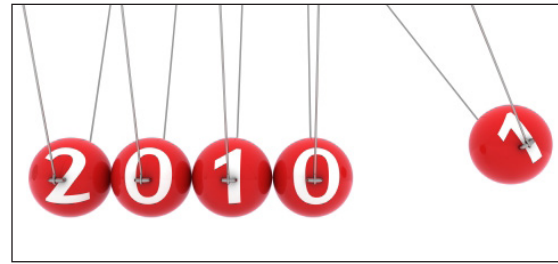# BSS/OSS Trends:
2010 in Review

By Jesse Cryderman

While global economies continued to recover sluggishly in 2010, the BSS/OSS sector definitely did not move at a snail's pace. Sure, some of the buzzwords were the same—convergence, silos, virtualization, greening, clouds, smart grids—but many left the realm of bleeding edge tech-speak to become marketable and monetized solutions. From catalyst demonstrations on trade show floors depicting "smart" user account management with unimaginable granularity to international marketing campaigns for pocket-sized mobile 4G hotspots, it's clear growth in the B/OSS world in 2010 has once again impacted and enabled the way the world

communicates and does business.

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STREAMING VIDEO: THE DATA GOLIATH

Streaming video—the big bang in bandwidth—is growing faster than anyone can keep up, and it shows no signs of slowing down. According to Goldman Sachs, data traffic will grow 6-fold by 2012, with streaming video accounting for the lion's share. The issue extends to the mobile platforms: according to Cisco, mobile data is forecast to grow at 108% annually, with video accounting for 66% of traffic. And soon the worlds will converge, as Effi Goldstein, of IP Gallery, explained. Referencing recent research by Gartner, he said "Mobile devices will overtake PCs as the primary data access points by 2013."

This mushrooming demand overlaps several layers of BSS/OSS tech: The need for optimization solutions

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to deliver Netflix On-Demand, Hulu, and YouTube; protocol management for CSPs; dynamic billing options, for both customer and provider; third-party services that bridge OTT players and operators; improved testing and measurement to better monitor service levels; and mobile computing optimization, for both hardware and software.

As a result, there are multiple entry points for the savvy entrepreneur. Third-party offerings that bridge wildly popular social networking with carrier offerings is one idea. Other new solutions include optimizing streaming video from YouTube/Hulu/Netflix for mobile devices and better billing software to enable greater customization of individual plans.

CLOUD COMPUTING

Cloud computing has made significant strides in 2010, becoming a service/solution that many companies have decided to utilize for its convenience and cost benefits. A recent Gartner study forecasts cloud growth to more than double in the next two years, to $150 billion in 2013. Even we here at Pipeline have moved to the cloud, sharing all of our collaborative monthly issue development work via a cloud solution. But what made 2010 unique?

Certainly part of the growth in cloud computing is directly related to the increasingly distributed

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workforce and number of employees telecommuting. With more and more business being done in virtual offices, it makes sense to use solutions that aren't location-based. In terms of collaboration, IBM's Lotus Live, Salesforce.com, Jive, Google Docs, and Microsoft Office Live all offer real solutions that are being used today.

Cloud-based data backup and security services are also fully live. These storage services are aggressively bundled with everything from new laptop computers (Carbonite), to cell phones (Cricket's MyBackup), to website hosting packages add-ons. The advantages to online backup are simple—ask anyone who has dropped a cell phone in water, or lost a hard drive full of important data. The concern for many enterprises, though, is the level of security employed. In fact, although enterprise cloud spending is expected to

increase substantially in the next five years, the main reason cited by IT purchasers for a slow move to the cloud is concerns over security.

The software-as-a-service (SaaS) model has also seen growth in 2010, and enterprise social networking is starting to take off as well, hoping to mimic the successes seen in the consumer sector. According to Gartner research, SaaS is expected to reach $14 billion by 2013, roughly double its current revenue level.

SELLING CUSTOMER EXPERIENCES VS. PRODUCTS

One of the top trends in the sector this year, although not brand new, is a shift in focus from selling products and technology to selling customer experiences. In years past, it may have been enough to provide a cell phone to a customer who wanted mobile connectivity. As Matt Bross from Huawei said during his keynote at 4GWorld 2010, "For the past 100 years our industry has been doing business with addresses where people live, not people."

One primary driver of this shift comes from a basic question: There are certainly more than three kinds of people—why are there only three packages to choose from at T-Mobile/Comcast/Verizon/Dish? Selling a

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customer experience means offering new levels of customization and account management. Instead of attempting to fit into a pre-packaged category created by a sales/marketing manager, a customer should be able to create a tailored plan that mirrors his/her lifestyle. Systems should be created and put in place that allow the customer to craft his/her own package on the front end while enabling the delivery, billing, and support of the service on the back end. Additionally, revenue opportunities exist in the realm of location-based incentives, such as real-time couponing and advertising.

Selling an experience also means knowing what that service looks like to the customer. It means integrating formerly siloed activities to give customer

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service agents the ability to see the account from the customers' point of view. If a customer calls the support line, there should be real-time account information as well as current and historical testing and measurement systems in place that allow the service operator to see what the customer sees, even if the customer forgot his/her account number or plan information. To a point, this data should be known to the operators without the need for a customer interrogation, and solutions should be similarly customizable.

For the enterprise customer, needs are even more varied, and scalability becomes an additional metric by which plans can be customized and supported. A company might want to select off-peak times for data transfer and backup, monitor customer bandwidth usage to locate new sales opportunities, or expand into new markets. In terms of service, if a data center goes offline, how fast is the response time? Today, increasingly the experience is what sells, not the type of server, device, or speed of the connection.

PLATFORM AGNOSTIC DATA RETRIEVAL/ANALYSIS

Roger Lindquist, CEO of MetroPCS, pronounced "The future is any wireless appliance on any network." If this is true, then platform and vendor agnostic data retrieval, testing, and analysis is crucial, and that's just the sort of solutions that are coming from many vendors in the BSS/OSS market in 2010.

Seeking to converge multiple platforms to create enhanced experiences, the innovation extends to other areas as well, like full lifecycle sales management. NetformX, Subex, and Salesforce.com presented a catalyst at Management World Americas 2010, integrating CRM, solution management and OSS to optimize sales and post sales processes.

4G IMPLEMENTATIONS

The big mobile data boom is about to accelerate with the further deployment of 4G networks worldwide. How big? The Yankee Group forecasts an explosive growth of 4G subscribers in North America from about 2 million to 120 million by 2015. In Asia Pacific

they forecast a growth from 3 million to nearly 200 million by 2015. How will we stay ahead of the tidal wave of demand? This thought gives rise to many questions in terms of available licensed spectrum (will we employ virtual channels? eminent domain?), technology (whether LTE or WiMAX is a superior solution), and spectral efficiency.

Reducing cost per bit will be as much a challenge as creating and supporting pipes with enough bandwidth to support demand. Improvements in spectral efficiency and reductions in interference as well as multi-user detection reduces cost-per bit, as do shared networks (although this is usually only a solution in rural areas). Many solutions in the BSS/OSS marketplace seek to improve spectral efficiency.

In regards to LTE vs. WiMAX, Ron Resnick, president of the WiMAX Forum, claimed

"There is a real need to accelerate what we need to do now...WiMAX delivers now." However, many networks can and will leverage their LTE assets for a 4G iteration, and some feel it is the superior standard. Sprint, who has a significant head start in the 4G market, is betting on LTE, even as it has WiMAX resources on tap. Dan Hesse, CEO, said in March that "LTE will likely be the bigger of the 4G standards." Given these constraints, the best solutions from a B/OSS standpoint will integrate LTE, WiMAX, and WiFi into service management and policy control solutions for operators.

OVER THE TOP PLAYERS

No one could have expected small companies like Hulu or Skype to become the wooly mammoths they are today, least of all the major telcos, who move with the speed of Brachiosaurs. But rapid growth is many times relative to agility, and these over the top (OTT) players moved quickly to become popular providers of services that used to be the exclusive domain of Ma Bell and the cable company.

Currently there are battles being waged, overt and clandestine, between the owners of the pipe and the owners of the hippest services on the planet.

Throttling streaming video, for instance, is not unusual. These skirmishes have raised significant concerns about telcos squelching competition; the latest news concerning the Level 3 lawsuit against Comcast shines a spotlight directly on this situation.

Many feel that there will be no winners and collaboration is the only answer—sharing assets to create win-win scenarios. This is where BSS/OSS solutions can find significant ground to create and sell new offerings.

SMARTGRIDS

Perhaps the most exciting BSS/OSS related news from 2010 is the push to expand BSS/OSS business into other industries to create smart grids. Capitalizing on the lessons learned from the "smartification" of the telco industry, similar implementations could be realized in energy, water, education, and healthcare, for example.

Tony Kalcina, Chief Product Officer, Clarity, believes, "The industry can't survive without reinvention. We need to see OSS/BSS players partnering to become the catalysts in the automation of the rest of the economy." The Chairman of the TM Forum, Keith Willets, expressed similar sentiment at Management World Americas 2010, commenting that smart grids in new industries are the new frontier. It will be exciting to see how the industry responds to this challenge.

LOOKING AHEAD

All in all, 2010 has been a year of measured growth in the BSS/OSS sector, with new technologies finally in the marketplace, and others much closer on the horizon. The coming year will see many more 4G deployments, hopefully mobile payments in the U.S., expansion into new industries, and far greater personalization. Perhaps, as Matt Bross said, these new advances "have the potential to be the most sustainable exit from the global liquidity crisis."