

## IMS Update: FMC, SIP Interoperability, ATCA, AIN, and Concilio Networks

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In our [last article](#), we noted that **fixed-mobile convergence (FMC)** is one of the big drivers for IMS. Recall that IMS is designed to deliver ubiquitous IP multimedia telecommunication services to any user, connected through any device, across any access network (fixed wireless/ wire-line or mobile). However, a recent **Yankee Group** Survey indicates that large enterprises are still cautious about the viability of FMC.

The Yankee Group found that the most valuable (and expensive) employees are also the most mobile. Mobile professionals, executives and managers comprise 49% of the mobile workforce. Field force was 31%, while specialty and others were 21%. The implication is that corporations need to adopt FMC to permit their mobile workforces to use the same applications they can access in the office.

Yet enterprises see varying value propositions with FMC and find no silver bullet feature that drives FMC value, according to the Yankee Group. Respondents were asked what were the most important features to entice them to make an FMC investment. Here are the results:

- Integrating employee mobile devices with the corporate telephony system- 48%
- Providing integrated wired and wireless support- 41%
- Flat rate and reduced rate international mobile calling and roaming -34%
- Removing and replacing on-premises PBX and desk phones with mobile handsets-32%
- Flat rate and reduced rate mobile calling on campus/office (in-building) -32%
- Mobile call logging/tracking using the PBX –23%
- Providing a shared office and mobile voice calling plan –23%
- None of the above –12%
- Other –1%

**Our Opinion:** The challenge for service providers is to come up with a viable set of IMS applications that will serve these needs and provide a reasonable return on investment.

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There has been good progress on **Session Initiation Protocol (SIP)**- the core protocol for IMS and the signaling protocol for VoIP. The SIP Forum announced that the recent 20th SIPit interoperability test event confirmed broad multi-vendor SIP interoperability for some of the most pressing issues in voice-over-IP technology, particularly security and enhanced **IP multimedia** communication.

SIPit 20 was held April 16 to 20, 2007, in Antwerp, Belgium, hosted by Alcatel-Lucent. The test sessions were notable for the strong effort put forth by the participants to ensure interoperability among their SIP implementations. Building on the broad compatibility that has been established in SIP products and services, the participants in SIPit 20 broke new ground, particularly for the use of multiple media in SIP services and devices.

SIPit 20 comprised 145 attendees from 19 countries, representing 59 companies. There were 67 teams testing 90 distinct implementations of the SIP protocol. Illustrating the broadening adoption of SIP, this event was fully booked well in advance, and more than half of the participants were first-time attendees, a much higher ratio than at previous SIPits.

Among the issues tested during this SIPit was TLS (transport-layer security). Jay Batson, managing director of the SIP Forum, said, "TLS is an important security technology for IP communication and a priority for the SIP Forum. The number of TLS implementations at SIPit 20 increased significantly from previous SIPits, showing that vendors are taking security threats seriously and doing something about them."

**Our Opinion:** This is very encouraging news for service providers and users interested in multi-vendor IMS interoperability.

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**ATCA\*** has become the industry standard for next-generation, carrier-grade telecom equipment, with the platform flexibility essential to meet the diverse processing requirements in an IMS architecture. In a June 5<sup>th</sup> Light Reading webinar, RadiSys Corp opined that ATCA provides the capabilities and economics required for telecom equipment manufacturers to rapidly develop cost-effective **IMS equipment solutions**. The speakers maintained that ATCA platforms can be configured and optimized for different components in IMS, ranging from the network processing requirements of transport and access equipment, to the compute processing requirements of control elements, application servers, and media servers. The webinar outlined the resulting operational and economic benefits for service providers adopting ATCA platforms for their IMS deployments. *For more information, please contact this author directly.*

\* **Advanced Telecom Computing Architecture**, or AdvancedTCA is a series of industry standard specifications for the next generation of carrier grade communications equipment. As the largest specification effort in PICMG's history and with more than 100 companies participating, AdvancedTCA incorporates the latest trends in high speed interconnect technologies, next generation processors, and improved reliability, manageability and serviceability, resulting in a new blade (board) and chassis (shelf) form factor optimized for communications. AdvancedTCA provides standardized platform architecture for carrier-grade telecommunication applications, with support for carrier-grade features such as NEBS, ETSI, and 99.999% availability.

**Our Opinion:** We think that ATCA is a viable architecture for off the shelf telecom equipment modules. It has the potential to reduce equipment and maintenance costs for service providers

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The **Advanced Intelligent Network (AIN)** is still alive and well. Developed by Bellcore (now Telcordia) over a decade ago, we thought AIN had been usurped by IMS, as many carriers have moved to an all IP core and are starting to offer IP access. Telcordia has just announced publications of two new documents related to this SS7 (and TDM) based switching and control system. The two AIN documents incorporate the most recent industry changes:

GR-1298, Issue 10, AINGR: Switching Systems

GR-1299, Issue 10, AINGR: Switch - Service Control Point (SCP)/Adjunct Interface

Telcordia states, "The *Advanced Intelligent Network (AIN)* offers significant possibilities to network service providers, operators, and suppliers. AIN provides the ability to offer unique and/or customized services to generate revenue. With service logic residing in a central Service Control Point (SCP), and with switching systems having reusable, service-independent capabilities.

- Service providers can deploy new services more rapidly than ever before while meeting individual customer needs
- Suppliers can develop the advanced products that the providers need to offer these services.

*This creates a win/win situation for all key players."*

**Our Opinion:** We wonder if AIN evolution will delay widespread implementation of IMS in carrier networks. Many carriers have not yet transitioned to an all IP infrastructure (core and access sub-networks) and AIN gives them a path to maintain their existing TDM facilities.

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Finally, we'd like to call attention to a relatively new start-up company – **Concilio Networks** – that aims to facilitate the migration to IMS services. Based in Finland and in existence for a bit more than one year, Concilio plans to connect Circuit Switched/ GSM cellular access networks to IMS enabled IP networks. They make gateways, which GSM wireless carriers could use to offer IMS services to their existing cellular handset market. They seem to be well positioned to support wireless carriers having plans to move towards IMS applications. They plan to help them get there in a stepwise approach.

A few features and benefits that Concilio either now has or plans to offer in the future:

- Concilio's use of circuit switched voice eliminates the bandwidth and latency problems that SIP has in the air interface.
- Security is based on existing 2G/3G mechanisms
- From the end user perspective mobility and roaming work just like in existing 2G/3G networks

***For more information on Concilio, please contact this author who will refer you to the principals in the company. We were very impressed with the CEO during our meeting in Santa Clara.***