

# B/OSS

B I L L I N G & O S S W O R L D

## BSS/OSS Vendors Plug Into IMS Forum

Long the realm of big iron and small (routers and switches, signal generators and oscilloscopes, session controllers and traffic simulators), the IMS Forum took the unusual but bold step of inviting the software community to its plugfest party.

By Tim McElligott

IF YOU'RE LOOKING FOR A SIGN OF THE TIMES, this is it. In the new era of the next-generation network — arriving, as we speak, by way of IMS and pre-IMS architectures and some hybrid variations thereof — operations software is no longer an afterthought.

As IMS marches slowly toward general acceptance and real-world implementations of its core technology, the time has come to begin proving the revenue-generating services promised by this new architecture can be delivered — as promised — across multiple networks, through multivendor environments and, most importantly, profitably.

Acknowledging the core network cannot achieve this alone as it has in the past, the infrastructure crowd has integrated billing and operations support system functionality into the IMS Forum's annual plugfest at the University of New Hampshire's Interoperability Lab.

Plugfests are designed to advance interoperability for developers of new network technologies. The UNH defines a plugfest as "group test events that allow participants to collectively test their devices with each other in accordance with a specific test plan. These test plans are comprised of interoperability tests based on functional aspects of a given standard."

Most participants in the plugfests agree that, in practice, plugfests are more about the interpretation of a given standard. Only through interoperability testing can vendors determine whose interpretation or which combinations of interpretations are more conducive to an open, multivendor environment.

The first three IMS events focused on the interoperability of networks and network equipment in small-scale networks.

Plugfest IV was bigger and broader. It was conducted in February at the UNH IOL. Results from the exercise were shared at the VON.x Conference on March 18 by execs from HP, Aricent and more (see photo above). The big payoff for participants and for the industry as a whole was twofold: Participants completed the first successful IMS call between mobile devices and core network elements, such as Proxy Call

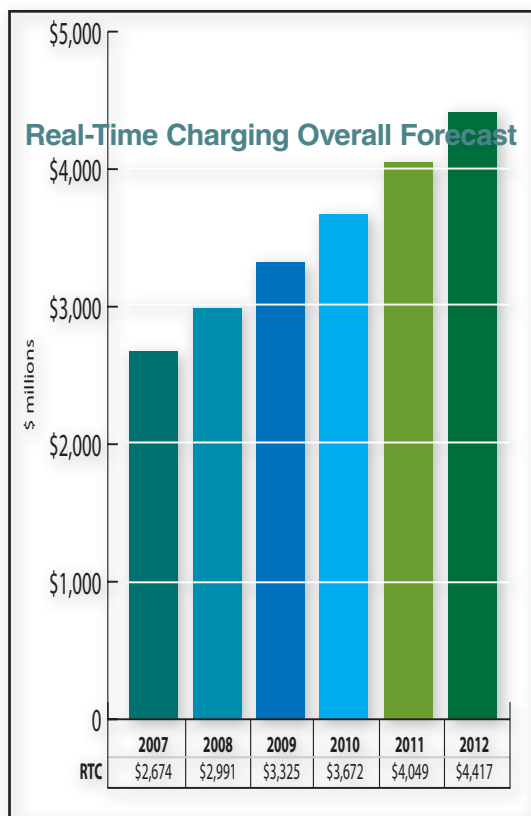


Presenting the results of Plugfest IV at VON.x in March are: Thomas Maufer, director of technical marketing at Mu Security; Prakash Tripathi, segment manager of VoIP and IMS at Aricent; Sridhar Ramachandran, CTO of NextPoint Networks; Nigel Upton, general manager of BSS products in HP's Communications, Media and Entertainment group; Gavin Cato, vice president of strategic planning at Tekelec; and Michael Khalilian, chairman and president of the IMS Forum.

Session Control Function (P-CSCF) servers, the Serving Call Session Control Function (S-CSCF) and Home Subscriber Servers (HSS), all from separate vendors and across two large-scale networks. That's interoperability.

But more important for Billing & OSS World readers, the forum has moved from testing core architectures to IMS-based services. And in the process, it wisely expanded the configuration to include billing interfaces for charging and included in its plan tests for IMS-compliant charging and billing systems in multiple network configurations.

"We have heavy acceptance from the industry on IMS, but to actually do it, you have to be able to bill, manage and secure the networks and services. That is why it is more important than ever that we put a billing component and other OSS into our plan of implementation," said Michael



Source: OSS Observer

Khalilian, chairman and president of the IMS Forum.

HP and Amdocs were the two primary BSS and OSS vendors joining the event this time around. Other vendors included Acision, Alpha Networks, Data Connection, Empirix, Mavenir Systems, Mu Security, NextPoint Networks, Radvision, Sonus Networks, Starent Networks and Tekelec.

Nigel Upton, general manager of BSS products in HP's Communications, Media and Entertainment group, said that if market leaders like Amdocs and HP can help demonstrate IMS compliance with both excellent performance and a low total cost of ownership, it will drive operators to adopt.

"Through Plugfest IV, we were able to show that you could have real-time billing and charging and not have to build another silo," Upton said.

He added that new multimedia and entertainment services are forcing vendors to address real-time charging for multiple services on the same handset device or multiple devices. "Building another silo is a painful way to go," Upton said. "So [operators] are saying they need to put in real-time charging solutions and want to know that they are using standard IMS interfaces like DIAMETER and that it works well."

The advantage of the plugfest, Upton said, is that it provides as much of a real-world environment as one can get where vendors can prove their IMS compliance. Khalilian said it gives BSS and OSS vendors formal results that they can take back to their own forums, such as the TM Forum, and work with confidence in developing their own standards (which are outside of the 3GPP IMS standard.)

As companies have tried to figure out how to deploy Web 2.0 applications through different mashups, Upton said, there was a lot of frustration with people claiming full IMS compliance and full DIAMETER support. "But when

they tried to do a proof of concept, the whole thing fell apart," he said. "So we were strongly encouraged to find a forum that would allow us to, in a neutral setting and as close to real worlds as you could get, demonstrate interoperability that would increase confidence, not lower it."

Lincoln Lavoie, vice chair of the technical working group at the IMS Forum, said the intent for the BSS/OSS component of the event was to examine the interfaces that are used to collect charging data about sessions and events from the network.

So through testing, participants exposed BSS and OSS interfaces to a number of services including triple play, VoIP and fixed mobile convergence from multiple vendors. They also validated test and measurement equipment, SIP, Class 5 features, DIAMETER IMS stacks and instant messaging with presence support.

Including back-office components in the interoperability process hardly could have waited much longer. According to OSS Observer, the forecast for real-time charging systems will grow from \$2.9 billion this year to \$4.4 billion by 2012 (See chart, Page 15). It is unlikely the market can grow at such a pace without the accelerated deployment of IMS and pre-IMS architectures. The reverse also is true: It is unlikely IMS can reach its potential without incorporating interoperable real-time charging.

Real-time charging is not new — obviously, by the \$2.6 billion it generated last year — but one of the reasons it is so important to include it in the plugfest process is that the charging process itself is changing. Mostly, it is scaling.

Sixty-nine percent of real-time charging solutions support IN-based systems, such as prepaid platforms, according to HP. By the time the market reaches that \$4.4 billion mark, 70 percent of it will be in support of IMS-based services. That is important because the complexity of transaction event volume in an IMS architecture will increase by seven to 10 times over the volumes needed to support voice traffic today.

In addition to the increased volume of transactions and messaging, more complexity will be introduced by the need to support the transactions across third-party providers and multiple network types.

Testing this functionality cannot wait until the hardware community gets its entire house in order.

"It was bold to implement billing and OSS this early in the process," said Thomas Maufer, director of technical marketing at Mu Security. "Without billing, we can't have a service."

He said that he and other vendors attended the plugfest with the intention of breaking things. After Plugfest IV, he said, the industry is a lot more production-ready.

Does that mean service providers who haven't already done so can begin the transition to IMS? Yes, said Tekelec's Gavin Cato, vice president of strategic planning. "But the message to service providers is that IMS will be deployed over a period of time. Leveraging open standards allows you to evolve as your business demands," he said.

Some people may be too eager, said Sridhar Ramachandran, CTO of NextPoint Networks. "The standards guys like to think that IMS stands for 'It makes sense,' but IMS is very complicated to implement," he said. "We have already seen a lot of battle scars getting the basics to work and it will take a few more plugfests before we have a basic network that works."

Basic, in this case, is still complex, as Ramachandran refers to a "basic" end-to-end, multivendor, multicarrier network. But the benefit to the industry is that when this basic network works, the ability to charge for the services running over it will be ready in parallel.

"Usually, no vendor includes OSS when they are doing marketing demos of new technology. They don't care about billing for that," said Manuel Vexler, a board member at the IMS Forum. "But including billing and OSS at this point in the plugfest says that from a vendor point-of-view, they are getting to the point where their customers are asking what kind of operational support they can expect."

The bottom line, said Scott Poretsky, IMS Forum technical co-chair and director of carrier network engineering at NextPoint, is that IMS is not about the technology anymore. "It's about the services. We can talk IMS technology all we want, but it boils down to whether the services are available and is IMS the vehicle for delivering them profitably. With OSS/BSS, we have a complete ecosystem that really shows IMS is the premier solution for delivering these services."

Plugfest 5 will take place on June 2-6, at the IMS Lab at UNH-IOL. It will be called NGN Plugfest 5 or "NGN M-Play, OSS/BSS and Billing Applications" and will focus on OSS/BSS and interoperability for VoIP, fixed mobile convergence and femtocell, IPTV, video and multimedia applications for residential and business customers. And it will continue to evaluate unified communications, security, reliability and robustness.