

## Integrated solutions for network growth

by Manoranjan 'Mao' Mohapatra, CEO, Comviva

Demand for mobile broadband is growing rapidly in India. Demand for mobile data service already exceeds supply, so service providers are investing to survive as the market evolves from a voice-centric market to one that relies on mobile broadband. A manage, optimize and monetize (*MOM*) strategy increases the user's quality of experience (*QoE*) for enhanced Internet services, provides the flexibility to quickly launch new service plans, simplifies charging and increases penetration, helps increase ARPU (*average revenue per user*) and speeds ROI.



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The mobile broadband market in India is moving from its embryonic stages of development to a high growth trajectory with a nationwide launch of 4G services expected shortly. Currently, demand for mobile data service is exceeding supply, and service providers are investing to meet in a rapid evolution from a voice-centric market to one that relies on the provision of 3G and mobile broadband services.

Catalysts for this burgeoning growth include a relative lack of fixed PC infrastructure, highly available 3G, and broadband networks, accelerated adoption of smart phones, tablets, laptops (dongles) and the influx of applications, video traffic, P2P

file sharing traffic, entertainment and social networking sites.

Owing to this explosive data traffic, service providers in India are striving to provide high-performance networks to deliver a rewarding user experience and faster access to content, to encourage long-term customer loyalty and support differentiated service offerings. Sustained growth in traffic volume can easily overwhelm network resources, introduce higher latency on the network and negatively impact the overall quality of service delivered to subscribers. The sheer rise in data volume has also been due to the varied mix of traffic transiting through the network, which has altered the current

approach that service providers have taken to manage this growth. Wireless networks must scale even further to support delay-sensitive, real-time multi-play services such as mobile TV and streaming video that are bandwidth intensive applications.

The profitability of service provider's data operations depends on how they respond to the explosive growth in mobile data traffic. Simply augmenting the network infrastructure is a capital-intensive proposition. As competition is fierce, and there are limits to consumer data service charges, operators face a trade-off between the capex-to-revenue ratio and the quality of experience on offer - unless they can

handle traffic more intelligently. Customer experience is a key factor for service providers' success in this domain, along with the ability to personalize the service and overcome the threat they face from the OTT Players.

From our experience, we have observed that service providers have depended on niche vendors offering point products that address individual problems. The need to integrate a variety of solutions from different vendors makes their task extremely complex and difficult to manage. The onus to envision a comprehensive blueprint, then, and orchestrate the implementation of a complete infrastructure to manage their growth, falls on the service provider. Such a complex network requires deeper engagement from the service providers in handling end-to-end service delivery. It also limits the innovation in service offerings, as multiple vendors cannot function in a cohesive manner. This in turn has a direct impact and leads to delay in marketing activities - upon launching new plans, bundles, promotions, and the like - given the high dependency on multiple vendors and a long, complex, integration testing cycle.

Accordingly, today's operators in other markets are looking at single vendor solutions that can seriously address their end-to-end needs to administer data growth challenges that are centred on managing, optimizing and monetizing data traffic. Operators are now looking at an integrated, consistent, unified, robust solution for data pipe management that delivers a hassle free and smooth experience to subscribers using a variety of network technologies (2.5G, 3G, WiMAX, etc.). Since acknowledging that data pipes will need to be controlled and shaped, service providers have increasingly begun to understand the need for data plans that are scaled to suit their market demands.

Adopting effective traffic management techniques and suitable data plans will enable service providers to control their data pipe effectively, offer differentiated and personalized services and flexibility to charge these service offerings. The manage, optimize and monetize (MOM) strategy addresses user expectations for an enhanced Internet experience, provides the flexibility to quickly launch new service plans, simplifies charging and increases penetration, thereby having an overall impact on the increased ARPU.

To address this MOM strategy, mobile data platforms offer integrated solutions to overcome the prime concerns of the service providers centred on offering a rich Internet experience.

- Service management - granular, real-time control and allocation of bandwidth resources by defining and enforcing a broad set of policies at subscriber, service, device and protocol levels based on network status to manage and optimize use of existent capacity more effectively; often termed in the industry a PCRF (*policy and charging rules function*) solution

- Service optimization - optimizes diverse traffic streams using tools such as caching, transcoding and adaptation; called in the industry a caching and optimization solution

- Service monetization: supports differentiated, tiered monetization models based on multiple parameters - time of day (peak vs. off-peak) destination, quota consumption and application type to monetize the value delivered to subscribers with a variety of new revenue models. Largely termed in the industry as a PCEF (*policy and charging enforcement function*) solution

With this MOM strategy, more and more service providers are now convinced they need a single integrated solution to address the challenge of managing the mobile data boom. The key is to drive better and consistent user experience through effective and smarter traffic management.

It is imperative that the solution offerings optimize operators' spending on often exorbitant network infrastructure and thereby speed the ROI. An integrated solution that incorporates the MOM strategy would positively result in reducing the operator capex and opex and at the same time offer flexibility to create differentiators in their competitive markets, in a timely manner. Furthermore, given the exponential growth already experienced in mobile data and its expected momentum in the future, the solution offering should be scalable over time, capacity and functional dimensions with minimal disruption to service.

The further expansion of 3G, WiMax, WiFi networks in India will push the mobile broadband market into a new phase of development. This phase will be characterized by an increase in network capacity, the development of local content

and applications (vernacular content), and the increasing adoption of low-cost smartphones and handheld devices such as tablets and laptops.

Service providers must now prepare for the coming surge in data traffic, but there are number of distinct opportunities for them to deliver greater operational efficiency, commercial agility and a better customer experience by choosing the most effective strategy. ●



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