ATCA Systems in Advanced VoIP Carrier Applications

by Alan Percy, AudioCodesNow that the Advanced Telecom Computing Architecture (ATCA) is moving from the specification phase into the first customer development projects, a flood of interest is flowing from new VoIP carriers. With the wide range of hardware platforms already available (such as PCI, CompactPCI, and BladeCenter), why are so many carrier application developers interested in ATCA?

The Force Behind New Applications

As new VoIP-based carriers begin to build their customer base, they are learning an important lesson from the wireless carriers:

- Differentiation = Long-term customers

Once the service pricing wars settle down, and a sustainable business model emerges, the VoIP carriers must differentiate themselves with useful applications to avoid losing hard-earned customers to new entrants with big advertising campaigns. Take the example from the wireless space of Push-to-Talk (PTT) from Nextel. Once customers understood the value and speed of PTT, one would literally have to pry the phones from their hands to get them to change carriers.

Unleashing the Applications

To make advanced applications a reality, developers recognize the need for more computing power to handle actual application logic, speech recognition, text-to-speech, and other media processing. And this increased power must be available today!

ATCA platforms offer a larger physical card form factor, improved power and cooling budgets, and access to state-of-the-art processors. ATCA can, for example, support the latest dual-core Intel Xeon or AMD Opteron processors or banks of advanced TI DSP chips for complex media processing, giving developers access to significantly greater computing power in a field replaceable form factor. No longer will the need for telecom form-factors force the use of „yesterday‚s‰ CPUs.

Reliability

Unlike traditional PC-based platforms, ATCA offers an infrastructure that supports core redundancy schemes in telecom applications. With the increased density of the OC3 and OC12 physical network interfaces, a faulty card could take thousands of revenue generating ports out of service. And it can take a long time for a technician to reach the installation, identify the problem, and replace the card. With ATCA and the Fabric interface, redundant physical TDM interfaces or processing resources can switch in to take over for faulty cards immediately.

Many carrier application developers recognize that ATCA‚s redundancy features are an absolute requirement to achieve 99.999% up time.

Starting Now

Today there is no time to wait for the long development cycles of proprietary hardware platforms. Instead, carrier application developers are recognizing the value in using

standards-based platforms such as ATCA. Developers can start immediately and can select best of breed processor blades, media gateways, and media processing resources needed to build their applications.

Staying Afloat

As new carriers move past capturing their initial customer base and start to focus on service differentiation, application development decisionmakers are recognizing that ATCA platforms are sure to play a key role in „staying afloat‰. In the end, only the strong swimmers with solid, tested life jackets such as ATCA will survive.

Alan Percy is Director of Business Development at AudioCodes, a leading provider of Voice over IP Telephony enabling technology and systems components.