

*By Curt Schwaderer***CompactPCI & AdvancedTCA**

## Industry momentum at SUPERCMM 2004

*SUPERCMM 2004 was held June 20 through 24 at McCormick Place in Chicago, IL. Show attendance and exhibitor numbers were up significantly from previous years and seemed to indicate an upward direction for the communications industry, and technology in general. Substance at the booth was the norm with countless displays demonstrating security, network management, and voice and/or video over IP. I got the distinct impression that everyone learned through the late 1990s and early 2000 that "Talk is cheap." The focus was on the advanced capabilities of today's products that can now be delivered. The atmosphere differed markedly from five years ago when vendors were anxious to talk about the possibilities but apprehensive about when they could be delivered.*

Voice over Internet Protocol (VoIP) was clearly the larger service message at SUPERCMM with most network service providers and network equipment manufacturers demonstrating voice and video over IP capabilities. Viewing the live demonstrations showed that VoIP is reaching critical mass as a viable alternative to traditional voice networks. Problems have been solved, and the equipment is now available for rolling out large-scale VoIP deployments.

On the networking OEM equipment side, AdvancedTCA continues to build momentum with companies like Kontron and RadiSys Corporation announcing Pentium and network processor-based AdvancedTCA boards. More than 15 PICMG companies demonstrated a number of AdvancedTCA-based boards, systems, and software at a pavilion. Continued growth and presence of these companies indicates that AdvancedTCA platforms are vital contenders for future modular compute platforms. I talked with a number of engineers and engineering managers who have AdvancedTCA projects in the design phase. From the technical perspective, AdvancedTCA seemed generally capable to satisfy engineering requirements. However, some of the engineering managers I talked with questioned when the pricing curve would kick in for

AdvancedTCA, making it economically feasible for production.

Intel Corporation had a large presence, demonstrating system, silicon, software, and ecosystem solutions. ADLINK Technologies, Incorporated showed a CompactPCI board based on the Intel IXP2400 network processor. Rounding out their offering, ADLINK announced an AdvancedTCA chassis and Pentium-based single board computer offerings, showing that they can deliver a number of building blocks for communications applications. Teja Technologies demonstrated their Network Processor (NPU) software development tool running on the ADLINK board. Teja's tool facilitates the development of microcode (software that runs on the network processor micro-engines that implements data plane processing) and XScale code for NPU-based applications. The developer can graphically represent the required processing, and then the tool builds this representation into a combination of microcode and XScale code for test and validation.

A new company, IP Fabrics, demonstrated an alternative approach to NPU application development in the Kontron and RadiSys Corporation booths. Their software application product was demonstrated on an Intel IXP2800 network processor-based AdvancedTCA board. IP Fabrics has developed a fully operational application that runs on the micro-engines and control CPU of a network processor with defining a language called the *Packet Processing Language* (PPL). The NPU programmer writes a high level data plane processing program in the PPL language.

Another company to note was Augmentix. This company focuses on adapting standard commercial servers for high-availability, fully managed applications. Their product line is quite diverse and synergistic, starting with a high-availability software suite that implements the Service Availability Forum (SA Forum) Hardware Platform Interface (HPI). The HPI defines how software interacts with hardware boards, chassis, and mechanical components to monitor status and

report on the system's operational aspects. This software works with various server platforms. In addition, Augmentix also provides a plug-in card for a *finished plug-and-go* SA Forum HPI software onboard for system *management on a card*. This type of plug-in card enables the transformation of a generic server platform into a high availability solution economically. With this PCI card, monitoring and control of the server system can be performed independent of the operating system. The card includes a separate instrumentation processor that can analyze and report management information and status over redundant Ethernet interfaces even when the system it is managing has failed. Finally, Augmentix also provides 1U and 2U high availability servers with modified form factors for applications that require high-availability and/or may have special dimensional requirements.

Motorola Computer Group (MCG) also had a large presence at the show. MCG announced blades and systems with software that can be made to fit a number of communications applications. The goal is to provide a generic system/software solution with only a small amount of modification to transform it for a particular application. The complete platform hardware and software solution stacks are still in the early stages of development, so look to *Software Corner* for more specifics as they become available.

All in all, it was a good show and a much needed infusion of optimism for an industry that has been battered for a number of years. Service providers are getting serious about rolling out new services and network equipment. Networking product companies showed a number of systems and technologies key to launching next-generation networks now and company representatives are again designing with an eye on specific deployments. The new companies are emerging with real products and new approaches to solving next-generation network complex packet processing and management.

For information, contact Curt by e-mail at [cschwaderer@opensystems-publishing](mailto:cschwaderer@opensystems-publishing).