

It is not unusual to find many legacy systems delivering network performance management capabilities in an operator's NOC. Operators need to go through a calculated transformation of their network and OSS without impacting their main revenue generating business, says Mounir Ladki of Mycom

Measuring the heartbeat of the network



Mounir Ladki: We offer a multi-vendor and multi-technology platform that can manage the performance of the entire network

Mycom is playing a key role as a leading provider of next generation convergent OSS service assurance solutions and innovative engineering services. The company provides end-to-end network performance management and is planning to introduce service quality management capabilities.

It is right at the heart of the transformation process currently undertaken by major telecom operators, says Mounir Ladki, general manager of the OSS products business unit at Mycom International.

It is working for some of the world's leading tier-one operators as they transform their networks and implement new technologies such as 3G, 3.5G and NGN, he adds: "Our solutions have been adopted by leading operators, such as Telefónica O2 and SFR in Europe, SKT in Korea, BSNL in India, STC in Saudi

Arabia, and a number of operators in the Americas."

The company has also announced new contracts with a leading-edge WiMax operator in the US — no names yet. The operator has chosen Mycom to deliver implementation, engineering and optimisation services nationwide.

The business transformation process in which Mycom is playing a key role has been driven by changing market conditions.

First, operators are under heavy pressure to increase their profitability in what is a highly competitive and nearly saturated market. "They need to reduce operational and capital expenditures and increase productivity and they need to increase ARPU."

For example, they are aiming at doubling the productivity of their 2G operations team to take on-board the 3G network without increasing headcount; or are looking to reduce their investment in WCDMA infrastructure through optimization of resources allocation.

"It is not impossible to achieve 25-30% capex reduction through intelligent network optimization and capacity reallocation," says Ladki.

But at the same time competition is increasing

throughout the world, and operators are increasingly using network quality as a key selling argument in order to retain their existing customers and win new ones, says Ladki, pointing to Cingular's "Raising the bar" campaign and Verizon's theme of "It's the network".

Meanwhile operators are heavily committed to roll out their 3G networks, and then to upgrade to HSxPA and enhanced EV-DO, and they're evolving towards convergent NGN core networks. "The simplification of core networks through migration to NGN will drive costs down," says Ladki.

The industry is also seeing an increasing competition between incumbents and new market entrants; in this context, the rapid introduction of innovative yet bandwidth hungry applications and services is becoming a vital issue.

Advanced next generation OSS service assurance solutions are key enablers to respond to those market imperatives.

"But over the past years, the existing wireless networks and their OSS have grown rapidly, with a hugely complex mix of off-the-shelf, temporary and bespoke solutions to cope with the growth," says Ladki.

"It is not unusual to find a mix of 10-20 different legacy systems delivering network performance management capabilities in an operator's NOC. This has now become prohibitive in both operational — maintenance — costs and restrictive in flexibility for the multimedia data world of tomorrow. That is why operators need to go through a calculated transformation of their network and OSS without impacting their main revenue generating business."

Mycom is offering its next generation service assurance platform, its systems integration know-how and its telecom engineering expertise to help the operators successfully achieve this transformation exercise.

"We offer a truly multi-vendor and multi-technology platform that can manage the performance of the entire network, from the radio access to the packet and circuit core, transmission and VAS platforms," says Ladki. "The correlation of information from the various domains enables the operator to view and optimize the end-to-end network and service performance on near real-time basis."

He compares one tier-one operator, which had more than 50 different servers supporting the various

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vendor technologies. "The maintenance costs were prohibitive. For us, it can all go on one server. The distribution on multiple servers is only considered for scalability and redundancy purposes."

This allows the operator to achieve "significantly lower TCO", he says.

"Our platform comes ready with a very wide range of embedded technology interfaces, including the latest ones," says Ladki.

Mycom put its first live 3G network performance management solution in place in 2002 and its first live HSDPA performance management solution in place in 2005. "Today, we offer hundreds of off-the-shelf vendor-technology interfaces including GSM/GPRS/EDGE, UMTS, HSxPA, CDMA 1x, IP, ATM and SDH. We also manage a wide range of VAS platforms including MMS, pre-paid/IN, video/audio streaming, and so on."

All this comes with optionally embedded expert technology knowledge in the form of KPIs, KQIs, dashboards and optimisation scenarios ready to use from day one, he adds.

"In addition, the modular architecture allows the introduction of new vendor technologies and new applications and services in a rapid and seamless fashion. The system must enable the integration of a new service or a new network component in a matter of weeks, when it used to take no less than six months to introduce a new voice service on circuit switched networks a few years ago."

The solution also manages the very high complexity and large volumes of data, and applies powerful processing capabilities to automatically transform this mass of data into meaningful information," he says. "An executive of one of our customers calls it the heartbeat of the network."

It is warehoused and then distributed on near real time basis, explains Ladki. "While operators started monitoring the performance of GSM networks with a weekly granularity in the mid 1990s then moving to daily and hourly granularities, they are now monitoring the performance of their 3G networks on near real-time basis — every few minutes," he adds.

Sitting at the heart of the NOC, the solution then distributes the information tailored to the needs of the various functions: from executive management to marketing, customer care, planning, engineering, QoS and field operations.

These different functions have completely different needs, and they look at the information in different timescales, he says.

"A CEO looks at certain global indicators in his monthly board review meetings, while the maintenance and the field operations people can look in real time at the information as they need to react in a few minutes to events in the network," says Ladki.

"They have a limited number of people, yet have to take care of the entire network, and they have to decide how to allocate their resources depending on the impact on the business."

The solution also comes with a range of powerful integrated analysis capabilities that help to achieve dramatically higher operational efficiencies and reach superior network and service performance.

For example the embedded geographical system

enables the operations to focus on events that might impact on corporate customers in business areas, and the decision support system automatically identifies the root cause of service performance degradation and suggests resolution actions in far shorter time-frames.

"The intelligent planning capabilities help operators to analyse the resources utilisation and suggests resources reallocation to avoid over-provisioning of the network," says Ladki. "This applies to all network resources including radio sites, power amplifiers, links, and so on."

In addition to its solution offering, Mycom brings to the table its successful experience in OSS migration and transformation projects. "These projects are usually complex and highly customer dependent. They may include historical data migration from multiple systems, customisations migration and business processes migration."

Now, he is excited about the significant contract with the unnamed US WiMax operator.

"WiMax technology is a major step in the evolution of the industry that will bring new business perspectives and will accelerate the race to new high quality services," he says. "Operators will be forced to operate their networks fast and right to remain competitive."

Mycom has tailored its next generation OSS service assurance solutions to the business requirements of the WiMax model. "These solutions will be a must-have component to enable operators delivering high quality differentiated services over WiMax."

One of the key success factors of WiMax resides in its ability to deliver simultaneously multiple high quality services to the end users combining multimedia, internet and voice. These multiple services will cross several domains through multiple networks implementing hybrid technologies before reaching the end user. Typically a service might be carried over WiMax, DSL, 3G, IP core and IMS.

Effectively managing the quality of such a service requires an advanced OSS service assurance solution that has the scalable architecture and the embedded expertise enabling it to deliver the end-to-end view of the service performance across these various domains.

"In addition, WiMax technologies also introduce specific performance management challenges that Mycom is among the few solutions providers to fully answer." Among these is the highly dynamic nature of the networks and the diversity of deployment scenarios requiring automatic detection, discovery and adaptation capabilities.

Mycom is successfully managing today the performance of some of the most advanced and complex hybrid multi-vendor and multi-technology networks in the world.

"The wealth of experience gained in modelling and managing telecom technologies such as GSM, UMTS, HSDPA, IP, ATM and IMS, coupled with our leading edge product offering and our deep understanding of the WiMax networks ideally positions us to be the partner of choice for the management of WiMax performance and service quality," says Ladki. ■