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I Want My IPTV: Internet Protocol Television Predicted a Winner

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Technology watchers and channel-surfing couch potatoes, take note: Among the technology winners *IEEE Spectrum* magazine recently predicted to surge in 2005 is Internet Protocol television.

IPTV delivers a relatively low-speed broadband TV connection (2.2 megabits per second) through telephone wires. By using a legacy copper network instead of a more costly optical-fiber upgrade, IPTV delivers a multiplicity of programming choices that's expected to enable telephone carriers to one day give cable providers a run for their money.

Everybody loves a winner

Ed Graczyk, marketing director of Microsoft TV, is thrilled at *IEEE Spectrum*'s forecast (http://www.spectrum.ieee.org/WEBONLY/publicfeature/jan05/0105wbro.html).

"We're obviously elated," says Graczyk. "We are big believers in the potential of IPTV, not just because a well-architected IPTV system will deliver the advanced digital TV services people demand today—such as HDTV, digital video recording, video on demand, and interactive applications—but also because the two-way broadband connectivity used

by IPTV enables new capabilities that will dramatically improve the TV experience for consumers."

Indeed, to make the cut, *IEEE Spectrum* 's winners needed to demonstrate that their technology's social, economic, or environmental benefits outweigh any possible negative outcomes. In addition, to demonstrate the technology's imminent success, it needs to capitalize on business, technological, societal, or governmental trends.

"In meeting the criteria for selection, IPTV fits the trend of 'convergence,' which is the resounding mantra within the industry," says analyst Bruce Hudson, a program director of META Group's Technology Research Services. "That is, the convergence of voice, video, and data—all rendered into digital packets carried by the pipe of your choice."

An IPTV revolution?

When IPTV providers discuss its likely impact in the industry—or at least the one they're hoping for—they often sound as if they're at the helm of a full-fledged technological movement rather than a single solution.

"At the heart of IPTV," Graczyk says, "is the global move of virtually all content to digital formats, the introduction of advanced video compression and digital-rights-management (DRM) technologies, and the evolution of broadband distribution networks based on Internet Protocol."

Graczyk also believes that rather than getting in the way, as is often the case, recent regulatory and technology trends have enabled IPTV's economic viability.

"On the regulatory side, we recently witnessed FCC decisions that no longer provide disincentives for telecom operators to invest in upgrading their networks," he says. "On the technology side, advances in video codecs, DRM, and open standards are making new ways of sharing content across devices possible, while giving more opportunities for content owners to reach new audiences on new devices."

BellSouth, a telecommunications services provider in nine US states, isrolling out the Microsoft TV IPTV platform, with trials expected to be complete in the next several

months.

"We have been looking into expanding our IP footprint since the late '90s," says Randy Zimler, a senior member of BellSouth's science and technology exploratory development team. "But it's only been in the last 12 to 18 months that we've actually embraced [IPTV] as something that would be viable for deployment within our infrastructure."

Zimler gives some credit to DSL, which has made progress in recent years, reducing infrastructure costs. "There is more potential with DSL than we ever thought possible," he says. "Advancements in DSL are definitely making IPTV easier."

Working out the kinks

Bringing IPTV to the masses is another story, replete with challenges.

"The biggest challenges tend to be in the area of integration," says Graczyk. "That is typical with any solution like this, as each operator has its own fairly unique infrastructure and back-office systems."

After overseeing BellSouth's trials, Zimler says it comes down to two considerations: "How to build the core network in order to best support IP applications, and how to better manage the technology already in the customer's domain."

"Long-term stability was one of the biggest challenges," says Myriam Ziesack, a spokesperson for SwissCom, a leading Swiss telecommunications company. SwissCom's trials of the Microsoft TV IPTV platform commenced in November 2004 and are expected to be complete later this month.

"Another challenge was, and still is, to match the quality of Swiss cable providers," she says. "But so far, we are satisfied with the progress of the trials."

"We're working not only with a brand-new generation of software but also a new generation of silicon, set-tops, and video encoders," Graczyk says. "That said, we've been very encouraged with the excellent progress being made in our IPTV efforts around the world."

The wave of the future?

So, will virtually every household eventually have IPTV—making it not only a winning technology but also a proverbial bee in cable providers' bonnets?

META Group's Hudson says yes, but not right away.

"Is this a threat to standard cable TV programming? Not in 2005, not in 2006, and probably not even in 2007," he says. "But this will indeed [eventually] be disruptive as cable providers, telecoms, and satellite companies all vie for that monthly fee from consumers. Already, we see in the consumer as well as the business marketplace a move toward rationalization of service providers based on bundling of services."

Conclusion

Hudson points out that Microsoft has a clearly stated strategy to try to control the delivery of content to the end user. "But the Microsoft vision and technology is still too cumbersome," he says. "Watch Apple in this space as they digest the success of the iPod and figure out a way to become the media center of the home."

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