

Capsule Summaries of Trend Data for Broadband

A monthly Staff Report (The focus this month is on FTTH and IPTV)

Asia Moving Full Speed Ahead on Fiber to Home and Neighborhoods

Five Asian countries comprise the fastest developing regional broadband market in the world, according to an In-Stat report released in December. The broadband penetration includes adoption of advanced fiber to the premises and especially the residential broadband market. Fiber to the Neighborhood/Curb/Building (FTTN/FTTC/FTTB) is also common, says In-Stat (www.in-stat.com).

Asia as a whole, and in particular the growing China and Australian markets, provide huge growth potential for equipment and service players to claim a slice of the growing FTTX pie, the high-tech market research firm says.

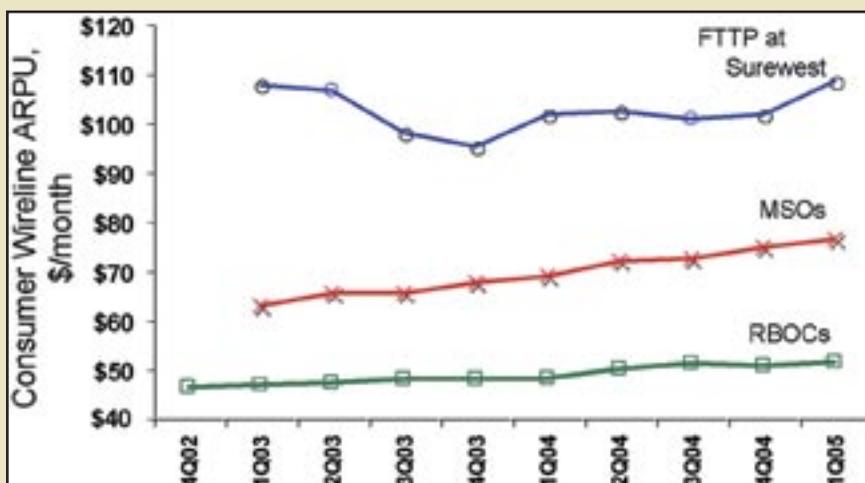
“Foreign investors may not need to build up networks or provide services on their own,” says Victor Liu, In-Stat analyst. “Instead, content developers and value-added services providers may have better revenue prospects if they work closely with broadband service providers who lead the adoption of FTTX in those markets.”

In-Stat also found:

- In China, FTTC and FTTN are proving to be cost-effective ways to introduce broadband to homes.
- Japan has built up high-speed network infrastructures extending fiber all the way to the home to deliver a wide array of voice, data and multimedia applications including increasingly popular VoIP service.
- In South Korea, service providers have found that online gaming, Video-On-Demand, and e-commerce are moneymaking applications that are well suited to the increased bandwidth of FTTX.

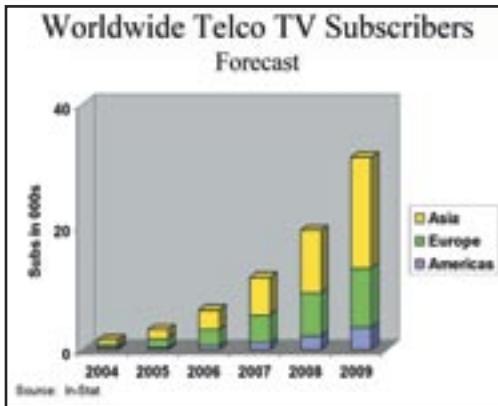
For more information, contact Tina Sheltra at tina.sheltra@reedbusiness.com.

Competition Driving Converged Services



Bob Whitman, Manager, Global Broadband Marketing for Corning, says CATV operators are reporting a 50 percent reduction in churn for triple play. Recent numbers for average monthly US revenue per customer have video at about \$59, voice is about \$40, and data also about \$40. He also notes that although broadband penetration is only 32 percent of US households, paid television subscribers account for 81 percent of households.

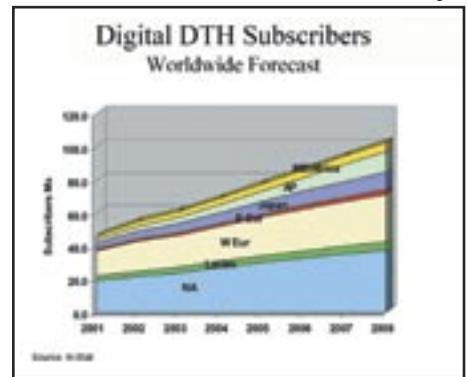
Digital TV: The Telco TV Market



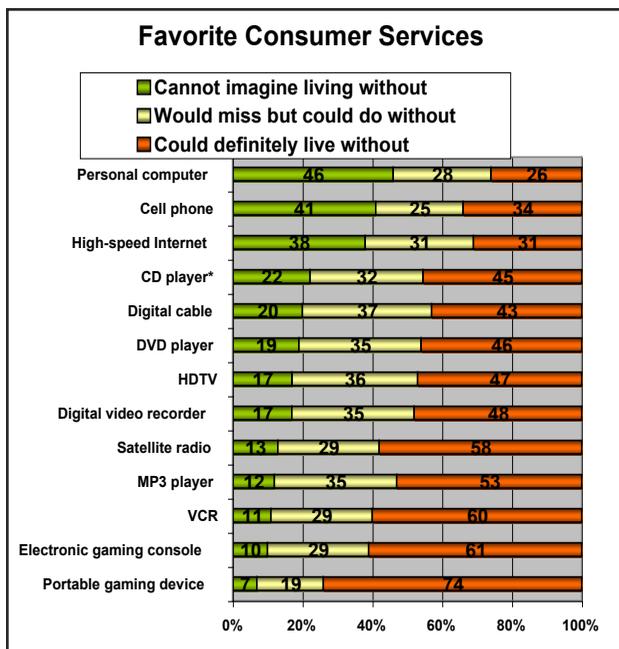
The number of digital TV subscribers who get their service from telephone companies is likely to quadruple in the next four years to over 30 million, according to In-Stat. Much, but not all, will be delivered as IPTV rather than RF, although almost all is delivered by RF now. The action is in Asia and, to a lesser extent, in Europe. In-Stat noted in late summer that Verizon's FiOS is just getting started. Latin American trials are small. In Asia, China is putting pieces in place for a 2008 Olympics launch. Atlas has just started up in the past month, in India. PCCW, the largest telecommunication enterprise in Hong Kong, is going strong, with 440,000 subscriber households. In Europe, France remains the most active and competitive market. The Swisscom debut was postponed to later this year. KPN, Belgacom, TeliaSonera, and Telecom Italia all started services in 2005.

Satellite TV Market Continues to Grow, But More Slowly

Growth is flattening out in the Direct To Home (DTH) satellite TV business. It is now less than 10 percent per year in larger regions. North American customers (NA in the chart) account for about a third of all DTH customers worldwide. The key challenge, says In-Stat analysts: Overcoming the lack of a triple-play service bundle. DTH equipment vendors agree that India offers the greatest growth prospects for the immediate future. European service providers are turning their attention to HDTV services. North American service providers also focused on HDTV and Personal Video Recorder services. New service providers are still entering the market, especially in Eastern Europe.



Poll Says Digital Gadgets Pervade American Homes



Only a quarter of adult Americans say they could definitely do without personal computers, and only a third say they don't need cell phones or high-speed Internet. The data come from an Associated Press poll of 1,006 adults conducted by Ipsos in mid-December. While the results should be taken with a grain of salt – 13 percent of respondents said they could not imagine living without satellite radio, although the two providers had only signed up 7 percent of all American households at the time the poll was taken – the relative demand among different items seems reliable. More than half of the respondents said they wanted HDTV, but even more said they either could not imagine living without digital cable, or would miss it. By the way, by early January, almost 10 percent of American households had a licensed satellite radio receiver.

It's Fake But It's Fun

This photo, supposedly from a 1954 RAND report, has been showing up in broadband presentations, as a way of pointing out that when it comes to technology, the future is often under-predicted – and thus, maybe we'll need more bandwidth than some nay sayers suggest will be enough.

It's actually a composite photo, based on the attack-center controls of a nuclear submarine. The photo surfaced at a fake-picture contest in 2000. That's a shame. But there are some similarly ungainly computer system pictures dating back to the 70s. Also, Popular Mechanics supposedly carried a statement in 1949 to the effect that "Computers in the future may weigh no more than 1.5 tons." At about the same time, IBM founder Thomas Watson said the market for computers worldwide was likely to be only seven machines. Ken Olson, founder of Digital Equipment Corp, said in the early 1970s "There is no reason anyone would want a computer in their home."



Fiber Backhaul Market to Grow with Wireless Adoptions

The number of organizations deploying voice over wireless LANs (WLAN) will triple over the next two years, from 10 percent now to 31 percent in 2007, driven by the growing availability of wireless VoIP handsets and voice-enabling wireless infrastructure. The study, *User Plans for Wireless LANs: North America 2005*, is based on in-depth interviews with 240 small, medium, and large organizations using WLANs by 2006, including analysis of 5 vertical markets, as well as surveys of 450 organizations for WLAN adoption rates.

Infonetics projects 57 percent of small, 62 percent of medium, and 72 percent of large organizations in North America will use them by 2009. The leading barriers to WLAN adoption are security and privacy. For more information, contact Larry Howard at larry@infonetics.com.

Cisco Systems has also taken notice. Symbol Technologies, the first vendor to launch a wireless LAN switch product, is facing stiff competition from Cisco, according to Infonetics Research's latest *Wireless LAN Equipment quarterly market share report*. Symbol maintained its leading share for wireless LAN switch revenue with 28% in the third quarter, but Cisco's acquisition of Airespace in early 2005 has now leapfrogged it into second place.

Worldwide wireless LAN equipment revenue grew to \$753.6 million in 3Q05, and is forecast to reach \$4.2 billion in 2008. Wireless LAN switch revenue grew 18 percent to \$95.1 million and is forecast to reach \$746.5 million in 2008. The mesh network access node segment will jump 242 percent over the next 12 months. Cisco maintained the top spot overall with 22 percent revenue share in the wireless LAN equipment market, following its first \$150 million+ quarter; Cisco-Linksys was second, D-Link third, NETGEAR fourth. Trapeze Networks and Aruba Networks hold the third and fourth spots in wireless LAN switch revenue, behind Symbol and Cisco.

In-Stat is predicting that WiMAX chipset sales will climb as well, reaching as high as \$950 million in 2009. Another plausible, more conservative scenario, pegs this market at \$450 million in 2009. "Competing technologies include 3G technologies on the cellular side (EV-DO Release 0, A, and B; HSDPA) and Wi-Fi (coupled with wireless mesh networking and MIMO enhancements within 802.11n) on the networking side," said Gemma Tedesco, In-Stat analyst. "Persuading the large service providers to build infrastructures to support WiMAX will be the key for WiMAX boosters, especially convincing cellular operators, who already have built out expensive 3G infrastructures."

In-Stat notes that, despite tremendous hype around WiMAX, the WiMAX chipset market has a relatively small number of players. Intel, perhaps WiMAX's biggest cheerleader, has the power to drive mobile WiMAX into becoming a standard embedded feature within mobile PCs, as Intel did with Wi-Fi in its Centrino mobile platform.

The report, "WiMAX: Wireless Super-Chips," is described at www.instat.com/catalog/Ncatalog.asp?id=28.

