by Richard "Zippy" Grigonis

IMS – The State of the Market

The pace of IMS adoption by the world's carriers has been buffeted by an amazing number of factors: The current world economic situation has slowed some carriers who are worried about the total cost of converting their infrastructure to IMS, even over a period of years; the idea that IMS is still evolving in the light of new ways of delivering services (Web Services, SOA, SaaS, etc.), many of which by themselves are perhaps more adept at delivering non-telephony services than IMS; competition from cheaper alternatives such as UMA, and the fact that IMS was an early victim of the classic "hype cycle".

Chad Hart, Product Manager at Empirix (News - Alert), the well-known vendor of testing platforms, says, "There has been a lot of speculation about the future of IMS, leading some to think IMS will never really take off. We think IMS is following a typical technology 'hype cycle'. Gartner (News - Alert) describes a typical hype cycle as starting with a technology trigger that leads to inflated expectations followed by a 'trough of disillusionment' as the industry tries to commercialize. Eventually they figure it out leading to a 'slope of enlightenment'."

"The IMS buzz started in 2005 and really hit its peak in 2006 when everyone was talking about IMS," says Hart. "Well it seemed in 2007 that few people were buying IMS. But this is changing as the industry starts to figure out how to make money with IMS. In 2008 four things are happening: First, IMS standards are maturing, alleviating ambiguity problems and they're becoming robust and practical to use. 3GPP R7 has been frozen and R8 is in progress. Second, nearly every NEM [Network Equipment Manufacturer] has fully embraced IMS – you'll notice most of them describing their products in terms of IMS, and some, like Sonus and Alcatel-Lucent are describing their products almost exclusively in IMS terms. Third, the industry is proving IMS works. We've participated in the fourth IMS Forum (News - Alert) industry Plugfest, demonstrating multi-vendor IMS interoperability and new services on the IMS architecture. We'll also participate in MSF GMI 2008 – another major industry event demonstrating multi-network interoperability among dozens of major vendors and several Tier 1 Service providers, including Verizon (News - Alert) and BT. Fourth, service providers are buying IMS: In addition to the dozens of smaller-scale deployments – some vendors would claim upwards of a 100 – several Tier 1 service providers will complete their evaluations and will announce major IMS contracts."

The Magic Box

Apptrigger originated the idea of the Application Session Controller, a purpose-built device combining media, signaling, call control, and a family of APIs for multi-network, converged application deployments.

Patrick Fitzgerald (News - Alert), Apptrigger's Senior Vice President, Sales and Marketing, North America and EMEA, says, "I just got back from a big wireless show in Barcelona, and one thing you noticed on the trade show floor was the lack of discussion around IMS. But there is definitely an undercurrent of both IP and operational savings. The other big thematic concept there concerned how to drive new, better and faster applications. You can look at it in two different ways: From a purely architectural IMS standpoint, the market right now is in a wait-and-see or backlash mode relative to a pure IMS architecture. Or, you can broaden the view and ask, 'What is IMS about?' And IMS is about getting the applications out of the switching fabric and being able to create innovative applications and reduce the overall transport and network infrastructure costs being built using IP, and creating a best-of-breed buying environment for the service provider. That spirit of IMS is very much alive and well and service providers are investing in the overall concept. Of course, it won't get implemented in a strict 3GPP IMS architecture manner because the reality is that the service providers have a legacy network infrastructure and they can't throw that away."

"We at Apptrigger have spearheaded a market message built around the ability to help subscribers and help customers transition legacy IN-based applications into the next-gen networks," says Fitzgerald. "We pioneered the Application Session Controller which sits between the application layer and the control layer and down below in the control layer we are fully aware that there's an IMS network there, a potential next-gen there – if for example you look at a BT (News - Alert) deployment – and there's a traditional wireline and wireless network. We've always said that the challenge that IMS has had is a market message around, first, having to go out and build out a new infrastructure, and throw away those apps and recreate those them for the next-gen network. The challenge with that is that the service providers took years of investment and

optimizing their network to get those legacy applications to work correctly, and there's no real reason to throw them away. But they do need to be able to transition them into IMS and to do that with an Applications Session Controller, a stateful call machine that allows the application to remain whole. The service provider won't have to re-provision or reconfigure the app, so it can easily be connected down into the IMS network."

Taking it Indoors

Aricent's (News - Alert) Vice President of the Wireless and Convergence Business Unit, Ajay Gupta, says, "Our IMS software products and services range from IMS clients, multimedia engines and development environments for handsets to our work with equipment manufacturers to develop, test and integrate IMS products. We have an IMS Convergence Lab used by our partner manufacturers and test tool companies for conformance, performance and end-to-end IMS testing. We also can provide IMS consulting for service providers regarding interoperability, system integration and end-to-end testing from the handset to the network core."

"Several factors have placed a headwind in the IMS market," says Gupta. "It's very clear that people want to deploy IMS in the core. All of the switching elements, one way of the other, are becoming more IMS-compliant. Second, people understand that IMS can be deployed on the wireline networks, but trying to deploy IMS for the wireless networks specifically to provide mobility is not a solution that I think many people are looking at today. People are also asking how they can integrate IMS in an existing network. Volume traffic is necessary for success if the existing large operators actually use IMS as a mainstream network. So we see that they're definitely interested in IMS, but they deploy IMS in certain pieces and they all want to be able to tie into the HSS or Home Subscriber Servers and they are deploying certain core elements such as Call Session Control Function (CSCF). However, there is still no massive movement to IMS. The operators do want new applications to be deployed along with IMS, but they really need a clear migration path."

"There are peripheral technologies that are not driving IMS directly, but are interesting nonetheless and may ultimately affect IMS," says Gupta. "Foremost among these are femtocells, which are in-building base stations that improve the quality of indoor wireless reception for cellular phone users. Rather than placing an IMS client on every handset, you can place an IMS client right into the femtocell and it converts previous signal from the handset to a SIP signal on the femtocell site and that travels directly to the IMS core. It's a very simple, straightforward architecture. However there are challenges, because SIP has been found wanting in terms of being able to support mobility functions. That's why we launched our Femtocell (News - Alert) Deployment Practice that combines customizable off-the-shelf test suites and specialized testing services to enable mobile network operators and equipment manufacturers to do seamless integration and large-scale deployment of femtocell solutions."

IMS Meets Transactional Intelligence

Openet (News - Alert) focuses on network-edge solutions that extract increased business value from network activity. By combining their specialized solution delivery engagements with their FusionWorks event-processing and transaction-management software platform, Openet enables service providers to rapidly introduce new services and cost-effectively manage existing ones.

Marc Price, Senior Telecom Strategist in the CTO Office of Openet, says, "From our perspective, IMS and the particular parts of IMS where we play, such as the IMS charging space and essentially the communication between the IMS core network and the rest of the OSS/BSS environment, generally is what we refer to as an area of 'transactional intelligence'. This 'transactional intelligence' is something that enables operators to monetize diverse networks, rapidly deploy new services for those networks and cost-effectively manage existing services across legacy networks as well as next-gen networks underpinned by IMS. We've been quite busy, since operators are certainly still active in thinking about how they are going to deploy new services that go across networks, including plans for IMS, if not actually realizing an IMS topography, and they're still very much investigating what the benefits will be of IMS."

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"It's very fair to say that the business case for IMS is still somewhat in question," says Price, "and it certainly hasn't been realized yet. The two main areas that were initially the focus of the business case for IMS are, first, cost savings and, second, new applications and thus new revenue opportunities. As for the cost savings, it's probably fair to say that operators haven't found cost justification in deploying IMS infrastructure solely for the purpose of cost savings. This is unsurprising. There are some operators – BT being one of the most prominent – that have undergone a very rigorous approach of eventually replacing their circuit-switched infrastructure with packets. But for the most part, IMS investment is a very expensive proposition, and it would be surprising if operators decided overnight to replace their whole infrastructure with IMS solely for cost savings."

"As for the second proposition, new applications and revenue opportunities," says Price, "that's still underway. The jury is still out. Our view at Openet is that this will continue to be a successful reason for deploying IMS, and we see the steps being taken to achieve this. There are four legs needed for the 'stool' of IMS deployment. For IMS to become a reality, we need the perfect storm of all four of these legs reaching maturity. First are the devices. There's been much development of IMS and SIP-enabled devices. Second is the network itself. Clearly we've seen IMS core network applications becoming available and operators have tested them out and they're deploying pieces of the IMS core. But no operator has yet deployed a full IMS topology. From our perspective even partial deployment is important because we're actually in live IMS environments with IMS charging deployments, talking to parts of the IMS core that are live and which are leveraging the Diameter protocol, which enables a number of real-time applications and a number of goals that we think operators have, such as being able to deploy and monetize new services and manage existing services in new ways. They didn't have the resources to do this prior to the deployment of the parts of the IMS core."

"The third leg is the applications themselves," says Price. "The industry has been slow to adopt IMS-based applications. It's fair to say that the core has been put in place prior to the applications. The fourth leg is the OSS/BSS 'glue' which is what we at Openet do. It's the 'transactional intelligence' I mentioned earlier. The industry name for this is IMS charging or policy pieces; it involves a software-based solution that enables the ability to provide real-time authorization and business decisions, while at the same time insulating the rest of the OSS/BSS system, so that operators don't have to change their whole billing system to put in place an IMS network, devices and applications. That's the business that we're in, and we've been busy lately."

After the Hype Cycle

Oracle's (News - Alert) David Sharpley, Vice President of Product Marketing and Channels, says, "At the 2008 Mobile World Congress, IMS was relatively nonexistent. Very few of the traditional 'vendors' if you will, had a strong focus on IMS. They're hesitant because of the perception that IMS involves a major overhaul and a revolutionary approach, so they're unwilling to go ahead and make such a leap of faith. At Oracle we recognize that IMS adoption isn't a 'big bang', it's a more of an evolution."

"There are three different ways an operator can benefit and profit from IMS-type services," says Sharpley. "First is modularity and an evolutionary approach where you can leverage the value IMS promises, profit from it, get some new services to market quickly that will help drive revenue, and then ultimately migrate as you look to decommission other systems and move to the ubiquitous IP network. Second is that it's got to be like an Internet standard platform. The Internet has grown because it's so open and so readily acceptable. An operator needs to adopt that same approach so it can deliver those services at Internet-like speed. The only way they can achieve that is through an open standards-based SoA [Service-Oriented Architecture] type of application and platform. That's important because once you have the open foundation, you now have an active ecosystem, and that ecosystem needs to include network equipment providers, systems integrators and ISVs. That's where we at Oracle have a strong focus. We have many partners – three separate partners on our STP platform that we announced recently. We think that's a key point. To get that kind of innovation you've got to help promote those types of ISVs. One that comes to mind is NewStep Networks (News - Alert) [www.newstep.com] who have some very creative 'follow-me' type of services based on IP that integrate with the Oracle service delivery platform. So, operators need an open Internet-based architecture that's SoA-based and an active ecosystem to help support it so that they can bring Internet-type speed and services to the infrastructure."

"Third and finally, what underlies our pragmatic approach, is to ensure that all of this is part of an end-to-end integrated suite," says Sharpley. "This is where we at Oracle have significant competitive advantage in that we can tie in our platform into things like real-time charging, activation and so forth via our extensive CRM billing and OSS so that they can start to realize the value of the productized integration that we're unleashing using our application integration architecture. The ecosystem is a key part of everything because it gives us the speed. Traditional hardware vendors are trying to reposition legacy platforms into this part of the marketplace. We at Oracle, however, come at this solely from the IP and software layer."

Whither Thou Goest. . .

With their shrinking voice revenues, the world's carriers and service providers are hoping that data and multimedia applications will increase boost their profit margins. IMS has been the great hope of both network operators and equipment vendors, both large and small, to enable the mass deployment of media rich services and applications. And, despite some technological competition and economic woes, the maturing architecture known as IMS does continue to steadily grow, though not at an explosive, 'disruptive' rate.

Richard Grigonis (News - Alert) is Executive Editor of TMC's IP Communications Group.

Companies Mentioned in this Article:

Apptrigger *www.apptrigger.com*	NewStep Networks *www.newstep.com*
Aricent *www.aricent.com*	Openet *www.openet.com*
Empirix *www.empirix.com*	Oracle *www.oracle.com*