

## Predictions for 2007

As we start the new year, we pay particular attention to the general market and technology conditions that will drive the broadband business over the next 12 months.

### U.S. Broadband Penetration to Hit 60% This Year, with Cable Treading Water

About 60 percent of all U.S. homes will subscribe to broadband service by the end of 2007, and cable operators will come close to losing their majority market share, research firm Pike & Fischer ([www.pf.com](http://www.pf.com)) concludes in a new report.

Cable operators' share of the high-speed Internet market will fall to slightly more than 50 percent as DSL and, increasingly

fiber to the home or node, help the major telephone companies net the largest number of new broadband customers. However, cable operators will keep their core video base with a growing array of on-demand and high-definition programming, together with aggressive promotional offers.

"We also know that cable operators want to draw users away from the comput-

er screen and back to the TV set, so they'll be developing ways to let customers access Web content through their set-top boxes," said Scott Sleek, Pike & Fischer's director of Broadband Advisory Services and an author of the report.

Pike & Fischer also predicts that:

- Approximately 2 million U.S. households will subscribe to telco TV by the end of the year.
- The cable industry will surpass Vonage's lead in the VoIP market.
- New forms of broadband wireless technology, based on WiFi and WiMAX will improve the quality of mobile video services and help drive up what so far have been slow adoption rates.

## Why We Need Fiber to the Home

A report in British publication *Comms Business Magazine* suggests that telcos may actually jeopardize quality of service by upgrading from lower-speed ADSL to higher-speed ADSL2+. *Comms* cites a VoIP reseller who explains that ADSL2+ uses a different contention policy from the original ADSL standard. Under the original standard, bandwidth is assigned for the duration of a task, like downloading a file or making a VoIP call. Under ADSL2+, however, bandwidth can be reassigned dynamically when it is needed for another task. According to the reseller, "We have seen upstream capacity decrease to lower than 57 Kbps in peak working hours, which is simply not viable for a VoIP application."

## New Applications Depend on Fiber

The year 2007 will see continued convergence of telecom, media and IT, according to a new report from Paul Budde Communication ([www.budde.com.au](http://www.budde.com.au)). However, this convergence will depend on the development of fiber broadband networks. He sees video telephony as the number one killer application of the future.

Consumers are quickly adopting digital media on the Internet, and television and entertainment are also becoming digitalized. This will lead to an increase in the number of channels and new interactive formats, and from 2007 onward traditional broadcasting will increasingly become a subset of broadband. A range of new Internet devices that can be connected to the TV will be launched over the next few years.

Fixed-line voice will also become a subset of broadband; by 2009, there will be more than 135 million residential and virtual office VoIP subscribers worldwide. Wireless VoIP could also challenge 3G

wireless service toward the end of the decade.

This year will see a further increase in the emergence of triple-play business models, and while VoIP will be a key element in triple-play packages, it is broadband video that will make the products viable. Other important applications for 2007 and beyond lie in social networking and broadband e-health, including home-care services for aging populations.

But these services can only be fully developed once high-speed broadband networks are widely available, says the Budde report. It is estimated that, during this decade, demand for bandwidth will grow by 1,000 percent and more. This demand for broadband will lead to the further development of fiber networks, as copper-based networks cannot handle the increased capacities required. This process, in the western world, will be largely completed by 2015.

Over the next 12 to 18 months, the report forecasts more large-scale fiber announcements from incumbent telcos

around the globe, led by Japan, Korea, the United States, the Netherlands, Germany, Switzerland, Belgium, France and the Scandinavian countries.

## In-Stat's Predictions for 2007

Video? High Definition TV programming will become available via the broadband Internet, says In-Stat analyst Gerry Kaufhold. In-Stat is predicting that more than 60 million households will have at least one wide screen, high-definition TV display in their home by the end of 2007. People who shelled out \$2,000 for HDTV during 2006 will be willing to pay a few hundred extra for a high-end entertainment PC that connects directly to their HDMI-equipped HDTV display.

Beyond 2007, In-Stat bets there will be a backlash against so-called "network neutrality" as the rising amount of rich media content on the Internet slows down other traffic. Today's proponents of net neutrality

will begin to plead for tiered service – the option of paying more money for priority on the backbone.

Intel is delivering quad-core CPUs that “cry out to decode high-definition TV,” he says. At the start of 2006, In-stat predicted that dual-core CPUs would not migrate to the home desktop. In fact, their prices fell so fast that they replaced single-core CPUs in low-end \$400 to \$600 computers. Apple’s new Intel-based machines will bring iTunes into play in video this year, and it’s likely that iTunes will provide some high-definition versions of Disney movies for “download-to-own” services. That, in itself, will generate a lot of “buzz.” AMD, which bought video-card maker ATI last year, can build portable PCs that include HDTV tuners and HDTV graphic accelerators.

Again, this calls out for something with intense graphics to drive sales. Outside the US, countries that provide very high speed broadband services, such as South Korea, Japan and Taiwan, can deliver 10 GB HDTV files quickly, and Intel’s Viiv architecture has connections to content owners and ISPs that are ready, willing, and able to begin delivering HDTV files over their ultra-high-speed Internet services.

By the end of 2007, we’ll see some people asking their ISP to give them a 30 Mbps connection, and then canceling their Pay-TV service because they can download their favorite shows and movies and not pay for the extraneous networks that come “bundled” by the Pay-TV service.

A bonus: Some of the HDTV content being delivered will look BETTER than the HDTV being provided by digital cable TV services. Some people will decide that the quality of their viewing experience is worth the extra hassle of waiting for large files to download. Finally, there will be some wireless HDMI solutions by late 2007 that permit an entertainment PC to “connect” to a wide-screen HDTV display with “no new wires.” That will really drive the market forward!

## Technology

One in 5 US households will have a personal video recorder by the end

of 2007 – mostly coming from the service provider.

At least one successful WiMAX “d” vendor (the fixed WiMAX) will go out of business as the transition to “e” (mobile WiMAX) comes to a head in 2007.

WiMAX will be more widely deployed in Europe and Asia than in North America.

Look for Verizon to make acquisitions in the professional services space to keep pace with AT&T’s acquisition of Calisma.

In-Stat also expects AT&T to continue to seek deals in the content delivery and managed applications space.

In-Stat anticipates one or two deals from Alcatel-Lucent to help it penetrate this fast-growing market space. Advances in Ethernet-over-Copper (EoC) and Pseudo-Wire technology will allow the Tier 2 carriers an opportunity to more aggressively pursue Ethernet services, especially to small and medium businesses. This will cause Tier 1 carriers to adopt these technologies at a more aggressive rate in order to protect their installed base.

The net effect of this will be that Ethernet services will see significant growth in 2007-2008. There is potential upside for Alcatel-Lucent, which has a pseudo-wire solution, and Hatteras, which has a contract with BellSouth (now part of AT&T) for its recently announced mid-band Ethernet solution.

Given the growing emphasis on security, In-Stat expects acquisitions from AT&T and Verizon in this pure-play space to continue. Similar to IBM’s 2006 acquisition of ISS (Internet Security Systems), EMC’s purchase of RSA Security, and BT’s acquisition of Counterpane, firms whose core business does not revolve around security will need to enhance their portfolio through organic growth or, more likely, similar strategic acquisitions in order to ensure legitimacy in the market.

Cable MSOs like Time Warner Communications, Comcast, and Cox will become more focused on the business market and demonstrate effective ability to take share in emerging markets like layer 3 VPNs and Ethernet.

The Venice Project’s P2P video project will be the big viral media sensation of

2007, creating a new model for cost-effective distribution of video and a new platform and business model for content producers – both big and small – to monetize their creations. Why does In-Stat think so? P2P enables the lowest cost, most scalable distribution platform imaginable. The founders, Riis and Zennstrom, have an amazing track record with building disruptive P2P platforms (Kazaa, Skype). They also understand that they have to integrate a business model that is acceptable to content creators into the platform and they have developed a targeting advertising model that may enable them to provide this. Finally, the infrastructure and market are ripe for a new video distribution model, as demonstrated by the success of YouTube.

## Asia

The advanced mobile markets like Japan and South Korea will see a lot more dual-mode (switched cellular and Ethernet) handsets as wireless broadband offerings increase, from both incumbent and emerging operators. Carriers will launch faster yet cheaper Internet access on the go.

The first few WiMAX business cases will emerge in Asia beside Wibro in Korea. By 2007, we should be able to identify how operators price their services and how customers react to wireless broadband.

HDTV services will receive wide interest in 2007 in regions like Hong Kong, Taiwan, Australia, New Zealand, Singapore, and China. These services will be mainly initiated and driven by regulatory pushes.

IPTV will continue to gain momentum in South East Asian emerging markets, such as Thailand, Malaysia, Indonesia, and even India in South Asia. Also, iTunes and Real Networks may expand their online music shop services into one or two more countries in the Asia/Pacific region, aside from their current operations in Japan and Korea respectively. India and Vietnam continue to be the hot investment target countries in the electronics and semiconductor industries. ■