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Telos Zephyr iPort Plus Links Australian Stations

Codec forms key part of Southern Cross Austereo's new continental program distribution network

USERREPORT

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ADELAIDE, South Australia — Southern Cross Austereo is Australia's largest commercial radio broadcaster, with 78 analog and 35 digital radio stations located throughout the country. SCA recently completed a rollout of a new live audio distribution system called SCAsat.

Australia is similar in physical size to the United States, and reliable distribution of live audio to stations across the country is critical to SCA's business performance. The SCAsat project implemented world-first distribution technologies, and is based around the Telos Zephyr iPort Plus audio codec.

SCA deployed a primary and backup Telos Zephyr iPort codec at each radio station. Each 2RU iPort device contains 16 encoders and decoders, which can send and receive live audio streams in all popular compression formats. The power of the iPort is due to its ability to receive encoded audio streams simultaneously from different network segments, providing seamless redundancy to SCA's radio network.

After considering various alternatives, SCA decided to use satellite technology as one distribution medium, and a telecommunication provider's wide area network as the alternate distribution platform. Live audio is sent from the originating radio station simultaneously across both satellite and WAN to all receiving radio stations.

Steve Adler (left) and Matt Steadman

The Telos iPort audio codec receives these multiple copies of the same audio, and will simply feed the first available IP audio packet to the audio decoder regardless of whether it arrived from the satellite or WAN. This means that if one of those paths became lossy — for example due to satellite "rain fade" — there is no impact on listener audio; the iPort will use the packet received on the other path.

This "hitless" redundancy model is key to the reliability of the SCAsat system, and has not been used for a large radio network anywhere else in the world.

As well as guaranteed delivery of live audio streams across SCA's radio network, the Telos Zephyr iPort Plus multiplexes Axia Livewire GPIO signals as well as three independent UDP data ports into the encoded transport stream. This means commands that start stop sets/commercial breaks or play station IDs and jingles are time-aligned with the source audio. The UDP data ports allow for distribution of any program-related data such as "now playing" information and album art for DAB+ transmission. Because the iPort places this ancillary data into a single transport stream with the audio, they are equally protected by SCAsat's dual-path distribution technology, guaranteeing that they will arrive at all of SCA's radio stations.

As SCA's radio network operates across many time zones, the iPort has an optional feature that allows for each individual audio stream to be delayed locally by a fixed time delay before being fed to the audio decoder. This means that all SCAsat programs are sent across the system once, and delayed at the receive site (if required) to ensure the correct broadcast time.

SCAsat is configured to allow 17 audio channels to be distributed across SCA's radio network. Each receiving site can pick which programs on any SCAsat channel is received and sent for broadcast on the local radio station. The deployment of the Telos Zephyr iPort Plus as the SCAsat codec solution has given SCA's on-air teams much greater flexibility, reliability and improved the audio quality for millions of listeners each day.

For information, contact Clark Novak at the Telos Alliance in Ohio at (216) 241-7225 or visit www.telosalliance.com.