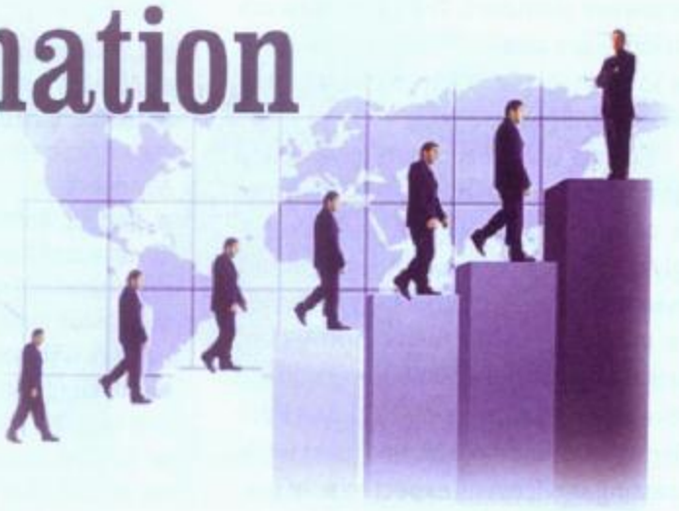
The Transformation

With 3G, competition among operators will go up and so will the pressure to handle multiple technologies. This will reduce cost



In the recent years the OSS/BSS market has been witnessing a phenomenal transformation. It is out and out mature and fiercely competitive with as many as 400 vendors across the globe. The phenomenal transformation ought to be attributed to constantly changing market needs, cut-throat competition, ever-increasing customer demands, operators' urge to reducing opex and capex and better revenue management.

At present, the telecommunications industry is poised at an inflection point, network technologies are being deployed to provide data capacity at speeds to the average consumer that have not before been available. Conditions are ripe for market disruption as pent-up consumer demand for more content has not been served. Technology is undergoing step-change and a better service can and will be offered. With the advent of MNP, customers will not think twice to switch if the desired level of services are not provided by the incumbent service providers.

Market Demands in 2011

The price wars appear to be giving way in favor of attracting high-value customers. As a result, OSS/BSS is now being seen as a critical component to the success of each operator as they fight to stand apart from the competition. Operators not only need to offer new innovative services that are reliable and cost effective, but they must do so quickly.

Market needs are changing due to deceasing ARPUs and increasing cost of network building. Operators demand immense flexibility, open, interoperable solutions, integration of technical and business process management viz, billing, CRM, service activation, provisioning and fault management. Operators are under pressure to lower their margins when sharing revenue with third party service providers. Operators are under pressure to shift investments from commodity communications' enablers into higher value-added solutions, such as ICD (Intelligent Content Delivery), PoC (Push to talk over Cellular) and Presence. The increasing number of external mobile service providers is forcing operators to open interfaces for service management and activation in order to reduce the need for manual integration work.

Component based OSS and BSS solutions improve the management of service planning, deployment and operations in a multi-service, multi-vendor, multi-technology environment. And now as the Indian telecom industry is clearly poised for a leap with all-IP (packetcore), WiMax and LTE shining bright on the horizon, the segment would indeed witness even more competition and augmented market maturity. And service providers will have to provide stable and better OSS/BSS means to combat the complexities in authentication, billing, network hand-off, roaming etc in simplifying such next-gen network operations and thereby driving user experience.

Growth Drivers in 2011

The growth drivers are fundamentally the changing models. We can broadly divide the current growth drivers into 5—firstly, the tele density, a single OSS/BSS can only manage a pre-decided number of end-users. Companies are forced to install a new system or upgrade the existing one as the number of subscribers increases.

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Secondly, user requirement—as the ARPU (Average revenue per user) falls, telecom companies are hard pressed for cost-effective solutions turning them towards OSS/BSS vendors for streamlining the processes and making system usage cheaper. Thirdly, due to augmenting value added services—a consistently growing number of value added services like mobile-TV and video-SMS means that the systems need continuous modification or upgradation to handle such content. Fourthly, there is a fierce competition—seeing the growth prospects, more and more companies, which specialize in related domains, are jumping into the fray, leading to more innovations. Lastly, for the increasing complexity—new technologies such as 3G and WiMax have resulted in increased complexity in operations and billing such as authentication and handoff, network management, dissimilar network roaming that align goals for network operation and user experience.

Tips for CIOs

- The new architecture should not re-invent the wheel. Instead, the systems should utilize mature mainstream IT middleware, such as J2EE, and technologies in order to simplify the infrastructure and provide hardware independency
- Interfaces should be consistent—they should be mappable through parameter translations or transformations and compositions of service calls
- Verify service feasibility with the service configuration system and update service data and SLA information with the SLA management system. It should enable service providers an ability to modify processes
- The fundamentals for choosing an OSS/BSS vendor—vendor should suggest solutions effectively and cost efficiently, customer references, faster RoI and domain expertise
- Interoperability of the OSS/BSS products have to be looked at. Before investing into these products service providers must carefully study the current requirements and assess these products against their requirements.

Current Trends

The OSS/BSS market at present focuses on addressing the needs of changing business models and new technology evolution. The growing challenges cannot be addressed by any single product. Hence architectural trends that support integration and interoperation of OSS/BSS systems, faster introduction of new services, bundling and triple play services will play a pivotal role.

Telcos are heading from the concept of customer acquisition to customer retention. OSS/BSS solutions concentrate at consolidating systems, processes and people across customer-facing and network-facing domains.

In 2011, the telecommunications industry's inflection point centers on certain processes required to enable new revenue models—content monetization and an expanded content value chain, real-time charging and policy, convergence and LTE, the multiply-connected subscriber and the growing importance of machine-to-machine communications. Real-time processing will be mandatory including in nearly every component of an operator's Business Support System. Charging will take on an increasing strategic importance viz how to charge, when to charge, and who to charge, with multi-sided and ad-supported business models. The huge increase in traffic volumes will present challenges to both application scalability and data management from storage to analytics. This is particularly relevant in the Indian market, where the demand for data is exploding given the aggressive rollout of 3G services, coupled with the a continued increase in subscriber numbers.

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The move to real-time systems has emphasized many of the architectural trends of the last year which will continue into 2011. There is a move towards the 'best of suite' rather than 'best of breed' solutions. Delivering high value with lower cost is much sought after. Adoption of service-oriented integration with a blend of managed, flexible, reusable and enterprise-wide business service function is a key requirement.

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Challenges of today's networks and BSS solutions is to cope with complex connectivity, internet of everything or machine-to-machine connections, supporting and monetize services. The solutions aim at capitalizing on real-time intelligent decision automation, smart billing–mediation, rating and charging and transforming customer experience.

Another factor is a whole new breed of communications companies like media, entertainment, and MVNOs have evolved offering new avenues for OSS/BSS vendors. Equipment vendors are competing on these fronts and it is also driving systems integration for O/BSS the need is to seamlessly bring these into playalong with existing legacy infrastructure. Convergence of services and the ability to take advantage of the low cost of operating IP networks has driven the modernization of OSS/BSS.

Much of the growth in the OSS/BSS segment came from operators deploying streams to cater to NGN rollouts. As networks move toward 3G/4G, VoIP, WiMax etc the focus is towards the next generation and other standardization across integration layers. In addition, the new

operators in India would fuel the growth of OSS/BSS in the next 2 years.

Telecom companies are now initiating a move towards common platforms to enhance interoperatability and ease of integration. In this regard, there have been 2 major initiatives, complementing each other—the New Generation OSS (NGOSS) by Telemanagement Forum (TMF) and the OSS through Java (OSS/J) initiative. These 2 initiatives promise to alleviate the cumbersome process of systems integration.

The Indian operators are also looking to get into long term relationships with large vendors who could, either themselves or through integration partners, provide managed services. This not only saves costs for the operators, but also frees them from handling multiple vendor relationships by having a single interface. Managed services make for a big opportunity in India. In many Asian markets operators have tended to focus on price and customer acquisition, but strategies are now changing to focus more on margins and customer retention. Customer retention strategies are varied and complex, but one area to be considered is the simplification of the customer experience, to make it easy-to-use for customers to interact with operators and services.

The shift to a focus on simplifying the customer experience is evidenced by an increasing emphasis on subscriber needs, not only by those parts of the operator's organization that are directly involved in dealing with customers, but also finding its way into other areas. When operators are thinking about replacing legacy billing systems, they want to be sure that they consider how this will impact the customer, and what business processes and interactions the entire OSS/BSS has to support, rather than just concentrating on the billing component. This is a major shift from previous years.

3G, MNP in Sync with OSS/BSS

There has been relatively late adoption of 3G and MNP in India. The launch of 3G has been acknowledged to be a financial failure for many operators in the early part of this century. Promises of customers making space-age video calls, making voice redundant, were greatly exaggerated and advertising-funded models are only now becoming a reality with the advent of the smartphone and associated app stores.

With introduction of 3G and MNP the inter-operator competition is going to shoot up. To monetize 3G, new services will be launched daily, which means the OSS/BSS platform has to be flexible and scalable while being able to offer high quality services (like Mobile Banking, video calling, social media application, content reselling, IPTV etc) to both rural and urban subscribers. The platforms will need to cater to multiple technologies, customer types and services and reduce the per subscriber cost for service providers.

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O/BSS vendors will have to ensure that they provide means of monitoring and ensuring QoS, customer experience across all touch-points that their systems traverse such as call and data handling, billing, IVRs, call centers, PoS systems. Pricing and BSS billing methods may also need to change reflecting this to support not only 3G's premium to normal content consumption but also QoS based charging with customers subscribing to assured QoS across voice and data services. As 3G data consumption becomes more popular and people expect a broadband experience, roaming on 3G with compliant O/BSS will also need to be supported for all services.

Policy management has already been adopted by many operators, it should be integrated with online charging so that policy management does not imply restrictions, but rather enhance revenue opportunities and to remain competitive. Scalability will be a top priority. And again the recognition of the importance of content partners will not only revise the BSS components to include content partner management, but will also mean new business models and structures.

Customer management, using all channels, becomes more critical when the complexity of a 3G device becomes apparent to a consumer. With growing competition, there is a need to not only offer new and innovative services quickly, but to smartly package services to various and more diverse segments of the subscriber base. In addition, consumers will demand more personalization and more control. The challenge is to be sufficiently agile to keep tweaking service offerings quickly based on changing market dynamics.

As for MNP, the opportunity brings with it the challenge of potential churn. If subscribers leave the network, the operator will constantly be in the mode of subscriber acquisition directly impacting margins. To combat this vicious cycle, operators will need to identify the high-value subscribers and offer them a differentiated service and experience to help encourage customer loyalty. The initial reports of MNP usage indicate a pent-up frustration of user experience and all the major operators have already used up their MNP capacity in the first 20 days itself and are gearing up for additional capacity.

MNP necessitates that operators and their O/BSS vendors can support automated provisioning. MNP will also lower the barrier for churn. MNP has lead to significant OSS integration Issues and challenges with dependencies around billing, mediation and provisioning.

OSS/BSS has been witnessing a few hurdles—there is no legacy system in place. Since there was no standard framework or language, system integration becomes challenging in a multi-technology environment. Inter-operator mediation and lack of unified standards for OSS/BSS and the need for large clearing houses needs to be holistically looked at and standardized. Quick provisioning and quick rolling out of services are important.

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