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Why IMS?

by Tim Young

IMS: IP Multimedia Subsystem. It's been a part of the telecommunications lexicon since the 3rd Generation Partnership Project (3GPP) designed it as a wireless technology some time ago. It has obviously progressed from being an exclusively mobile technology to an integral part of the long-term visions of many a CSP. However, where are we on the road to true convergence? How can IMS help us get there? Is IMS the only way to go? Is its necessity a foregone conclusion?

In short, why IMS?

It would be unfair to call IMS a nascent technology. It's been batted around for several years, and there have been serious efforts to mainstream and refine the technology for some time. How far along is it?
Radvision, a company specializing in visual communications, sums it up this way: "We think that the 80/20 rule applies here. We believe IMS has gone 80 percent of the way toward becoming a mainstream implementation, but it is still evolving." A fair appraisal. There's been a great deal of progress made on IMS over the last few years, but there's still a lot of work to be done.

SIP is pretty well mainstreamed at this point and serves as an adequate binder for

IMS capabilities and applications. Other aspects of IMS (Home Subscriber Server, Application servers, NGN interconnections, etc) are at various levels of readiness. However, IMS has impact on the Core and the Edge alike, and still has ground to cover before it is ready to confront all of the challenges it will face.

Linking It All Together

What does IMS promise? "Early critics described IMS as a wonder technology in search of a killer application," said Roger Ward, Office of the CTO, BT Group and President of the MSF. "That killer application turns out to be 'service integration,' and IMS will provide network services the flexibility to move with the market just as nimbly as with the Internet. IPTV is just one example of a new wave service that operators seek to deliver on a variety of underlying infrastructures and we anticipate major media interest in our GMI2008 IPTV-related scenarios that compare IMS and non-IMS based solutions."

Indeed, regardless of whether or not IMS is fully ready to roll, more than a few major service providers have announced commitments to the architecture and its promise. It's not just about what IMS can do now, which is limited. It's about the promise of things to come. "IMS is more than a platform; it is a system which will enable the true convergence of services, using some very interesting blends of network and Internet functions," said Mark Wegleitner, Verizon Senior Vice President of Technology.

The folks at AT&T seem to agree, and have helpful things to say about what IMS is and isn't and what it can and cannot be expected to do. They released a document detailing these attributes and non-attributes, and concede that IMS is, indeed, an architectural framework based on SIP and IP that serves as a multimedia service delivery platform. They characterize it as "very sophisticated with complex capabilities," note that it "standardizes interfaces between applications, network layers and back-office systems," and state that it "delivers on the promise of wireless-wireline convergence." In addition, they assert that IMS is "capable of being deployed with its full capabilities by AT&T" (as a part of its Common Architecture for Real-Time Services (CARTS) initiative).

However, it bears mentioning that they note that IMS is not a service. It is not an application. It is not a "widely deployed, mature platform." It's not "rigidly defined," nor is it "completely standardized." It is not a "complete network architecture." However, their attitude, as indicated by their confidence that AT&T is capable of deploying IMS with its full capabilities, is that these shortcomings do not a crisis make.

That's probably true in any case. The technology can and will mature under heavy use, and probably requires such regular use to reach its full potential. There are, however, those in the market who want to move in the direction of IMS without waiting for the full architecture to bake. NEC, earlier this year, announced its "light IMS" product set and migration path. The approach involves a blade-based server platform combining a SIP server (though one based on IETF standards, as opposed to 3GPP standards) and SDP and OSS/BSS functions. The idea is to derive the essential benefits of IMS without waiting for the technology to fully mature. A software upgrade down the line could enable a move to full IMS capability as the technology becomes more and more ready for prime-time.

The Skeptical View

However, there are those who find the entire IMS value proposition to be a bit of a boondoggle. Martin Geddes, Chief Analyst for STL Partners and noted IMS skeptic, is one of those. His problem with IMS? "It's way too complex and is trying to solve a problem of rationing out access that the users don't have."

Geddes, whose firm is behind the Telco 2.0 initiative, references alternatives to IMS, like the technologies offered by tiny startup Predictable Network Solutions (PNSol). PNSol, and, presumably, other companies like it, offers solutions that allow companies to milk every last bit of value from a broadband connection. It doesn't create new capacity, but it doesn't involve massive CAPEX, either. It basically involves traffic categorization and prioritization, and pricing based on priority and bandwidth required. It fits the model for the future of telecommunications that many have, and does so at relatively low cost to the operator.

As for the merits of IMS that Geddes is willing to concede? "There might be some uses for recycling IMS technologies for new wholesale products like sender party pays data. But it's still a damned complex way of doing it."

Cautious Optimism.

And isn't that one of the main issues with IMS? It's a terribly complex approach. That is a double-edged sword, as it combines huge possibilities with truly daunting barriers to entry. It's somewhat difficult to understand, expensive to implement, and requires the sort of vision and strategy that can often fall by the wayside as we all struggle to deal with day-to-day challenges.

However, just as IMS isn't quite ready, it also probably isn't yet necessary. The current needs of most users are being met with or without IMS. However, IMS can and will enable the needs and wants of future users to be realized, and IMS will

mature as these needs and wants also develop. At this point, especially given the tenuous state of the worldwide economy, allowing a huge project to develop alongside the growth of demand within the market is probably the correct approach to take.

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