



## The Virtual Person – Part II

Squeeze 20 years worth of work into 800 words? You don't, actually. Instead, you've seen the elements of the Perspective Imaging/Virtual Person system documented over the last five months. Stereo mics, the Deva II 4-track hard disk recorder, and the ability to reliably lock audio to picture are all part of the process. Now there's great news on the postproduction front. The TC Electronic System 6000, an 'edge-of-the-art' multi-channel digital processor, has added a new algorithm to its extensive list of reverb, hall, and dynamics programs. This new software, called Unwrap, is one of the first professional devices to deliver on the promise of consumer extraction processes such as SRS Circle Surround, Lexicon Logic-7, and Meridian TriField. Basically, it allows a sound mixer to turn the output of any stereo microphone or program signal into a believable 5.1 sound field, complete with stable stereo surrounds. This multi-channel stem can then be printed back to disk or tape as the foundation of a complete Dolby Digital/DTS print for DVD or HD release.

In other words, a \$1,000 microphone is now as useful as its more expensive discrete surround sound cousins. For example, you can mount a Sanken CMS-10 stereo shotgun in the shock mount of a Sony CineAlta 24-frame HD camcorder; set the pair on a Tiffen Steadicam, Paddock PRO, or GlideCam camera stabilizer; then hang a Crown SASS-P Mk II directly under the lens.

If the camera is equipped with an HD-CA 901 4-channel adaptor, you'll now have a

dialog dominated front-to-back signal from the Sanken and a side-to-side audio perspective of the same event from the Crown. Extract the two signals through the System 6000, and you'll have more handles than a steamer trunk.

What about those surround microphones at which we looked? While the Neumann, Shoeps, and Holophone systems can be used on a Virtual Person camera rig, their expense, size, and multiplicity of output channels often make them impractical for everyday use. To the rescue comes the latest generation of a design that dates back to those early days of Quad. The original Calrec SoundField Microphone, invented by Michael Gerzon, was a studio design used to capture acoustic spaces for a surround format known as Ambisonics.

It contained four closely matched, high quality condenser capsules in a tetrahedral array. It saw things as three vector signals (X, Y, Z) compared to an omni-directional reference (W). These four channels could be recorded to tape through a proprietary B-format processor. Through convoluted mathematical analysis, you could define any point in space from this information, and actually steer the image during postproduction.

Over twenty years later, the design takes on new significance, as home theater has become a household word. The portable \$5,000 SoundField ST-250 is everything for which a location recordist could ask. It looks, if you will, like a Shure VP88 on steroids — barrel shaped, weighing less than 3 pounds, fitting snugly in a Rycote shock mount. Stick it on a camera hot shoe or soundperson's fishpole, and you have a direct replacement for a mono or stereo shotgun mike. Operating procedures and usability are the same.

However, the four outputs of the battery operated decoder box give you a leg-up on any other recording system. The hot mic level signals are a perfect match to the Zaxcom Deva II inputs. You can literally capture 4 tracks of 48.048k 24-bit digital front-to-back, side-to-side, and up-and-down audio as easily as recording a mono shotgun with a Nagra 4.2.

To make things even better, SoundField was nice enough to release an analog transcoder box this Spring. Once you've captured reality in these four signals, transferred them to a DAW and locked them to picture, you can route the 4 tracks through the new SP 451 Surround Processor, which will turn them into a discrete 5.1 to 7.1 channel stem, with controllable width, depth, and a sense of height.

Mind you, all this sounds fine on paper, but will it work when your client is breathing down your neck and you're losing light? I can now answer that in two words: it works. This February, I had the rare opportunity to call in all my favors from vendors and friends for the last 5 years. I tried almost every combination of microphone and camcorder I could find, and here's the winner: The SoundField sits in the Canon's hot shoe and feeds its battery box, mounted next to the Deva II on a GlideCam V-16 stabilizer sled. To lighten the total package, a Canon GL1 can be substituted with equally good results. In fact, I even mounted the smaller Canon to an inverted pistol grip, slung the Deva II from a PortaBrace shoulder harness, and left the stabilizer behind for interior shots that didn't require a lot of walking. The DV location scenes of a pick-up basketball game, company party, and traffic pass-bys, were bumped to D5 through a Miranda DV Bridge; then loaded and locked in a Fairlight DAW. First pass through the SoundField transcoder and my boss says "That's the best sense of envelopment I've ever heard."

What does all this mean for your next production? We'll look into that over the next couple of issues. See you then. ■