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Comcast and the Multiscreen Play

By Jesse Cryderman

"Cable operators are not really cable TV operators anymore. Their focus has really expanded beyond the TV set."

This is what Andrew Rowe, Ericsson, said in the show daily at The Cable Show in June, and it succinctly summarizes the state of pay-TV. As devices and transports have become increasingly nimble, video consumption has left the living room, and video services must follow these trends onto new screens. In addition, a new class of device, the tablet, has emerged to outsell the laptop and deliver a larger-screen experience to the mobile environment. As Ira Gorelick, Senior Manager, Verizon, pointed out at 4GWorld, "A PC is a productivity tool. A tablet is a media consumption tool."

Stefan De Beule, Director, Solutions Management, Alcatel-Lucent, underlined the significance of the tablet. "They are not just being used to watch short (1- or 2-minute) video clips - but are increasingly becoming a second TV screen. Tablets also prove to be a perfect device for content discovery, as it is much more intuitive than doing this on a TV screen."

According to Nielsen's Cross-Platform Report, users in the US spent 20 percent more time watching mobile video and 34 percent more time watching video on the Internet in 2011 compared to 2010. Looking toward the future, Informa forecasts that online video will account for 50 percent of all internet traffic by 2015.

Carriers must take their content to where the eyeballs are, or risk losing customers to competing OTT services. Put bluntly, a video service provider without a multiscreen plan is not prepared to compete in the future.

While many have lamented the fact that carriers' dilatory launch of news services has put them at risk of becoming dumb pipes, Comcast is a good example of multiscreen done right. In this article, we'll take a closer look at Comcast's multiscreen offering and the underlying technology that is required to enable it.

The Road to Xfinity

Matt Strauss, Comcast's senior vice president of interactive media, recently told attendees at the PromaxDBA Conference that customers want to experience their television programming on any and all mobile and terrestrial devices, and it's the operator's job to enable this. "They don't want to hear why certain things are on certain platforms, they just want it," said Mr. Strauss. "We have to get out of our own way. At the end of the day, the consumer's desire to get this content on any device will win out."

This sentiment informs Comcast's Xfinity TV and Xfinity TV app. First, Xfinity TV allows subscribers to watch on-demand movies and television series on their laptops and desktops. Viewing is as simple as logging in and browsing/searching for content, or selecting from your user queue. In addition, the internet portal allows for DVR management. The GUI is well thought out, and I'd vote it better than Netflix. The Comcast On Demand content library is fresher and deeper too.

The Xfinity TV App takes Xfinity a step further and enables subscribers to watch On Demand shows on the iPad, iPhone, and iPod touch over a WiFi connection. The app turns your iDevice into a remote control and a DVR management device as well. Comcast has been consistently refining the Xfinity TV App, revising it four times in the last year, to ensure it delivers the quality of experience that customers expect. Currently, the remote control and DVR programming functions of the app are available on the Android platform, but not video streaming. (Android devices are not standardized for hardware specs the way iOS devices are, so not all Android devices would be capable of streaming high quality video at this point in time.)

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Comcast has partnered with Samsung to offer Xfinity TV service through Samsung IP-enabled TVs. Brian L. Roberts, Comcast CEO, called the partnership an, "important step in Comcast's plan to totally reinvent how consumers watch television wherever and whenever they want."

Recognizing that game consoles are a major portal for video viewing, Tony Werner, Chief Technology Officer at Comcast, recently revealed in an official blog post that Xfinity TV On Demand will soon be available on the Xbox 360. "Through our partnership with Microsoft, we'll offer our customers a unique and innovative way to discover, control and experience thousands of On Demand programs from leading networks and studios, using unique features like Kinect's voice and gesture controls. And, because Xfinity TV's Xbox experience is built on a private IP platform, we can deliver a more personal and integrated next-generation experience."

So Comcast is poised to deliver content through traditional set-top boxes, to desktop and laptop PCs, to mobile phones and tablets, to IP-enabled televisions, and through the Xbox 360. That's quite a few screens—how do they do it?

Enabling Technology

Comcast relies on two solutions to deliver multiscreen programming: Elemental for IP transcoding, and thePlatform for publishing. Charlie Herrin, Senior Vice President of product development and technology for Comcast Interactive Media, explained the two-pronged to Screen Play Mag: "Elemental has a highly reliable transcoding solution that, coupled with thePlatform's cloud-based video management, is helping us deliver compelling services to our subscribers."

First, everything Comcast pushes out has to be encoded for the numerous devices it supports. Elemental CEO Sam Blackman indicates this means 18 different adaptive streaming outputs, with room to scale for future device support. Then it has to be published, and that's where thePlatform steps in. Alcatel-Lucent is a strategic partner with Comcast's delivery solution, thePlatform, so we connected with them to gain some insight into the challenges of enabling a multiscreen offering.

Alcatel-Lucent and thePlatform

Alcatel-Lucent has been at the forefront of multiscreen enablement technology with its Multiscreen Video Platform Solution, so it's no surprise that they partnered with Comcast to drive thePlatform. I asked Stefan De Beule, Director Solutions Management, to explain the challenges of delivering content to multiple devices:

> The current challenge is that you do not only have to deal with these 4 different types of user experiences, but that - within 1 category - you typically require different UI development environments, delivery techniques and security mechanisms. For instance, to reach the main TV screen with a lean-back experience, you have to support different TV brands (Samsung, Philips, Sony…), different add-on-devices (Apple TV, Google TV, Roku…) or game consoles (Sony PS, Nintendo Wii, Microsoft X-box) - all having different requirements for their devices, which makes multi-device content delivery challenging and costly.

Stefan pointed to standards as one way to cut down on associated costs. "For this reason, Alcatel-Lucent tries to drive the adoption of standards (HTML5, HTTP adaptive streaming), and tries to push for homogeneous content protection mechanisms."

Next, I asked Stefan to explain about the underlying delivery technology required to replicate a live TV experience across multiple screens.

Comcast's Xfinity TV will soon be available on the XBOX 360, an industry first.

At Alcatel-Lucent, we believe that two components are absolutely crucial to this:

1. A video management system which provides the central logistics for multiscreen video publishing. It should provide video and metadata management, rights enforcement and business policy modeling between TV providers and content owners, and automated publishing capabilities. It should also provide flexible deployment options that support a fully-hosted cloud-based ASP (application service provider) model, a self-hosted solution within the TV service provider's data centers, or a hybrid deployment that combines aspects of both. It should also come with advanced subscriber management services which maintain a detailed subscriber profile for each customer, supporting authentication, payments, preferences, audience measurement, advertising, and customer service needs.

2. A multiscreen Content Delivery Network (CDN) enabling service providers to build and operate their own dedicated CDN as an alternative to shared third-party CDNs. This improves video quality, offers faster file downloads at significantly reduced costs, and – when integrated with the abovementioned video management system – assures seamless delivery of video.

The Future

With apps, connected TV integration, and an industry-first partnership with a popular game console, Comcast is prepared for the future. "We have the technology framework in place to deliver new features to Comcast customers faster than ever, including on connected TVs, tablets and multiple devices, which is core to our strategy and a key facet of the future of television," said Brian L. Roberts, Comcast CEO.

Jim Benz, CSG International, feels that Comcast and other video operators can evolve even further. "Operators need to evolve out of the current mode of including TV Everywhere or subscription extension as an add-on feature of the bundle and deliver more paid content through that same multi-device delivery model," opined Mr. Benz. "They need to offer premium or micro-subscriptions, pay-per-view on demand, and both rental and purchase options."

There are challenges to this model, however, that require additional infrastructure to support.

“As soon as you start to sell content like that, you also have to care for it and cover all of the bases in terms of billing and payments,” explained Benz. “Those are things that carriers are pretty well equipped to deliver, but they also need capabilities that build on their existing OSS/BSS infrastructure that are specific to the digital video and digital content world. That brings us back to concepts like portable content in the cloud, what we refer to as a digital locker, which can have a post-paid billing aspect to it in regards to purchase, but also has real-time entitlement requirements on the delivery side.”

Regardless, by embracing multiscreen, Comcast is taking a proactive stance in the battle for video. The company is taking its content to the people, wherever and whenever they are viewing it. This is both a competitive advantage and something other video carriers can learn from.

Stefan De Beule sums up the importance of the multiscreen play for operators:

“When comparing telcos/cable operators with OTT players, telcos and cable operators have a major competitive advantage: their existing customer base. If they can satisfy the multiscreen requirements of their existing customers at the right price (by offering rich, high-quality content across various screens), these customers are typically not going to look for alternatives.”