Is IPTV Ready for

The infrastructure is laid, but customer experience

BY REBECCA MACDONALD

Despite the drum rolls and dramatic triple-play announcements, for most telcos and their customers, the future of IPTV (or broadband TV) remains a big question mark. The question is not whether interactive video services are the wave of the future. Market studies indicate that consumers want, and are willing to pay for, services such as video on demand and interactive TV. In fact, a recent Light Reading Insider Report predicts that by 2010, IPTV services will have captured 65 million subscribers worldwide. Only one question remains: which providers will succeed at delivering the quality experience and service reliability necessary to capture and retain these customers?

Most major voice carriers have introduced plans to deliver IPTV services. In the U.S., AT&T has long promoted its Project Lightspeed, an initiative to deliver a portfolio of digital TV, high-speed Internet and voice services—all under the AT&T U-verse brand. Verizon has already launched its FiOS TV service in seven states and is targeting additional markets this year. In the U.K., voice provider BT has announced plans to launch a TV-over-broadband service that combines access to digital terrestrial channels, an extensive video-on-demand library, "catch-up" TV and a range of interactive services. "We see next-generation TV as a vital element of our vision for home entertainment," said Ian Livingston, chief executive of BT Retail, in a press release last year. Deutsch Telekom and France Telecom have also announced IPTV initiatives.

The rush to deliver IPTV is not just an offensive strategy by telcos to win market share, however. As the features and pricing for voice-over-Internet protocol (VoIP) have become more attractive to consumers, carriers are attempting to reduce customer churn by offering video in addition to their existing DSL and voice services. This triple-play strategy is nothing less than a battle for survival. According to a recent Yankee Group report, "Cable video subscribers and telco voice subscribers are most likely to add cable modem or DSL to their service package, and then add on cable telephony or IPTV as their third service, terminating their relationship with the competing provider."

IPTV is Not New

While the major voice carriers are still in the midst of launching their video

Prime Time?

concerns have telcos proceeding with caution

initiatives, the technology itself is not new. In fact, independent providers such as PCCW in Hong Kong, HomeChoice in London, FastWeb in Italy and Manitoba Television Services in Canada have been delivering interactive television services for years. According to Adam Daum, a research vice president with Gartner Industry Advisory Services, Free—an IPTV provider based in France—has the largest deployment in Europe to date, with more than a half million IPTV households to its credit.

However, Daum says, there are inherent problems in scaling services to that level. "Free entered the market as a low-cost disrupter, but they also have experienced a large number of customer complaints," he explains. "The problem is that, although the independents have been quicker to bring IPTV services to consumers, the challenges involved in scaling these services to the mass market are better suited to carriers with experience supporting large numbers of subscribers."

Caution is Advised

Independent providers are not the only ones experiencing the challenges of entering the television market. Major telcos around the world have postponed the rollout of IPTV services because of complicated issues ranging from content acquisition and network build-outs to back-office operations and customer service and support. For example, in Europe, Deutsche Telekom and BT have both delayed rollout of their IPTV services until later this year. In May 2005, AT&T announced that the commercial launch of its U-verse TV service—a complex effort involving countless technologies and a strategic collaboration with Microsoft and Alcatel—would be delayed to 2006. (The company since began a controlled market entry of its U-verse services in San Antonio, Texas in December 2005.) And while Verizon has already launched its FiOS TV service, it is currently available only to customers in certain parts of California, Florida, Maryland, Massachusetts, New York, Texas and Virginia.

There are good reasons for telcos to be cautious. According to Curtis Howe, president and CEO of Mariner Partners, a Canadian IPTV systems integration firm, "The scalability of IPTV services is gated not only by the network infrastructure, but also by the cost and reliability of key customer facing operations."

Clearly, the major carriers understand that, in order to succeed in winning customers over to IPTV services, they need to get it right the first time. Rather than rushing to market, they are field testing and launching services more cautiously—in individual communities—to work out the kinks. That's good news for consumers.

Microsoft provides the middleware and the user interface for service providers such as AT&T.

The Cost is Great

The telcos' caution should not be mistaken for a lack of commitment to delivering IPTV. In fact, most operators have already invested millions upgrading their networks to deliver those services. That's because conservative estimates put the bandwidth requirements for video services at 20 Mbps, well beyond the capabilities of current DSL infrastructures, and unlike their cable and broadband competitors, telcos couldn't simply deliver the new services over their existing networks. Now that the infrastructure is in place, operators are eager to recoup their investment.

For example, AT&T's Project Lightspeed is a multibillion dollar deployment of fiber that will reach approximately 18 million households in the initial rollout. Verizon is also investing heavily in an even more expensive fiber optic network that extends all the way to consumer homes, and the company has hired between 3,000 and 5,000 new employees to complete the task. Others are exploring technologies that promise to leverage their existing copper plant, while still others, such as BT, are taking a hybrid approach.

Competition is Fierce

Typically, carriers could recoup some of this cost by introducing a new technology such as IPTV with a premium price, which would gradually become more affordable as the service gained traction with mainstream consumers. With IPTV, telcos are competing head-to-head with cable operators and independent VoIP providers, such as Vonage in the U.S., by offering bundled services that are both attractive to consumers and priced competitively. At the same time, they must combat new entries into the video market by Internet-based rivals such as Google Video and Apple iTunes.

"Cable competitors are moving aggressively into the voice market, everyone is converging on this space," says Ernie Carey, a network vice president at AT&T. He adds that, "As convergence becomes more common, customers are going to want to buy a bundle of services from one vendor because it makes their lives simpler. The demand is there."

The competitive pressure will make it difficult for telcos to quickly recoup their infrastructure investments. But for the most part, providers such as AT&T are taking the long view that the investment will pay off by reducing customer churn and by positioning them as a single source provider for a variety of digital home services.

"We see this as a natural extension of what we do," says Carey. "For years we've struggled with the challenges of operating two completely different networks for voice and video. Project Lightspeed solves that problem by allowing us to deliver those services over a single network, and it sets up a pretty big revenue opportunity."

Daum believes that, in Europe, Free's model of offering basic TV channels at no charge, and charging only for premium channels and services, is the one major carriers will need to adopt to achieve the kind of mass market penetration necessary to make IPTV profitable. "They absolutely need to build up the installed base first, and worry about value-added services later," he says.

Customer Expectations are High

Building the infrastructure and winning customers is just the beginning. Because IPTV is new territory for most providers, the service inevitably will include some glitches. For example, dropped calls are a fact of life for users of almost any mobile phone service. However, customers were willing to put up with less than perfect reliability in order to get the benefits of mobile technology. In the case of IPTV, trial and error won't work. The technology already exists to deliver quality, reliable TV service, and IPTV does not yet offer either a net new capability or the "must-have" cachet that attracts mobile phone customers and makes some service glitches tolerable. To prevent customer churn and realize a return on their investment, IPTV providers must deliver a superior customer experience, rock-solid reliability and fast, effective service and support.

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Photo: Alcatel

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The Impact of Complexity

Early DSL rollouts taught telcos a lot about the complexity and cost of delivering and managing a new technology-based service. IPTV multiplies that complexity by an order of magnitude, bringing together disparate hardware, software, content and services from multiple providers. "IPTV makes home networking look easy," says Mark Huttemann, president and CEO of Triple Play Integration, a Massachusetts-

based systems integration firm. "With IPTV, you have the set-top box, middleware, a programming guide, content—all from different vendors. And there are no standards yet that say they all have to work together."

As a result, the typical IPTV installation requires at least one truck roll and a specialized technician several hours to install the service in one home. How will providers scale this model from the few communities of today to a mainstream market?

"Right now they can afford to roll a truck to install the service or fix a problem," says Hutteman. "But as the subscriber base grows, that will get expensive very quickly."

In addition, the complexity can cause major headaches for technicians installing the service. When an IPTV service fails, finding and resolving the problem can take hours. "In practice, we have measured order to installation failure rates exceeding 50 percent," agrees Howe. "The impact to the telco and the consumer is dramatic."

AT&T's Carey says the company is prepared. "We know that video service, by nature, will require a truck roll," he explains. "So we've spent a fair amount of time looking at models for scaling these services, including hiring specially trained reps specifically to deal with these issues. We're very comfortable that we'll bring those people on board, train them, and roll out a service that we can be proud of putting our brand on."

Of course, installation is just the first step. Once the service is installed, managing all of the moving pieces for ongoing reliability presents a much bigger hurdle. In fact, the IPTV challenge is similar to the problem faced by many providers when consumers began networking devices in the home—when something goes wrong with one of the devices or applications on the network, who owns the issue?

As most operators have discovered, the customer assumes the provider is responsible. The same will be true of IPTV. As Howe puts it, "Customers don't care that Scientific Atlanta provides the set-top box, Microsoft owns the middleware, Pioneer provides the program guide and ABC delivers the content. They do care that their picture is clear and their service works without a hitch when they've invited 20 friends over to watch the big game on HDTV."

A new VoD deal with DreamWorks Studios will allow customers of BT's new broadband TV service to download films such as *Wallace and Gromit: The Curse of the Were-Rabbit.*

AT&T's Carey agrees that the challenge is a new one for most telco providers. "In our traditional voice business, we haven't had to go inside the house very much, except to wire a wall jack. With IPTV, you have a much more sophisticated environment inside the home."

Can Software Help?

To meet the challenge, telcos must transform their traditional voice-oriented systems and processes to meet the demands of video customers. In addition, they must be prepared to integrate their IPTV processes with existing systems and processes for delivering voice and data to customers. For example, a DSL customer ordering a bundled triple-play service needs to have all of his services—and the corresponding account information—updated.

"That is the big untold story behind Project Lightspeed," says Carey. "Most of the news stories focus on the external network infrastructure. But a major effort went into making sure we have the right back-end systems in place to support this initiative. We believed it made sense to start with a clean sheet of paper in evaluating our BSS and OSS systems, and the result is that a majority of the systems we have put in place are new."

While these systems operate behind the scenes, they can have a significant impact on the customer experience. That is one of the reasons software giant Microsoft launched its Microsoft TV IPTV Edition, an integrated software platform developed specifically to deliver broadcast-quality video and new, integrated TV services over broadband networks. The platform combines features such as instant channel change (ICC) and multiple picture-in-picture (PIP) with traditional TV services such as broadcast programming, VoD and DVR.

"Think of trying to roll out an upgrade across this big, mixed environment," says Ed Graczyk, director of marketing and communications for Microsoft TV. You have millions of set-top boxes and servers across the country. How do you begin to manage that?"

The answer, according to Graczyk, is software. "Software is the secret sauce that enables content to be delivered across disparate devices. If you think of IPTV as a puzzle, the puzzle looks slightly different for each operator. Microsoft TV IPTV Edition offers network operators a true end-to-end platform. It's not just client software or specialized software for each component in the puzzle. It's kind of like the Southwest Airlines approach, if you fly only one kind of plane, it makes it easier and less costly to manage and maintain."

The approach seems to be gaining traction with customers around the

globe, including AT&T, Bell Canada, Deutsch Telekom, Swisscom, Telecom Italia and Verizon, to name a few. In addition, Microsoft has established partnerships with key IPTV technology vendors such as Alcatel, Scientific Atlanta and Thomson.

From the provider's perspective, Microsoft provides another key element. "Our primary reason for partnering with Microsoft was that we felt they had a game-changing UI, with a look and feel that consumers were already familiar with and knew how to use," says AT&T's Carey. He adds, "But this is a new business and there is a learning curve for both companies. We're new to the video business, and they are still learning how to do business with major carriers. The nature of a "five nines" (99.999 percent uptime) network is not something they have to think about when supplying retail software to Best Buy."

Learning from DSL

Fortunately, telcos can take some of the lessons learned from their earlier DSL rollouts and apply those lessons to IPTV. One of the keys to making DSL offerings profitable was automated installation and management. Similarly, providers will need an automation strategy that allows them to gather intelligence from the myriad devices and technologies used to deliver IPTV service, and use that intelligence for remote monitoring and management.

One company that has experience in this area is Austin-based Motive, Inc., which provides intelligent automation software that is designed into services delivered by more than half of the world's leading broadband providers. Using Motive's remote management technology allows providers to identify and resolve many potential issues before they become problems for customers.

"A typical IPTV installation involves 11 new pieces of technology going into the home, which must be coordinated and controlled to function properly," says Sanjay Castelino, vice president of strategic marketing at Motive. "Delivering a compelling, uncomplicated end-user experience is critical to the longevity and success of IPTV in the market."

When an issue does affect a customer's service, Motive technology can help customers troubleshoot and resolve common issues on their own through simple interfaces. This eliminates a costly phone call or truck roll. And when a call or truck roll is necessary, the data collected ensures that the problem is quickly identified and resolved by the service agent.

"Motive is definitely going down the right path with its remote management product," says Hutteman. "The challenge I see is that IPTV is in such infancy, from a real-life subscriber perspective, that operators don't yet realize how complex a system they are trying to deploy."

Maybe that is why, as Daum says, "In the IPTV market, there's still more smoke than fire." 2.0

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