

The New World of Video

New strategies, new services, new devices and new network technologies are keeping the industry hopping.

By Masha Zager ■ *Broadband Communities*

Is this the best of times or the worst of times for video service providers? Record high content costs, vigorous competition from traditional and over-the-top video providers and wildly increased subscriber expectations certainly pose challenges. On the bright side, providers can take advantage of new technologies to engage their customers in new ways.

SHOULD OPERATORS OFFER OTT SERVICES?

Pay-TV margins are slim enough that some small telcos, such as Toledo Telephone in Washington state, are abandoning their IPTV offerings for Roku-based over-the-top (OTT) services. Others – even large telcos such as Windstream – are pursuing similar OTT strategies rather than ever launching IPTV at all. (Windstream also resells satellite TV.) Subscribers to these operator-offered OTT services may get better prices than those dealing directly with OTT companies, and operators may increase revenues for their Internet services by bumping subscribers to higher data tiers.

However, according to David Thompson, product marketing director of equipment vendor ZyXEL, telcos' defection to OTT is not widespread and is not likely to be. IPTV technology costs have declined; among other innovations, Microsoft's small-scale version of its Mediroom IPTV product reduces the burden of offering a traditional pay-TV service. In addition, Thompson says, "It's difficult for service providers to monetize OTT video, other than what they get for the Internet service they're already being paid for. No one's figured it out."

Another option for service providers is

Is TV Everywhere a "complete and utter failure"? That depends on the definition of "failure."

to offer a combination of traditional pay TV and OTT services such as Google TV envisioned. However, this option has been slow to take off in the United States. (As an FTTH service provider, Google now offers an Internet-enabled set-top box, but OTT video does not appear to be part of its service.)

Vikram Shrivastava, marketing director for chip maker Sigma Designs, says several Latin American operators are ordering hybrid boxes with support for HTML5 and other streaming video technologies and are beginning to offer hybrid services, but "we haven't seen hybrid boxes in North America because the content relationships in the United States are very strict. ... It's very difficult, given the carriage rules." Shrivastava says hybrid boxes that combine Internet video with tuners for off-the-air broadcast channels may begin to show up in U.S. retail stores.

Shrivastava does see a role for another type of hybrid set-top box, however – one that controls both home automation and video. Sigma introduced a combination IPTV/Z-wave box last year and is beginning to see traction for it as video service providers look to home automation as a new revenue stream.

WHERE IS TV EVERYWHERE?

For the last several years, pay-TV providers have identified TV Everywhere, or multiscreen services, as their primary response to the growth of online content. The TV Everywhere strategy assumes that customers will be more likely to retain pay-TV subscriptions if those subscriptions entitle them to watch video on demand on their computers and mobile devices.

Implementation of TV Everywhere hasn't been smooth or easy, and in July, media analyst Rich Greenfield of BTIG Research caused an industrywide kerfuffle by calling the strategy a "complete and utter failure."

Jonathan Weitz, partner, and David Helfrick, principal of Interactive Broadband Consulting Group (IBB), believe Greenfield overstated the case. "There's a lot of content available now on a lot of devices," Helfrick says. "There's a lot of activity and motivation. Someone may say it's a failure because the original goal was to make every piece of content available on every device in a similar way across operators and devices.

"That hasn't happened. Some programmers make their content available for free, and others require users to have

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a cable subscription. Others are saying they won't make it available at all. If you were saying that everyone had to do it the same way, then it's a failure. But there *is* content everywhere." The availability of content on multiple devices, he says, makes pay-TV services more valuable to subscribers.

He adds, "IBB's point of view is that TV Everywhere has the potential to grow to a meaningful percentage of TV consumption over the next three years. We believe that content rights, the currency of cloud platform measurement and technical things like authentication will be addressed – and as they're addressed, there will be more content available, more marketing dollars spent on promoting it and more consumer awareness and acceptance. Look at video on demand and DVR usage – TV Everywhere could eventually grow to be in that neighborhood."

Certainly TV Everywhere meets a perceived need – as ZyXEL's Thompson says, "People don't just want to watch TV anymore; they're taking the tablet out onto the deck." ZyXEL uses DLNA technology to reduce the cost of moving content around from device to device.

However, even if TV Everywhere's start-up problems shake out and even if consumers come to accept and value the service, its role in retaining video customers is still doubtful. Some observers think TV Everywhere is not really needed to keep pay-TV customers from "cutting the cord."

"Rumors of cord-cutting are greatly overstated," says Jim Guillet, head of video and content delivery marketing for equipment vendor Alcatel-Lucent. A Canadian who is devoted to his hockey team, Guillet emphasizes the role of live sports programming in keeping viewers attached to their pay-TV providers.

Stuart Thomson, senior director of consumer electronics for chip maker Broadcom, agrees, saying that though pay-TV providers may lose video-on-demand revenue to online movie services, they won't lose subscribers until live TV is available over the top, all the time. "The Olympics [streamed online] is big right now – but it has to be 24/7, not just something special," he says.

If taking video on the road requires streaming it from a home DVR, FTTH is a big plus.

Thomson believes providers can make up lost VoD revenue by shifting customers to higher broadband service tiers. "Broadband is highly valuable to the consumer and the supplier," he says. "The supplier can increase its return by [charging for] either better quality of service or higher throughput."

TV EVERYWHERE, EVERYWHERE

A significant limitation of TV Everywhere is that, in most cases, "everywhere" means "everywhere in the house and backyard." Some content is available for subscribers on the go, but often, a subscriber who wants to watch cable VoD on a laptop in a hotel room is out of luck. Starting a movie on the home TV and continuing it seamlessly using a laptop on the road is an even more distant dream.

ZyXEL's Thompson points out that, to watch pay-TV content on the road, a subscriber generally must store that content in a home-based DVR and then push it via the Internet to the remote device. "If you push content upstream from the home as a Sling does, that's fine," Thompson says, noting that Sling technology is now being built into many set-top boxes. "But you need the bandwidth. That's why we're seeing a lot more interest from providers looking at technologies that will give more upstream bandwidth – VDSL with bonding, DOCSIS 3.1 or fiber to the home."

Some industry observers believe new video compression technologies may help realize the promise of TV Everywhere without investment in network upgrades. For example, Broadcom's Thomson cites High Efficiency Video Coding (HEVC), a draft standard that promises to reduce bandwidth needs by 50 percent and offer a "migration path to supporting multi-screen services without necessarily requiring more bandwidth to customers."

On the other hand, Thomson points out, service providers may use new

video compression technologies to support video with higher resolution – true high-definition TV or the even higher 4K x 2K standard that several new TV models now support.

Thomson says retailers are reporting that, even though 3D has not yet proven to be a "game changer" for video, "they think that with 4K x 2K, consumers can see a fundamental difference. ... Consumers won't all be willing to pay the premium price, but at least the selling of the idea is done by the technology itself."

He adds, "Operators will use 4K x 2K as a differentiating feature, just as they all were in a rush to say how many high-definition channels they had."

If, in a few years, 4K x 2K televisions are priced for the mass market and become the standard offering, then any breathing room afforded by HEVC will disappear, and operators will still need to upgrade their upstream bandwidth to realize the potential of multiscreen solutions.

THE NEW REMOTE

Beyond adding one more screen to multiscreen, tablet computers offer many new opportunities for service providers. One obvious opportunity is to improve video search and navigation, which the proliferation of cable channels and on-demand programs has made increasingly challenging. When consumers see how much easier navigating Web-based services is, they express frustration with the traditional TV approach.

Broadcom's Thomson comments, "There's a better way to discover what's on and to move through menus and displays. That navigation might as well take place on a companion device such as a tablet, as opposed to a cumbersome remote." Google's FTTH service uses a Nexus 7 tablet in place of a remote, and other providers, including Verizon, are reported to be considering this approach.

Guillet believes that tablet computers, which have ample processing power, will eventually replace not only remote controls but also set-top boxes. “Things the set-top box did can be done on the iPad, which the consumer willingly spends money on,” he says. “Removing the set-top box is the cable companies’ vision, three or five or eight years out.” The natural replacement cycle for televisions, which is filling the marketplace with “smart” TVs, will also contribute to the demise of the set-top box, Guillet says.

Not everyone shares this expectation, however. For example, Zyxel’s Thompson notes that “the iPad is more of a terminal – it’s got processing capability but no storage or [fast] network connection.” Because DVR functionality is now a critical part of set-top boxes, Thompson says, an iPad would be an inadequate substitute.

THE COMPANION

Tablets are more than newfangled remotes and set-top boxes; they are great devices for communicating, and they have made TV watching more social than ever before. Because tablets are small and convenient, many viewers use them while they’re watching TV to discuss shows with far-flung friends, family and fellow enthusiasts.

Show producers set up Twitter hashtags or ask their stars to tweet, but in general, social TV is a user-driven phenomenon whose sudden rise took the industry somewhat by surprise. Service providers still benefit from it because social TV helps reverse the tide of tape-it-now-and-watch-it-later behavior.

Guillet says, “One thing about this idea of watching live and participating in real-time conversations is that it drives live viewing behavior, so viewers see the ads.” As he points out, the highest advertising fees are commanded by contests, sports events and reality shows, all of which “draw you toward watching them live and seeing the ads.” The more willing viewers are to watch ads, the more valuable video services are.

In addition to encouraging subscribers’ natural propensity to chat, content providers also develop applications for

tablets and other mobile devices. “Voting and polling on a show about what’s going on or about the characters is a simple yet compelling use case,” says Helfrick. “Another one is companion content, where in real time, you get additional text or pictures or video related to what you’re seeing. It allows you to dig deeper and get more information. That kind of use case is to ‘superserve your super fans.’” Along with social TV, these kinds of applications inspire super fans to promote viewership of a show.

A good example is the new UFC.TV app that the Ultimate Fighting Championship and NeuLion recently launched for the iPhone and iPod touch. Users can order and watch live pay-per-view events, see archived fights, gain access to fight cards and other information, view additional camera angles, chat with other fans and purchase items from the store. NeuLion’s executive vice president, Chris Wagner, says, “More than just video, the level of interaction and accessibility within the app truly changes the way fans consume sports content and enhances the relationship between the UFC and ... fans.”

According to Helfrick, second-screen experiences not only make consumers more interested in shows and more likely to tune in again but also drive increased recall for ads. Cross-platform advertising may be the greatest value of the second screen for providers. Helfrick says, “Clearly a lot of viewers are already spending time looking at things online while they’re watching TV. ... There’s a lot of value in the attention of the viewer, so there’s a lot of value to unlock when the industry can bring that attention back to the program and to 30-second spots through rich, interactive experiences. They should be able to offer advertisers cross-platform ads with the ability to interact directly with consumers and the metrics they have come to expect from online advertising.”

NEW NETWORKS FOR VIDEO

Upgrading networks to support higher upstream bandwidth isn’t all that providers are doing to accommodate the onslaught of video. Among other notable trends,

- Cable companies are beginning to migrate to IPTV to support the next-generation user interfaces that subscribers demand, to reduce the cost of delivering video (Helfrick says that with IPTV, “Customer-premises equipment can be cheaper or nonexistent”) and to free up bandwidth. However, the migration is somewhat slower than many observers anticipated.
- Because IPTV won’t free up bandwidth until all subscribers are converted and non-IP channels can be turned off, cable companies are also using switched digital video as a transitional strategy. This provides room to start simulcasting in IP. Some are also migrating video-on-demand content to MPEG-4 format where possible because its higher compression level reduces bandwidth needs.
- Video providers are replacing super headends with content distribution networks so they can cache content closer to viewers. “If you’re delivering high-definition video by unicast, it’s the only way to scale to any level,” Guillet says, noting that the trend started with video on demand but will eventually encompass live TV as well. Storing content at the edge will help pay-TV providers compete with OTT providers by delivering better-quality pictures. Though OTT providers use third-party content distribution networks such as Akamai, their video content is typically not cached or prioritized.
- Video service platforms are migrating to the cloud, enabling service providers to take advantage of open-standard products and become more agile and innovative. “If you embrace the software technology that Twitter uses, that makes it easier to integrate with Twitter,” Guillet says.

Whether good or bad, the times are nothing if not interesting. To give Guillet the last word: “It’s always fun in the transition. There are new ideas and lots of innovation, and changes can take place.” ♦