

Prepping for the Gigabit Society: OSS/BSS in the Race to LTE

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The Communications Industry is focused on the race to roll out 4G and LTE, but in the bigger picture this is just the first step into a “gigabit society.” Successive generations of higher capacity wireless broadband services are before us in which customers will expect high-quality, on-demand services delivered on devices that meet pop culture’s image-driven demands. OSS/BSS strategy is increasingly critical in this intense environment because of the many roles it plays in new service delivery, customer experience, costs, partnerships, and revenue generation.

Pain and Pressure

Operators will compete to be the first to deliver each

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successive advance. As soon as they’ve completed one wave, they will have to start working on the next next-generation of networks and services. At the same time, their business models are shifting from being pure communications providers to becoming vertical-specific solution suppliers. The speed of this market, coupled with increasing customer expectations, means the need to monetize technology investments immediately has never been more intense; there has never been less room for inefficiency; and everyone must do more with fewer resources in less time under greater price pressure.

The increasing bandwidth that operators are delivering for customers requires massive capital outlays, and not just for the Radio Access Networks. More capacity in wireless connectivity also means more demands on, and capacity needed in, backhaul and core networks.



With essentially no time to ramp and transition (the time between tech generations is too short), the challenge is to figure out not only how to monetize new capacity, but how to do so profitably with a sustainable economy of scale in operations.

Driving profitability means seizing and keeping market share from one generation to the next, but it also means keeping costs down amidst increasing price competition. Most organizations face continuous budget pressure as a result, which means resources are more constrained and there is little to no room for error, waste, or inefficiency in building new infrastructure and launching new services and partnerships.

A relatively new variable that plays a radical role in this market is the intense public pressure operators face to consistently deliver new and more attractive technology. Wireless is in the spotlight. It’s a huge part of pop culture and lifestyle right now. Public commitments are aggressive and must be met, or there’s a big price to pay in the social media-driven court of public opinion. The downside of that public opinion is harsh and translates into losses in market share and revenue.

In the midst of all this pain and pressure, OSS/BSS can’t hide in the back office anymore. It now has too great an impact on speed, profitability, and public image. OSS/BSS is directly involved in: delivering new technology; governing customer experience; dictating underlying costs; enabling on-ramps for new partners and services; and providing the basis for revenue generation in terms of pricing, billing, and payments.

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In other words, OSS/BSS is central to any operators' overall success, not just today, but for the next several generations of mobile and broadband services.

Acceleration and Explosion

In the present, LTE and 4G are used more as marketing terms than technical terms, but their use is raising expectations among customers for more capacity, functionality, and access, as well as increasingly functional devices to come. With each new advance in network and device technology come explosive responses from subscribers, evident in some clear growth metrics.

By many estimates, we have reached or will reach 5 billion mobile phone users in 2011. The Internet consists of 50 billion connected devices. Facebook has surpassed the 500 million user mark. Twitter has added over 100 million users. The Beatles sold almost 1.5 million songs in a week after going live on iTunes. Streaming video became the largest volume of video traffic on the Internet. And Amazon.com sold 50% more e-books than hardcovers in 2010. So, when we think about the intersection of explosive demand, monetization, network and service performance, customer experience, and public image, OSS/BSS falls squarely in the center.

Going Vertical

Because communications technology has become a

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central part of everything from pop culture lifestyle to SaaS offerings and cloud computing, it is shifting the perception of what the operator's business really is. A CSP may have always thought of itself as a communications provider, but now it needs to be a vertical-specific solution enabler providing both bandwidth and applications with a focus on quality. Different verticals are using, and want to use, mobility and connectivity in different ways. They have increasing data, functionality, and connectivity requirements and are driving more machine-to-machine communications based on, for example, telemetry and logistical data. There is an opportunity to provide vertical-specific solutions that is largely untapped thus far.

To succeed in specific verticals, including the consumer vertical, partnerships are critically important. But the carrier can't be just one more logo in a list of partners, as has often been the case in the past. The communications service provider is the unifying and enabling element for a whole family of partners that leverage communications channels and application functionality — even OSS/BSS functionality — to

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deliver value and to communicate and interact with customers.

In evaluating a brand — or an operator in any vertical or family of partners — customers ask themselves what benefits they can get by being a customer. Operators need to ask themselves who they can effectively partner with in order to cater to the demographic segment, and industry verticals, in which they want to win. Partnerships have to drive retention and reduce churn by providing added value and rewards. If a partnership can drive retention, reduce churn, and make customers happier, then it monetizes the relationship and, in turn, monetizes underlying technology investments.

Complexity and Simplicity

With new generations of networks and services emerging rapidly, there is a distinct opportunity to build the supporting OSS/BSS infrastructure right

the first time, and a huge risk — in terms of customer experience, cost, and profitability — in failing to do so.

The increasing demand on the OSS/BSS infrastructure mirrors the exploding demand for devices, services, and transactions. Consider that an operator with 50 million subscribers, even for one hot service, can expect batch operations involving 1 million transactions per cycle, 50,000 real-time billing transactions per second, 200 order requests per second, and as many as 1,000 requests per order with an end-to-end order execution time of five seconds or less.

Beyond these requirements, the OSS/BSS environment needs to provide convergent solutions for 2G through 4G, and beyond — and from voice to an infinite range of value-added services and solutions — to achieve a true economy of scale. It needs to support adaptable business models, with inevitable variations on the MVNE/MVNO theme, especially in a partnership-intensive environment. And it needs to support a variety of customer billing relationships — prepaid, postpaid, and hybrid billing — as well as payment options from monthly statements and credit/debit cards, to new forms of value transfer, affinity relationships, rewards redemptions, and so forth.

Further, with great bandwidth comes greater responsibility for quality. Take streaming video; it is massively popular — and a lot of it is free. If customers are going to pay for it, operators must deliver it with



extremely high quality. The pressure on service quality is growing because traffic volume is exploding, but also because customer expectations are tough to meet. Services need to be available on-demand, and with the touch of a button, in many instances. A weak service will be skewered in social media circles, which in turn has a real impact on the operator, as several well-publicized examples have shown in recent months.

Under such scrutiny, partnerships must be set up to succeed out of the gate. OSS/BSS needs to make it easy to create partner-centric services that can be delivered with great quality. This in turn calls for greater optimization of network and service resources and for workforce optimization, so new networks and features stand up on time and in line with deadline commitments for new service launches and the campaigns that drive them. There are many interdependent parts in this overall equation, and they all tie back to an OSS/BSS infrastructure that plays roles in efficiency, quality, and orchestration across network, service, and partner boundaries.

In contrast to all of this service complexity is the idea that traditional approaches to billing aren't relevant anymore. Pricing and billing models that involve confusing rating rules based on different categories of usage or time of day are too complex for partners and especially for customers. Billing infrastructure needs to become simpler, focusing on flat-rated and transaction-based services.

We've already reached the point where it doesn't make sense for an operator to create problems for itself by driving more complexity into billing. It's time to make it simpler, save a lot of pain, reduce long-term costs and risks, and focus on monetizing network investments. It simply doesn't make sense to spend hundreds of millions to build ultra-complex billing infrastructures when services are becoming more application-oriented, more discrete, or one-time transaction-based, and when the market expects more flat-rate options for infrastructure services.

Now and Next

This is not the time to fool around with risky approaches to OSS/BSS or to overlook it as a back office cost center. The foundation for LTE, in terms of service delivery, network management, workforce management, and billing needs to be seamless and efficient. It needs to deliver value rapidly, in step with the cost and go-to-market demands that LTE, and subsequent generations, bring with them. OSS/BSS needs to: enable customers' and partners' experiences end to end, and top to bottom; keep things simple for partners and customers; set the stage for high-quality service and positive public perception; and drive consistent market delivery through multiple generations in the emerging gigabit society.