

## Newswatch - November 2011

By Jesse Cryderman

### Welcome to the Post-PC Era

Sandvine just released the [Fall 2011 Global Internet Phenomenon](#) report, and despite a public fracas over increased pricing, Netflix consumption shows no signs of slowing. During peak hours, more than 32% of North American internet traffic is generated by Netflix, up 10% from this spring. This is due in part to the beginning of the “post-PC era,” says Sandvine, characterized by a proliferation of IP-connected devices that, in aggregate, stream more internet data than PCs. Netflix has very effectively taken their content to the subscriber, wherever the eyeballs are, by aggressively rolling out apps that stream content to a multitude of devices.

Beyond highlighting obvious challenges for video service providers looking to square off against the likes of Netflix, the report found that real-time entertainment applications, which make up 60% of peak downstream traffic, are the primary network capacity drivers. At the same time, monthly usage per subscriber is levelling off. Since OTT services like Netflix, Hulu, Amazon Prime, and others use adaptive bitrate streaming (ABR) to manage video quality, when more capacity is added, ABR simply jacks up the fidelity of the video stream for current users.

In other words, if per-subscriber usage trends stay



flat, “investing to deliver increasing bandwidth no longer makes sense; rather, networks might soon be engineered to deliver a constant quality of experience,” wrote Sandvine in the report. “To do so effectively, communications service providers will need to look beyond bytes and into metrics that matter, like video quality of experience.”

Other important findings in the report include:

- The peak internet traffic period on fixed access networks has condensed from two-and-a-half hours to two hours over the past six months.
- “Monthly usage quotas have only a limited impact, if any at all, on peak network demand; however, quotas that differentiate between peak and off-peak might have a larger impact.”

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- Over the top messaging services may soon impact providers' SMS business. The "average revenue per delivered byte is dropping, as SMS bytes, estimated to be generally \$30,000/GB, are being replaced by over-the-top bytes that deliver a revenue on the order of \$10/GB."
- Peer-to-peer multi-casting, or peercasting, in Asia-Pacific has resulted in real-time entertainment becoming the largest upstream data category as well as downstream.

Dave Caputo, CEO, Sandvine, commented on the report: "The fact that more video traffic is going to devices other than a PC should be a wake-up call that counting bytes is no longer sufficient for network planning. Communications Service Providers need to have detailed business intelligence on not only the devices being used but also the quality and length of the videos being watched so they can engineer for a high subscriber quality of experience and not simply adding capacity through continuous capital investment."

#### Third Quarter Earnings Roll In

Just as we were going to press, third quarter results began to come in from several major service providers in the US.

Time Warner Cable (NYSE: TWC) posted nearly \$5 billion in revenue and \$1.08 earnings per share, but fell short of analyst expectations, and lost another 128,000 video subscribers. On the earnings call, TWC CEO Glenn Britt said the company intends to

**Sprint: We plan to have 12 LTE devices in the next year...We clearly think small cells are the future.**

maximize its "opportunity in our two most promising areas, residential broadband and business services, while continuing to deliver both the content and innovation our customers expect in our video product."

Similarly, Cablevision (NYSE: CVC) grew revenues by 8%, but lost 19,000 subscribers and was much harder hit, seeing profit slide a full 65% in the past year. Like other cables providers, CEO Ken Martin said Cablevision saw "increases in both high-speed data customers and voice lines," and those areas would remain top focuses.

Netflix (NASDAQ: NFLX) suffered a loss of 800,000 subscribers (in part due to its ballyhooed pricing structure change and wishy-washy Qwikster debacle), but still managed to beat the street and post a 48.6% yoy revenue gain.

Verizon Communications (NYSE: VZ) added fewer post-paid subscribers than expected, but reported strong gains in FiOS TV and Internet as well as equipment and data revenue. Verizon earnings of \$0.56 per share just barely met projections, but most interesting is how big red fared against big blue: the company added more than twice as many subscribers as AT&T (NYSE: T) in Q3.



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Sprint (NYSE: S) posted its best quarter in five years (and best ARPU growth in 11 years), yet couldn't seem to convince investors to get on board with its LTE network expansion—Sprint Nextel stock slid 11% on the day of the earnings announcement. Conjecture on the floor at 4G World in Chicago was that the solid gains in Q3 2011—1.3 million new subscribers and 3% yoy revenue growth—weren't enough to overshadow the continual bloodletting and \$7 billion the operator needs to fund its network upgrade.

#### Video Operators Going Over the Top

Why beat when you can join them?

That's the underlying theme that's driving video operators to find new ways to deliver their content to their customers and keep them from going to easily accessible OTT services. Since video game consoles are becoming the most popular portal for internet video viewing, smart operators are finding ways to offer OTT-style apps through the Xbox 360. AT&T U-Verse was the first to offer video content through the XBOX 360. This month Microsoft (NASDAQ: MSFT) announced two more providers who would be part of the fall XBOX 360 app update: Verizon and Comcast. Verizon will offer some of its live programming as well as on-demand content, while at launch, Comcast will only provide on-demand content (with plans to include AnyPlay later).

#### 4G World Simmers in Chicago

According to ABI research, operators are spending \$3 billion in 2011 to upgrade and install their LTE

**Verizon: The number of people purchasing and using LTE devices is well above the expectations we originally set.**

networks, and this number will grow by more than 500% over the next five years. Unfortunately Yankee Group's 4G World has not benefited from a similar growth trend. This year the show felt smaller than 2010, and more tuned to suppliers than carriers. Several of the vendors I spoke with questioned the value of participation in future years, and musings as to the future of the show were heard in the press center.

That said, there were plenty of inspired keynotes, prognosticative presentations, engaging sessions, and innovative demos on the show floor. Representatives from Sprint, Verizon, AT&T, Metro PCS, and Cricket (among others) presented on everything from backhaul and core convergence to CEM and pico cells. The exhibition floor was filled almost exclusively with vendors; Amdocs and Oracle were noticeably absent.

If last year's emphasis on WiMAX seemed attenuated, this year it was downright anorexic. In fact, LTE and 4G were so often used synonymously that a layperson might be confused into thinking there is no other 4G technology. Unless you spent some time with Sprint, that is. The company demonstrated its multiple 4G

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WiMAX devices for the press, while revealing the details of its long-term network strategy. In a word: LTE. “Every single cell site Sprint has will have LTE... we plan to have 12 devices with LTE in the next year,” said a Sprint rep at a press breakfast.

This prompted obvious questions of obsolescence; if all of the cool 4G devices in Sprint’s M2M catalog were WiMAX, were they multi-mode? No. So what happens in 2012, when Sprint is all-LTE? The short answer I received is buy a new device. Maybe this has something to do with Sprint’s falling stock price.

One of the hottest topics at the show this year was “small cells;” it was hard to sit through a session or keynote without hearing the phrase mentioned. In order to handle the capacity crunch, operators are increasingly turning to distributed networks of small cells, and this trend will only grow over the next five years. Carriers Sprint and Verizon both emphasized their dedication to small cell rollouts, with Sprint’s Bob Azzi commenting that “we clearly think small cells are the future.” Verizon spoke of using pico cells in high traffic areas as part of a heterogeneous network, or Het Net. Small cells offer many advantages, from lower power to faster and easier deployment, and we’ll be taking a closer look at the technology in the January issue of Pipeline.

Next to small cell, CEM was probably the second-hottest topic. Faced with competition from OTT and flat-lining service revenues, carriers are increasingly looking at quality of experience as a key competitive metric, so the Yankee Group put together a day-long summit dedicated to CEM. “They [service providers] have the customer; they need to make sure they don’t let go...they need to differentiate based on service,” explained Yossi Zohar, Customer Management Marketing Director, Amdocs. As I’ve noted in the past, there are clearly many definitions of CEM, but at its core, it represents a different way of looking at a business process.

It’s no surprise, then, that numerous vendors, from Alcatel-Lucent to Amdocs, had CEM solutions to announce or display, and the acronym was in constant use. Nokia Siemens Networks even took CEM to social media, revealing a Facebook application that enables customers to manage their telecom services and improve engagement within Facebook. Amdocs is incorporating social media into their proactive and predictive customer experience management tools by identifying potential, emerging customer care issues based on keywords and companies and feeding that back into service centers. Laurence Alexander, Tektronix, listed CEM as a top growth area for the company. “Traditionally,

we’ve been in the business of saving operators money,” he said. “Now we’re moving into making them money.”

Pipeline met with a number of other technology solutions and software providers including: Aricent, Netscout, Pegasus, Pitney Bowes Insight (PBI), JDSU, Tekelec, Benu, Broadhop, and Tektronix. Aricent is continuing their innovative approach to OSS/BSS by promoting their M2M solution, including producing a new report exploring how mobile money is being used in Afghanistan. Netscout, PBI, and Tektronix are squarely focused on improving the customer experience through better use of networks, network data, and leveraging subscriber and campaign information. While companies like Amdocs and Pegasus are focusing on improving customer experience by empowering CSRs with more intuitive desktops, access to information, and innovative trouble-shooting tools. JDSU’s solution, recently implemented by Telfonica, offers deep visibility into service delivery platforms, core and access networks, and the home network. Other vendors, like Mavenir, are focused on enabling carriers to deliver new services across multiple devices to facilitate a seamless user experience.

With the proliferation of devices and mushrooming mobile data demands front and center, policy control was also a key topic at 4G World. Tekelec was on hand to discuss their policy server, which has been deemed the industry standard and has been rolled out by Verizon on their LTE network. The Tekelec policy server enables operators to deliver greater personalization, create and manage data plans, and monetize OTT services.

The emphasis on LTE over WiMAX at 4G World was likely a result of the buzz surrounding LTE deployments or planned deployments in North American and European markets. Clearly WiMAX still has a place in other markets around the world, and M2M as well. Pipeline met with WiMAX carrier Velatel, a small upstart comprised of seasoned industry vets that launched a 4G network in Peru—from scratch—in six months. Their most recent news surrounded a 4G deployment in China, and their innovative application of real-time billing to offer personalized services and up-sell incentives. We also met with Alvarion, who offers connectivity solutions that support WiMAX broadband penetration into new verticals, including smartgrid, energy, and mining.