MOVING VIDEO TO IP: THE CHALLENGES AND THE OPPORTUNITIES

The cable industry has long raked in profits from video offerings traveling across legacy distribution systems. Such offerings leverage reliable, established technologies alongside healthy financial margins. Further, in many cases these revenue streams have withstood incursions by competitors ranging from satellite to telco to OTT providers.

But change is inevitable. The cord cutting trend appears to be gaining ground. Consumers are increasingly moving away from living room TVs in favor of video viewing on mobile devices. And competition in the video space is increasing at a break-neck pace.

As a result, cable operators across the spectrum are looking at technologies to push their legacy video systems into an Internet Protocol future. This rush toward IP video could create a wide array of opportunities, including anywhere, anytime video access as well as more flexible and streamlined distribution systems. But obstacles are similarly substantial, not the least of which is moving a huge, established customer base onto new networks and devices.

This FierceCable eBrief will delve into this space with an eye toward both the challenges facing players as well as the opportunities in the space.

HOW TO SELL OTT TO CABLE, SATELLITE AND 'CORD NEVER' SUBSCRIBERS

By Rob Pegoraro

Over-the-top video services should have an easy job pitching their offerings to cable and satellite subscribers: Pay a small fraction of what you do today for all, or almost all, of the channels you actually watch.

But selling viewers on that trade also requires asking them to depart from years of relying on a so-called MVPD (multichannel video programming distributor) for TV and asking them to trust that their internet connection will yield consistently reliable quality instead of "buffer rage."

OTT providers such as Dish Network's Sling TV, Sony's PlayStation Vue and AT&T's DirecTV Now, in turn, have to balance going after potential cord cutters with chasing a growing audience of "cord-nevers"—people who have yet to sign up for cable or satellite.

WHAT CORD CUTTERS WANT

Sling TV chief marketing officer Glenn Eisen said most of Sling TV's customers don't cut the cord thinking Sling TV will be their new way to watch TV—instead, first they quit their cable or satellite TV contract, then research their options and settle on Sling as a big part of the solution. "The majority of our customers are cord cutters," Eisen said, adding that "only a proportion of them cut the cord and go directly to Sling."

As a result, the $20-a-month-and-up live TV streaming service that Dish Network launched in 2015 has had to adapt.

That's meant increasing the number of add-ons that let viewers build out a channel bundle with local stations or more news or sports networks (a new "4 Extras" deal lets them add any four for $10 a month instead of the usual $20). Sling is also now testing a cloud DVR, which adds $5 to a customers' monthly cost when used on Amazon Fire devices.

Sony's Vue—a more expensive service, starting at $40 a month—has emphasized technology over price.

"Our marketing efforts highlight all the benefits that PlayStation Vue provides," wrote Nancy Kim, senior director for PlayStation entertainment product and services marketing, in an email. She cited such examples as Vue's own cloud DVR, a "new multi-view feature" that lets PlayStation 4 owners watch three channels on one screen, and streaming on five gadgets at once.

Google says its $35-per-month YouTube TV isn't aimed at cord cutters. At its February introduction, YouTube CEO Susan Wojcicki defined the service's target audience as "a new generation of TV fans" who place no priority on living-room viewing.

But that service may find that, like other virtual MVPDs, it has to cater to viewers used to a traditional TV experience. "We believe the majority of vMVPD customers are coming from existing MVPD services, not from the ranks of broadband-only households," wrote Diffusion Research senior analyst Joel Espelien in an email.

CHURN SIGNALS: QUALITY AND CHANNELS

With Sling, Vue, DirecTV Now and such upcoming offers like Hulu's forthcoming live streaming service, the absence of contracts rates high among the factors setting their offerings apart from legacy MVPDs.

"When people try to cancel, we're going to make it easy for them."

-Glenn Eisen, chief marketing officer, Sling TV

"Users who turn to PlayStation Vue are often frustrated with the traditional pay-TV experience that requires long-term contracts and additional fees," said Kim.

"When people try to cancel, we're going to make it easy for them," Sling's Eisen commented.

Diffusion Research's Espelien identified two types of OTT churn: How many people don't convert to a paid subscription after the usual free-trial offer, and how many leave after signing up. He estimated that 50% to 75% of free-trial viewers bail, while 2% to 3% of paying subscribers leave each month.

But while that adds up to a yearly churn rate of 25% and up, that's not necessarily bad. "I think there will be a significant number of 'revolving door' users who come and go repeatedly, either within one service or across a couple of services," he wrote.

Channel availability can affect those decisions heavily. Local stations have been particularly hard to come by, with their availability varying not just network by network but city by city.

Sling, which at first didn't offer local broadcasts at all, has benefited from TV-antenna vendors' promotions, such as a March offer from Terk throwing in a 10-day free trial of Sling with the purchase of a new antenna.

Streaming reliability—something both Sling and DirecTV Now have struggled with—also plays a role. Eisen pointed to slow connections as a clear churn contributor.

Espelien observed that streaming reliability also fluctuates within houses and pointed to one non-obvious reason: wireless routers. "My guess is people are more likely to upgrade their Wi-Fi network than they are to give up on broadband video."

MOBILE AS MARKETING PARTNER

Sling, DirecTV Now and Hulu have particularly emphasized mobile viewing, which is to be expected given their younger demographic. Sony's Kim said "more than half" of Vue subscribers are ages 18 to 34, a demographic that Nielsen figures show spend less and less time watching traditional TV.

"Consumers, especially the older generation, they're used to one provider being their entertainment solution," said Sling's Eisen. "That's not how the younger generation sees it."

Eisen said many Sling subscribers use the service to supplement a standard cable or satellite subscription with out-of-home viewing. That's exactly what cable's "TV Everywhere" initiative aims to allow, he said, but the login procedures required to authenticate an MPVD account for device viewing "made it too complicated and consumer-unfriendly."

But over the last year, wireless carriers have also become some of the leading generators of new customers for OTT services. AT&T discounting DirecTV Now for its wireless subscribers should surprise nobody, but Sprint, T-Mobile, and Verizon have all offered free or discounted access to OTT services as part of their new-customer incentives. ●

THE NEXT GENERATION OF VIDEO: MOVING TO IP

With the emergence of virtual MVPD services, such as DISH Network's Sling TV and AT&T's DirecTV Now, consumers now, more than ever, have more choices in the way they consume video content. But the notion of cord-cutting may be overblown, as studies have found that Americans are "holding on to their TV packages…because TV is often bundled with an Internet subscription service."

V-MVPD providers can't compete with traditional pay-TV providers in providing a stable, valuable and necessary broadband pipe into the home. Therefore, the value proposition of a service like Sling TV is unsubstantiated, as viewers would have to pay Internet plus usage fees for those products.

With an established base of installed subscribers, cable operators have the competitive advantage. By cost-effectively migrating to IP, operators are not only able to offer a full line-up of video programming, but can also deliver more applications, aggregate OTT content from multiple sources and deliver a unified viewing experience. With IP, operators have more opportunities to capitalize on revenue margins and growth. An IP hybrid set-top box enables operators to provide their customers a superior viewing experience, coupled with the operator's bundled high-speed bandwidth offering.

Forward-thinking cable operators that transition to IP can also deliver Internet of Things (IoT) features like security and surveillance in the home, as well as connectivity for baby boomers to instantly and proactively communicate with healthcare providers.

The future is bright for cable operators in the new world of IP distribution, in a way that V-MVPD and OTT challengers have no capability. ●

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RE-ARCHITECTING VIDEO SYSTEMS FOR THE NEW WORLD OF CONTENT CONSUMPTION

By Kendra Chamberlain

The biggest challenge facing the pay TV industry today is keeping the pay TV bundle business afloat during an era of personalized, on-demand, and multiscreen video consumption. Doing so requires shifting current video services away from linear, TV-centric distribution networks and towards IP networks that are more nimble to respond to the shifts in video consumption.

"The end-state they [cable companies] would like to get to is a true, full IPTV world, where it's IP linear, IP VoD, IP network DVR," said Michael Hawkey, SVP and general manager of TiVo's discovery business group. TiVo sells set-top boxes and other services both to retail users and cable companies. "That's the panacea that people see."

Easier said than done. That migration requires a significant amount of upfront investment and complex management between departments, vendors and legacy CPE. "The conversation has been going on for years about how to do this," said John Kendall, principal analyst for connected home and smart home for research firm IHS Markit. "It won't be easy."

Initial responses to the rise of OTT services centered on fleshing out pay TV's TV Everywhere (TVE) services—online video platforms that deliver pay TV content to subscribers across devices. But TVE apps were band aids, and now, cablecos large and small are digging into the task of migrating all pay TV distribution systems to IP.

DESIGNING THE CLOUD TV EXPERIENCE

Cablecos face two daunting shifts: one in technology and network architecture, and one in mindset. Moving legacy systems to IP requires a complete overhaul of virtually everything: backend delivery systems, VoD systems, DVR storage, security, customer premise equipment (CPE), and consumer-facing interfaces, navigation and more. But in order to mount a competitive response to the rise of OTT video services, cablecos will need to significantly shift the mindset around the role of the service provider.

Among the largest cablecos in the U.S., Comcast is largely leading the charge in modernizing pay TV. Its X1 platform—first unveiled back in 2012—has become the flagship cloud-based video product for pay TV, with features like voice command, cloud DVR, metadata and bonus content around programming, related web videos, personalization features and more. Nearly five years later, and the X1 platform is now available in roughly half of Comcast's 23 million-strong subscriber footprint.

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Comcast really flexed its innovation muscles with the IP-driven TV experience it created specifically for the 2016 Rio Olympics. Comcast CEO Brian Roberts called the experience the future of television, and touted the X1 for delivering "the largest, most technologically advanced and successful media event ever" in his fourth quarter 2016 letter to shareholders.

The other Tier-1 cable operators are moving in this general direction, although no one else has tackled the migration as aggressively as Comcast has.

Charter unveiled its cloud-based Spectrum video guide in 2013, with the help of set-top box (STB) software firm ActiveVideo. ActiveVideo's software uses HTML5 to deliver a consistent interface across legacy QAM boxes and newer IP-enabled STBs. In 2015, Charter unveiled its "WorldBox," a hybrid QAM/IP STB developed with Arris. Both the Spectrum guide and the WorldBox have hit some roadblocks in terms of rollout and have fallen behind schedule.

In the interim, Charter has acquired Time Warner Cable and Bright House Networks, which served to expand its subscriber base from 6.8 million subs to over 24 million. Both of those deals closed in 2016, which leaves Charter with the daunting task of unifying services and rolling out its Spectrum guide across its large new footprint.

Cablevision, which was recently acquired by Altice, similarly announced early cloud TV features for its Optimum TV that pointed towards an IP future. In early 2016, it added Hulu to the STBs of all of its 3 million subscribers—using ActiveVideo's software. A few months later, Altice closed its acquisition of Cablevision. As part of its acquisition, Altice promised to introduce "an all-in-one home center, which will allow subscribers to integrate cable video services, over-the-top video, online storage services, home media, and Wi-Fi and Ethernet connected devices into a single hub," with the goal of "easing the ability to enjoy non-cable services on TVs, tablets, and game consoles," according to a March 8 2016 filing at New York State's Public Service Commission.

It's clear the rapid consolidation that has taken place in the industry has distracted cablecos from new product rollouts. "It's distracted them from a lot of things," Kendall said. "We saw 2015 be a big down year in terms of what they're spending on infrastructure and CPE, because there's some element of uncertainty that was inherent in the consolidation that was occurring." He added that 2016 was a recovery year for that spending.

For most of the Tier 2 and Tier 3 cablecos, the migration to IP has only started in earnest in 2016. The first step usually is transitioning legacy VoD systems to IP delivery. "Operators, starting in 2016, started to kick the tires and move their non-linear content into IP," said Brent Smith, president, CTO and co-founder of Evolution Digital, which sells products and services, including STBs, to smaller cable companies. "That's step one."

OTHER SOLUTIONS FOR MIGRATING LEGACY SYSTEMS

A few years ago, the sheer complexity of migrating pay TV to IP was a stumbling block for cablecos, though today end-to-end vendor solutions are gaining ground in the cable space. Still, experts and executives agree the migration to IP will be incremental. There are a few reasons for this: first, transitioning to a full IP content delivery network is expensive. "It's financially a huge stretch for these folks," Smith said.

And just how expensive? "That's the question," Kendall said.

Second, there's no simple way to transition a subscriber footprint when the majority of those subs are still using legacy CPE. "They can't cut and go. They can't totally turn off their QAM network and jump to a full IP network," Hawkey said. "So they have to have a series of products that help them go from one product to another."

Operators such as Cox Communications, Shaw and Rogers in Canada are licensing Comcast's X1 platform for their own pay TV services. After inking a licensing deal for the X1 platform in 2015, Cox was able to roll out the service to the majority of its 4 million subscribers by the end of 2016.

Smaller operators are also looking to hybrid solutions that can support both IP channels and QAM channels. Unlike the Tier-1 operators, smaller cablecos have leaned heavily on vendor partners like TiVo to help them make this transition. "There's a need in the Tier 2 and Tier 3 market space for a partner that comes and helps innovate, that helps bring new technology to them at an affordable level, as opposed to the new complex systems that Comcast and Charter are out there touting," said Hawkey.

By rolling out hybrid boxes, operators can continue to support some QAM channels for subscribers until the last subscriber is switched over. Then the cableco can focus efforts of switching off all the legacy channels and moving those channels to IP-delivery, without disrupting service for anyone. Both TiVo and Evolution Digital are offering hybrid QAM/IP solutions for Tier 2 and Tier 3 cablecos. In fact, those two companies have collaborated on a hybrid solution, called the eBox, which is being deployed by cableco WideOpenWest (WoW) as part of its Swivel TV platform.

A final strategy in the move to IP is to launch a pay TV service app for third-party retail streaming boxes on the market, such as Roku, Amazon Fire TVs, or even Android TVs. The advantage to this strategy is that the pay TV provider can build a nice slick app that has all the bells and whistles in terms of user interface, content discovery and navigation, and personalization—but without needing to install any CPE to access it.

This amounts to what some in the industry call the BYOD strategy—bring your own device.

Roku, Apple and Google all have ambitions in the space. Roku, for example, offers a pay TV partner program, which promises full end-to-end security for streaming pay TV content to the TV set. And some operators, like Comcast, are offering device partnerships with the likes of Roku, Xbox and others for pay TV apps.

But that leads the industry into an interesting line of questioning: What is the future role of the set-top box? Is it as content aggregator? An enabling IP connection to the TV set? Or a walled garden holdout?

DEFINING THE FUTURE OF THE SET-TOP BOX

Set-top boxes are now competing for eyeballs with the army of streaming media players that occupy Input 2 on users' TVs. These retail devices often offer intuitive and personalized interfaces for navigating content options—and have historically put the grid-style channel guide to shame—but more importantly, they are content-source agnostic and consumer friendly.

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– John Kendall, principal analyst for connected home and smart home, IHS Markit

How cablecos choose to use the STB in the new world of IP-based content consumption could have serious ramifications for the future of the industry. "OTT content providers [have been viewed] as the main threat to traditional TV," Kendall said. "I would argue that the reality now is very different. Apple, Google, Roku—these are the real competition to the cablecos. It's not the content partners, it's the actual hardware providers that are offering their solutions via the retail channel."

Only a handful of cablecos have responded to consumer demand and opened up their STBs to OTT apps like Netflix and Hulu. Comcast, once again the leader here, has added Netflix, YouTube and even its own Web content channels into the X1 STB. It also recently announced it would integrate the Sling TV app on its X1 STB.

Those developments indicate cablecos are recognizing the importance of keeping viewers glued to Input 1. Once legacy pay TV systems are migrated to IP networks, it'll be imperative to leverage that new IP architecture to support multiscreen access to content and OTT apps—which represents a major shift in how cablecos perceive their service. ●