. The exhibition – which was always thronging between the equally bustling conference sessions – featured the likes of Alcatel-Lucent, Ericsson, Nexans, PacketFront and Prysmian (gold sponsors); JDSU, Cisco, Draka and 3M (silver); and several dozen other bronze hopefuls. Maps and diagrams of ongoing and previous FTTH projects, mainly outside Europe, were much in evidence.

These companies can look forward to significantly higher sales of optical products if FTTH becomes a truly mainstream technology. But while it is generally agreed that the necessary laser-based technologies are pretty much already here, volumes and price points will be the critical factors that will determine the speed of adoption.

Europe's growth of FTTH

Hartwig Tauber, president of the FTTH Council Europe, believes that Europe's rate of growth in deploying FTTH is now about 30% year-on-year, although the technology is currently thought to reach less than 1% of the continent's 150 million homes. “That growth rate may sound good,

The optimistic talk at the FTTH Council Europe conference in Barcelona matched the sunny atmosphere outside, but the rate of adoption of FTTH remains painfully slow. Matthew Peach reports.



Hartwig Tauber (top) wants Europe to have two million fibre-connected households by 2010.

but I want to see it going much faster,” he said. “The FTTH Council has a new mission statement, in which we say we want to see network deployers choosing fibre-to-the-home to give us at least 10 times the current growth rate.

“This could equate to Europe having approximately two million fibre-connected households in the next three years or so,” Tauber added.

Tauber's vision could be helped by Alcatel-Lucent and Freescale Semiconductor, which have a plan to facilitate the adoption of FTTH technologies. The two firms announced they will jointly develop gigabit passive optical network (G-PON) technology and make interoperability specifications available to vendors of terminal equipment worldwide. Through an agreement with Freescale, terminal vendors will be able to license technologies for G-PON that comply with Alcatel-Lucent's 7342 ISAM “fibre to the user” range of equipment.

Competition

The problem for FTTH advocates is the established market presence of copper-based technologies. VDSL, which may deliver broadband speeds of as much as 50 Mbit/s, is already established in certain territories, notably Germany. Despite its finite bandwidth, higher electrical power demands and aesthetic drawbacks (unattractive street cabinets, apparently), it continues to be developed and widely deployed.

But copper may soon run out of bandwidth. Wolfgang Fischer of Cisco, another FTTH Council Europe technical representative, highlighted a graph published in June 2006 by Heavy Reading in its FTTH Worldwide Market & Technology Forecast. This plots connection rates (log) against the time period 1990–2020 and gives an almost exactly linear, upward relationship, implying that copper-based communications could become redundant within five years.

“A communications equivalent of Moore's law [which links computing power with transistor density on a chip] means that today's typical 1–10 Mbit/s broadband definition, depending on where you live, will nudge 100 Mbit/s by 2010, 1 Gbit/s by 2015 and 10 Gbit/s by 2020,” said Fischer.

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Is Europe serious?

Several announcements at the event supported the idea that FTTH will progress significantly beyond the current community projects and tentative plans for national roll-out of optical access networks. Tauber highlighted some of the regions in Europe that have serious plans for FTTH deployment.

- **Sweden:** Many municipalities and especially remote communities already rely on FTTH networks – even paying for and installing them themselves in some cases. The Nordic countries generally have a history of embracing the latest telecoms technologies because of their combination of remote communities and prosperous economies.

- **The Netherlands:** Price and bandwidth competition between fixed networks and cable companies may yet open the door for FTTH with its relatively unlimited bandwidth and lower operational costs.

- **France:** Telecom company Free announced at the end of 2006 that it plans to deploy new FTTH access networks nationwide (starting with the Paris area, *naturellement*). Its aim is to replace the existing ADSL 2+ networks.



- **Germany:** Deutsche Telekom (DT) is still strong and continues to develop VDSL – that is, fibre to the kerb. There is apparently an ongoing wrangle between the European Commission and DT, which wants to have a “regulatory holiday” to release it from the required unbundling obligations. Further pressure to change is likely to come from the impending switchover in Germany (and Austria) from analogue to digital TV.

- **Spain:** There is increasing pressure from municipalities to the national government demanding an active policy on deploying FTTH to develop the national communications infrastructure.

Generally, Tauber noted, it is instructive

if somewhat galling to compare the still relatively small scale and sluggish rate of Europe's FTTH development with other parts of the world. In Japan, for example, FTTH customers are now being signed up at a rate of around 280 000 per month.

The answer, says Tauber, is for Europe's national governments to embrace and push the idea of FTTH. “People in Asia and North America involved in larger-scale FTTH developments are not asking whether we will ever need this bandwidth. They are getting on with it,” he said. “But in Europe, in many cases, the technology drivers are the actual policy makers. The situation we have at the moment is what I call missing vision.”