IMS and AdvancedTCA®: Building A New Foundation for Enhanced Services

"IMS is a strategic anchor point for next generation services and integrated service platforms. Standardization, integration and modularity are key to success."

Source: Yankee Group

A Brave New Network

As service providers around the world continue their migration to a converged network infrastructure, they are increasingly focused on offering a host of new enhanced services in addition to voice and data transport as the means to retain subscribers, attract new customers, and more importantly generate significant new revenue streams. Examples of such enhanced offerings relate to triple play and fixed mobile convergence, and include video and music, network-based gaming, multimedia ring back tones, and Enterprise applications such as presence management and unified messaging.

Uncharted Waters

Indeed, the relentless pricing pressure on standard voice and data services has created a critical scenario for today's service providers: either they introduce new innovative "must-have" services, or face gradual extinction. However, there's no certainty what the acceptance level of such new services will be, and there's no guarantee that what succeeds in one market will succeed in another. The challenge for today's service providers is to employ a dynamic network environment that allows them to develop and deploy promising new services quickly, add resources to successful services on demand, and easily reduce or remove resources for unsuccessful services.

The Promise of IMS

IMS, or IP Multimedia Subsystems, provides the answer to this challenge. Defined by the 3rd Generation Partnership Project, or 3GPP, IMS is an IP and SIP standards-based framework designed to allow the rapid deployment of new IP-based services across wireline, wireless and cable networks at low cost, and with minimal network interruption. The spotlight is on IMS today as providers look to IMS as a primary means to deliver fixed-mobile convergence and to accelerate new rich multimedia service deployments in a highly cost-effective manner.

IMS allows providers to deliver real-time IP-based multimedia communications; integrate real-time communications with non-real-time communications; enable multiple services and applications to interact; and escalate communications sessions easily, by turning an IM session into a voice call with a single click, for example. IMS also delivers significant improvements in mobility management, service quality, service control and standards interfaces for developers of new applications and services.

AdvancedTCA: The Ideal Platform Architecture for IMS

In order to deliver on the promise, the IMS framework requires modular, standards-based network elements designed with the specific considerations of communications networks in mind, including "five-nines" availability and superior performance. AdvancedTCA, for Advanced Telecom Computing Architecture, delivers the reusable, modular platform architecture that can provide the scalability, flexibility, and performance that IMS demands.

Indeed, AdvancedTCA-based solutions incorporating Intel® Architecture-based building blocks, including processors, and compute and packet processing blades, provide an ideal fit for IMS. AdvancedTCA addresses all key technical requirements for IMS network elements, including:

- High availability
- High compute density and SIP performance
- Rich media content and transcoding
- Video encoding and RTP acceleration
- SS7 and other PSTN signaling
- Bladed storage
- Large in-memory database support
- Control and user data separation with an intrinsic flexible GbE fabric interface architecture, and,
- Support for TLS and SSL-based security, and session border control functions.

Providing Key Tools for IMS Success

In addition to its leading-edge architectures in compute and packet processing silicon and industry-leading AdvancedTCA solutions, Intel has a comprehensive portfolio of educational activities, products and initiatives designed to accelerate time to market for IMS-based services. The Intel® Communications Alliance, with nearly 200 telecommunication vendor and solution provider members, works to ensure that products are successfully integrated into comprehensive IMS solutions.

For IMS system developers, the "Interoperability Guide for Modular Communications Platforms" is a design guide for standardizing hardware designs and enabling hardware reuse. Another useful guide is the "IMS Telco Server Proof Of Concept", where the best available products have been integrated, tested and validated to assure that they all work together as a fully functioning IMS.

Intel has also built a worldwide network of IMS solution competency centers in North America, Europe and Asia with the charter to assemble all the pieces of the IMS solution. These labs provide IMS solutions providers the opportunity to utilize a fully functional IMS core that can be used to integrate and validate interoperable solutions.

Delivering on the Promise of IMS

Combined with the proven time-to-market benefits of AdvancedTCA solutions utilizing Intel building blocks, IMS stands ready to deliver the enhanced services that today's and tomorrow's service providers require in order to succeed and prosper.

For more information about how a modular platform architecture based on AdvancedTCA and Intel building blocks can meet IMS requirements, contact your local authorized distributor, or visit us online at www.intel.com/go/ims.