

What are the key trends in the Indian OSS/BSS market?

The telecom sector in India with 846.32 million subscribers (as on March 2011) has been witnessing an unprecedented speed of growth of 45 per cent during the recent years.

The rapid acquisition and end to end management of the burgeoning subscriber base requires the telecom players to have an efficient, cost effective IT systems (BSS, OSS and SDP) which not only supports voice, data and value added services (VAS) but are also capable of integrating new technology solutions with existing and legacy systems.

The total BSS/OSS market in India has been estimated to be around \$ 2.3 billion today and is poised to grow at a CAGR of 6 percent.

The market registered 10-12 percent year-on-year growth for past five years, which is significantly higher than the global CAGR of 6-7 percent. Also, the maturing domestic market is the key thrust area for the IT industry. As per NASSCOM, IT services growth will be 16.8 per cent, driven by localised strategies adopted by operators.

OSS and billing systems (B/OSS) are used by operators to improve operational efficiency, revenue margins and drive customer experience. As network capacity expands and infrastructure converges on IP technologies, the operator's attention is shifting from the operational aspects towards network infrastructure. Over the long term, increasing complexity in business relationships such as RAN sharing, cloud enablement, and other wholesaling such as for M2M will require expanded B/OSS platforms. Some of the key drivers impacting the demand

for B/OSS solutions are:

- Increased focus of operators on customer acquisition leading to outsourcing of support functions.
- Mobile number portability mandating enhancements in the OSS/BSS platform for an operator.
- Need to drive down cost and drive up revenue margins.
- Need to bring in differentiation in offerings with increasing reliance on VAS for generating additional revenues to offset the drop in voice revenues.
- Huge investment by operators in upgrading to new technologies.
- New entrants and 3G technology mandate the development of new solutions
- Need for a converged platform for the rapid development of new services
- Next generation customer care

How important is the OSS/BSS segment for an operator?

With the advent of wireless technologies, gone are the days when telecom was all about fixed line phone connectivity with cables and some backend IT support. The underlying telecom infrastructure is changing and newer dimensions are unraveling in the form of next generation networks.

3G and VAS together support a plethora of applications. 3G would further bring a lot of revenue for operators; while internet-based services over the mobile will be the driving force of businesses in the coming days. This is supported by the fact that many operators in the metros and big cities have already started offering content and services like video on demand, IPTV, games, advertisement, social network, SMS/MMS, video mail, webcast, videoconference, and more. All these services need faster streaming of video and data over networks on a packet based format. Thus, circuit switches are increasingly being replaced with packets. Integration of soft switches with media gateways is underway for enabling desired flexibility. Also, the use of B/OSS, especially with improved capabilities, is in huge demand for remaining competitive as well as meeting customer expectations. Mobile number portability also mandates

enhancements in the B/OSS solutions.

Today, B/OSS plays a critical role in an operator's business, right from the complete life cycle management of customer to revenue management and enhancement. B/OSS solutions have advanced to handle billing and customer acquisition for multiple services on a single platform, making convergence a reality. Operators now have to manage a single system in place of multiple standalone systems. This also gives an advantage in bringing down costs. For operators, flexibility through next generation B/OSS also promises bringing in better revenue streams to mitigate the threat of falling ARPU's, which would further move downward with rural penetration.

Operators are intensely sensitive about infrastructure performance and also want to build and sustain a trusted relationship. Therefore, developing a more customer-focused organization will rely on support from B/OSS systems which have been evolving to keep pace with the growing requirements of operators.

What has been the impact of the recently launched 3G services on OSS/BSS? Going forward how is LTE likely to impact this space?

In the Indian scenario, the operators have been on a rollercoaster ride post winning the 3G licenses to go live in a shorter period of time. And majority of these players today face the challenge on the network capacity front as the 3G services have led to an exponential rise in call and data volumes. This has led to poor quality of service and a bad customer experience.

Operators thus need a solution that gives an insight into the end-to-end performance of 3G services.

The challenge with 3G is that the data sources or touch points that are to be considered for KPIs/KQIs get proliferated for example, active probes (call setup, abnormal call release), transmission (congestion, blocked calls), SGSN/GGSN (PDP context activation failures, drop rates), IP backbone (latency, jitter, throughput), VAS (server and application performance) etc.

Laying out active or passive probes across the network is CAPEX intensive and also not a full proof solution. This calls for a hybrid approach (combination of probes and IT solutions) that helps an operator get insight and an ability to drill down from customer impact to service impact to the root cause. Innovative solution thus, lies in the way modeling of objects or entities is done in the IT solution.

Going forward, LTE will make the legacy charging and billing infrastructures without the support of real-time charging, rating, and balance management, redundant. Operators would need to invest in building converged billing system which handles both voice and data, providing support for prepaid, post-paid, and real-time payments on a single platform.

They would need flexible charging and rating systems that enable them to offer their customers flexible pricing and promotion models. They would also need charging integrated with network resources and context which is possible through the integrated Policy and Subscriber Data Management Solutions. Also, network independent, software and standard-based platform which enables easy evolution to new networks would be required to support any type of service across any type of network.

What are the key issues and challenges in the OSS/BSS segment?

According to us, Revenue Leakages, Convergence and migration to Next Generation Networks are the three daunting issues faced by the Indian operators today:

Revenue Leakages: Operators still face significant challenges in identifying accurate sources of revenue loss resulting due to BSS failures. A challenge which will keep on increasing as operators become market driven with more complex product portfolios which have to be taken to market much more quickly; leaving very little time for testing and integrity of processes and systems.

Hence, there is a huge demand for solutions which minimise the risk of revenue loss and maximise the level of revenue recognised for all transactions through assurance of margins, rate plans, new products, efficient network assets utilisation.

The intelligence also needs to be built around anticipating and preventing revenue loss due to churn, market erosion and fraud. This will mean augmenting technical, finance, investigative, marketing and audit skills across the forensics, correction, controls management, and compliance domains of revenue assurance.

Another area of concern is accurate and timely interconnect settlements between the operators. According to global estimates, telecom operators lose 3-4 per cent interconnect revenue every year. That is a direct hit on the bottom line. Under-billing, wrong CDR reconciliation, inter-partner settlement disputes, inconsistent calculation practices used by various operators and interconnect fraud are some of the reasons for this revenue loss.

Convergence: In the current Indian telecommunication industry's context where plethora of new services, especially data and VAS are getting bundled with the existing ones, thanks to new technologies like 3G and BWA and LTE, soon, we envisage hybrid and convergent billing to be the safe bet for operators. However, this may change or vary depending upon a business strategy as well as the nature of services of a service provider.

It needs to be stressed that convergence is not only about efficiency and cost reduction also about giving subscribers personalised services. Instant gratification for delivery of voice, text, data and value added services, anytime, anywhere is pressurising operators to transform their businesses with integrated back-office systems that enable them to control financial risk,

differentiate their services and increase customer loyalty. The need to launch a wide variety of new services requires more developments and modifications to the existing B/OSS systems in order to handle the increased complexity in subscriber billing leading to problems such as bill shocks, revenue settlements with multiple parties and interconnect billing.

Again, from a system integrator's perspective, implementing a convergent billing solution is not the real challenge. It is the proper exploitation, monetisation and gratification of the benefits of that is of concern today.

Next Generation Network (NGN): The reducing Average Revenue Per User (ARPU), increasing demand of value added services, and convergence are the main drivers for promoting Next Generation Network (NGN). With the deployment of the Next Generation Network, users have one or many access providers providing access in a variety of ways, including cable, DSL, Wi-Fi, Wi-Max, fiber, etc. into the NGN. The NGN concept of "one network, many services" underlines the necessity and explicitly forces a technology-neutral approach with service-agnostic licensing. NGN challenges the traditional methods of handling interconnections, interconnection usage charges, quality of service, numbering and security issues.

Operators in India have already initiated their move towards NGN by implementing IP based core network for optimisation of their product portfolio, and rationalize the costs associated with running the systems. The migration to NGN is likely to be in stages and will require huge investments by operators. NGNs such as 3G and LTE provide a technical foundation for Convergence which directly impacts the B/OSS industry as it transforms the service delivery and manageability concept in ICT sector. These factors are driving the demand for next generation B/OSS systems which can scale up to any limits in order to provide exceptional quality and service experience for the end customers of the 3G and LTE service providers.

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