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IMS and the Interoperability Factor

By Dan Blacharski

The attraction of the open, standards-based IMS architecture is that both mobile and fixed IP services can be brought together to provide for anytime access and, more importantly, to create an environment where a provider can easily add and customize a wide range of features without the usual extensive development costs and capital expenditures. In short, the promise of IMS will be that providers will be able to find new revenue sources, while reducing operating expenditures and capital expenditures at the same time—and not to mention, reducing customer churn as a result of being able to offer new conveniences and attractive bundles. A reduced time-to-market that will inevitably result from IMS technology and broad interoperability will also translate to a better bottom line for those telecoms that get in the game early.

The MultiService Forum's global multi-vendor interoperability IP Multimedia System trial held in October, hosted by BT, KT, NTT, Verizon Communications, and Vodafone, tested and promoted interoperability between 26 vendors' equipment. The event's purpose was to create a test bed for equipment and services that will be used to build the next-generation platform. The event, held in five laboratories around the world, tested interoperability of IMS-based products from some of the most prominent players in the IMS realm. Although a group of 26 vendors certainly doesn't represent the whole gamut of IMS participants, it's a good cross-section and goes a long way to validate the MSF Release 3 Implementation Agreements, and the concept of universal compatibility that drives the development of IMS in general.

The concept that drives IMS, that telecom applications could use common, reusable components that could be shared between applications, and even between vendors, is the greatest attraction. The potential for saving money on operational costs is staggering. Lucent claims that IMS has the potential to reduce operational costs by 20 to 25 percent; IBM has a more optimistic figure of 38 percent. Lucent also notes that IMS will be able to reduce time-to-market for services by 20 percent or more. Further, Bell Labs has shown that because IMS applications will be able to flourish even with lower adoption rates, which means that it will be possible to offer several new services that would not otherwise be possible for economic reasons.

These sorts of interoperability tests are absolutely essential for all vendors that want to move to an IMS architecture on any level. An IMS migration represents a major overhaul. The end result is simpler operation and greater interoperability, but it's in the getting there that the big money will be spent, and it's in the transition that the inevitable shakeout will occur. While support is nearly universal for the framework, the initial costs involved in such a transition are still substantial, although once implemented, savings in capex and opex would ultimately provide some relief. But how soon those implementation expenses would pay for themselves is anybody's guess. The costs alone will result in a shakeout along the way, as less-monied participants exhaust their resources before the market's ready to accept what they have to offer.

The event provided a look into how an IMS infrastructure would work in the real world. If there was any doubt beforehand, it should have disappeared by now, as successful tests of this magnitude go a long way toward validating the commercial viability of the IMS architecture.

A long road coming

It's most likely that one of the first IMS services to gain widespread deployment and acceptance is mobile instant messaging and other high-value messaging services. At the Global Messaging 2006 conference, 60 percent of respondents said that mobile IM would be the most likely IMS service to take hold first.

The first fixed-mobile convergence offerings are more likely to be delivered with UMA and not IMS, at least for the time being—although there are still some carriers that are planning to use IMS from the very start. KPN of The Netherlands, for example, will replace its public switched telephone network with an IMS platform from Lucent. KPN is the Netherlands' largest service provider.

According to Pyramid Research, it will still take another 24 months before the IMS architecture is completely in place and ready to roll, and incumbent telecoms will start migrating their VoIP offerings to IMS platforms by 2008.Pyramid forecasts $30 billion in FMC and VoIP revenue as a result of IMS, with IMS mobile applications generating another $20 billion by 2010.

The first IMS applications are going to be stand-alone ones, and several carriers have already started down this road. But those stand-alone, individual applications don't deliver the payback that IMS promises. The big selling point of IMS is that because it uses common elements, providers can create and deploy new services. According to Pyramid, "we do not expect to see many blended services in place before 2008. Both operators and vendors agree that the majority of blended IMS applications will require development of new end-user behavior. This means that the initial uptake of the new services will be slow."

According to Infonetics Research, the worldwide service provider next-generation voice and IMS equipment market rose by six percent in 2Q06 to $772.3 million, following a 6 percent decline in 1Q. Revenues from this sector will more than double between 2005 and 2009, moving from $2.5 billion to $5.8 billion.

To become reality, carriers need to re-evaluate their back office OSS systems, and bring in a charging tool that will let service providers track premium services, and transactions that involve third-party content providers. Multivendor environment creates new needs for the OSS.

The drive to cooperative competition

Ever since deregulation, telecom has been one of the most intensely competitive segments in the marketplace. Telcos are, after all, in business to make money, and in business to make more money than the other guy. Traditionally, that doesn't involve a large degree of cooperation. The nature of capitalism in general, is to keep an edge over the other guy, to have something that he doesn't, and yes, sometimes to even put him out of business entirely. Switching from the PSTN to an all-IP infrastructure, something that arguably will take many years, will require a major shift in thinking.

When all's said and done, creating an infrastructure of cooperation isn't really rocket science, and technically, the possibility has been there with us for some time. The greatest challenge lies ahead in changing the corporate culture to one of cooperation between competitors, and in moving forward with changing our old paradigm of the public switched telephone network. The first implementations for the most part, involve IMS running alongside traditional PSTN, although there are a handful of pure IP installations coming out. There's no doubt that the migration to a new, all-IP framework will be gradual, but it's nonetheless inevitable.

Still today, the PSTN remains dominant, but it's only a matter of time before its inevitable decline wreaks havoc on the telecom industry and on incumbent fixed operators. A report from Informa Telecoms & Media forecasts that PSTN voice revenue will decline from $600 billion in 2005, to $500 billion by 2011—while broadband services (such as VoIP) increase dramatically at the same time. This trend will be especially noticeable in Asia, where fixed communications faces more serious and immediate competition.

It's clear that manufacturers and carriers alike will have to forge alliances to survive in the world of IMS. Some suggestions from Current Analysis include not only participating in interoperability events like the MSF event whenever possible, but also for equipment makers "need to leverage the opportunity to establish relationships with participating carriers. At the very least, equipment makers will get a first hand taste of the practices and procurement procedures of several major carriers." And for telecom equipment makers, they "should forge relationships with makers of complementary equipment. Small vendors with standalone solutions should partner with similar suppliers, creating a turnkey solution that they can offer as hybrid that combines the benefit of a single-vendor solution with the benefits of a best of breed approach." And lastly, "all equipment makers building IMS-based equipment need to adopt a mentality of mutual interest with their customers."