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**PRODUCTS AND PROFILES FOR THE AUDIO PROFESSIONAL**

by Richard K. Thomas

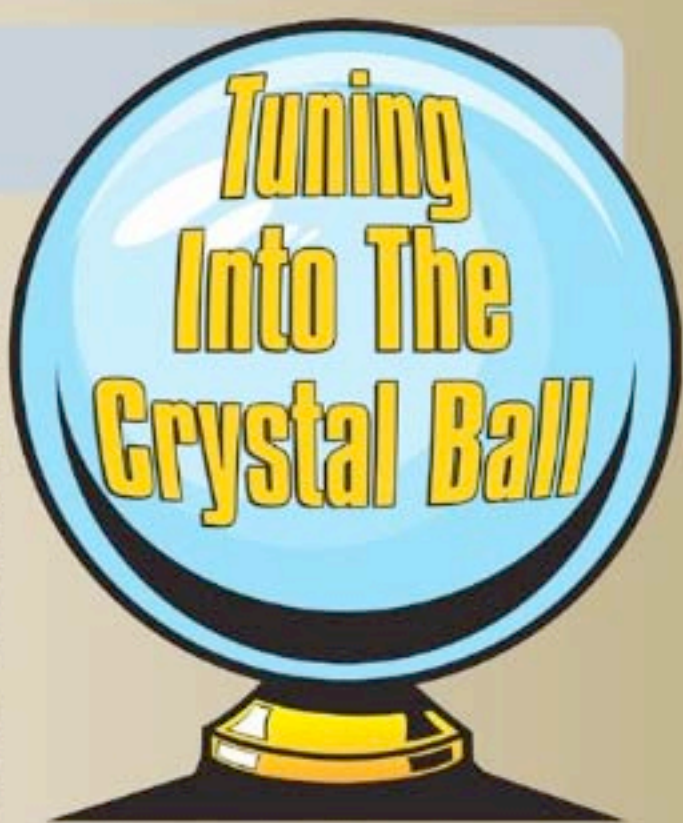
Every once in awhile, I am asked to tune into the "crystal ball" of theatre sound's future, and muse on what might possibly transpire. This is a fun exercise, but isn't it just a nice way of asking: "What's wrong with theatre sound that needs fixin'?" On the one hand, I must say, not very much—at least compared to what sound in the theatre was like when I started in 1973! Today's sound systems are amazingly transparent and routinely deliver lush and evocative sound that stirs my very soul. On the other hand, I can think of a few general areas that might benefit from the never-ending march of human evolution.

The first area that comes to mind is space—I lovingly refer to it as "the final frontier" of theatre sound. Unfortunately, the human ear and brain are not really designed to interpret space like our eyes are. We are constantly trying to trick them into believing that sound comes from places that it really doesn't. Anyone who has had the misfortune of purchasing premium Broadway tickets close to the stage, but off to the side near a speaker, knows only too well the limits of good localization. Signal delays can only go so far before the sheer volume emanating from a loudspeaker overwhelms the

Haas-induced illusion that the sound is actually coming out of the actor's mouth. I expect that the coming years will see even more interesting innovations in localization and environment simulation. We are already seeing exploration of tracking devices in wireless microphones that allow more precise synchronization of signals. Might we see emerging technologies like wave field synthesis develop to create true three-dimensional auditory illusions?

Since the dawn of theatre audio technology, theatres have wrestled with the overwhelming numbers of knobs and buttons on audio gear. Evolution led to an ever-increasing number of errors in sound operation, followed by a strong desire by everyone to automate sound. I have been to live shows, however, where everything—including the actors' voices—was recorded!

If theatre is to survive and to flourish, it must resuscitate—find its way back to being a "live" medium. Broadway musicals trump the straight play in this respect; the actors' voices are mixed live every night. Some mixes are truly sublime, and you marvel at the artistry of the team behind the console; others, not so much. And this is the way it should be. Sound is an art form, and theatre is live. You don't get the



## Tuning Into The Crystal Ball

same performance every night, and every show shouldn't sound the same!

Unfortunately, the situation in legit theatre is a bit more desperate. Producers and sound designers mistakenly believe that performances are so consistently the same that playback can be reduced to single button pushes. The better designers I know develop techniques to perform sound scores, not push buttons. In the future, look for new ways to put control of the score back into the hands of performers, and this includes soundscore performance gear, interactive programming, motion capture, and human interface technologies.

Finally, how can sound resuscitate a theatre that perennially seems to be in great danger of self-destructing due to an incestuous infatuation with its glorious past? Perhaps the future of theatre lies beyond our ability to predict the sort of technological advances necessary to enable it. The past 20 years have seen a tremendous explosion in our understanding of human cognition. We are only beginning to understand that theatre doesn't take place on a stage. Theatre takes place in our

minds; the icons and symbols we trot across the stage are only useful inasmuch as they elicit unique worlds in our minds that intersect with our past experience. Certainly we'll discover new ways to stimulate the theatre in our minds. What might happen down the road when Xbox's Project Natal finds its way into a theatre environment? Will there come a day when we dispense with the ecologically challenging physical sets and opt for live theatre experiences that no longer require the destruction of our environment?

There's one thing I'm certain about: humans are a social species. We will always want to physically gather together in real spaces and celebrate life's marvels. We will always desire theatre. As for what that theatre might hold for our ears, stay tuned. Come join us at the USITT 50th Annual Conference and Stage Expo in Kansas City, March 31-April 3, 2010, as we explore these and many more issues of sound for theatre.

*Richard K. Thomas is a professor at Purdue University, founding head of the USITT Sound Working Group, a Fellow of United States Institute for Theatre Technology Inc., and the recipient of USITT's Paul E. Rubin Founder Award.*

