RADIOWORLD

The News Source for Radio Managers and Engineers

WWW.RADIOWORLD.COM

WheatNet Smoothes Digital Transition

BY ROB PURDY

SEATTLE, WASHINGTON — For several years, going as far back as 2007, Sandusky Broadcasting in Seattle had been looking to upgrade and modernize our studios using networked digital audio technology.

▶USERREPORT

Originally, we looked at TDM networking technology. However, as we continued to evaluate options and as audio-over-IP-based technology began to enter the marketplace, I saw that AoIP had distinct advantages in our application.

For us, reliability is key. The ability to build a network from small, intelligent building blocks using off-the-shelf wiring and switching components meant we could design a system with essentially no single point of failure.

TECHNOLOGY

After evaluating available networking technologies and finding that Wheatstone's WheatNet-IP fit our needs most closely, we contracted with Pacific Mobile Recorders of Sacramento, California, for a turnkey installation.

This was no simple task. New furniture from Studio Technologies was being installed to accommodate the new consoles and equipment, and all five of our stations needed to remain on the air during the project.

Equipment was ordered in late 2010 and by January 2011 the consoles and routing equipment were on-site and ready for installation.

We decided to equip our five on-air studios with 20-fader, full-featured Wheatstone Evolution-6 consoles; these would give our air talent the versatility to deal with any type of broadcast. Each of these was equipped with a mix engine Blade and two IP-88ad

Blades, for a total of 16 analog and 16 AES digital inputs and outputs local to each console.

For our auxiliary studios, we chose 12-fader Evolution-1 consoles; these compact units contain their own metering and control displays and give us a comprehensive set of features in a small footprint.

In our production rooms, we made an even bolder move: There are no consoles at all.

Instead, we're using Wheatstone's Glass-E virtual consoles, which emulate a full E-series control surface in software. These use the same IP-88e mix engine Blade as the other consoles, and we provided an IP-88a analog Blade also to provide 8-×-8 analog I/O local to the room.

Each of our studios — on-air, auxiliary and production — is equipped with its own Cisco 2960G switch. This topology allows each room to function independently in the event of a network disruption.

INTERFACING

We also chose to use WheatNet-IP driver software on our Broadcast Electronics AudioVAULT machines to eliminate the need for soundcards. We were able to directly interface AudioVAULT control to the WheatNet-IP system via Ethernet as well.

During installation, the flexibility and power of the AoIP routing system became apparent.

After outfitting our technical operations center with the WheatNet-IP Blades needed to handle our on-air chains, Jim Hibbard of Pacific Mobile Recorders designed

routing salvos to allow for fast, easy switching between main and auxiliary studios for each station.

We built the auxiliary studio for each station first. When complete, we used the salvos to switch on-air operations to that auxiliary studio while the on-air studio was rebuilt. We then used another salvo to move operations back to the main studio.

Because we were remodeling existing rooms rather than moving to new facilities, it took some time to plan and carefully implement this phased rebuild. We began work in February 2011, and the system was substantially complete by mid-May.

Transitions like this are never easy on the on-air staff, but this one was smoother than most. Our production people are particularly pleased with the Glass-E virtual mixer interfaces, which allow them more room to work.

Rob Purdy is an engineer for Sandusky Broadcasting in Seattle, Washington.

For information, contact Jay Tyler at Wheatstone in North Carolina at telephone: +1-252-638-7000, or visit www. wheatstone.com.