



## CES Preface

At the 2011 International Consumer Electronics Show (CES) in Las Vegas, Nevada, reportedly over 20,000 new products were introduced by over 2,700 technology companies across global industries! Reportedly, more than 140,000 industry professionals attended. The product offerings were staggering and incomprehensible to grasp and digest during a four-day trade show. Major technology trends emerged from the CES show floor, including the launch of more than 80 tablets, wireless 4G LTE, connected TV technologies, smart appliances, and electric vehicles. The 2011 International CES conference program consisted of 250 sessions featuring 900 speakers. The CES is far too overwhelming for anyone to fully experience and comprehend.

Much of the products on display were simply useless “me-too” China-manufactured knock-offs, which together result in an environmental disaster underway. Virtually lost on our collective conscience is the fact that few products are made from renewal resources or produced with sustainable energy sources. Most products are designed to be disposable rather than long-term utility, instead of repairable, even upgradeable. This is the new face of the consumer electronics industry. Ironically, the very people who spend millions on developing all of these new

devices are the same ones urging you to replace it every year, if not every quarter. Few companies embrace innovation, which adds value over the long term. As I passed through the miles of hallways and exhibits the sense of useless product clutter was apparent everywhere.

This is not to say that there were no companies who strived to add value, address true problems, and serve a need. One of those was Magneplanar, a small loudspeaker company based in White Bear Lake, Minnesota. The company demonstrated at The Home Entertainment Show (T.H.E. Show) at the Flamingo Hotel, concurrent with the CES venues at the Las Vegas Convention Center and other hotels. Jim Winey, the founder, along with his son Mark, who serves as President, and the face of the company Wendell Diller, who has served for years as the company's Sales and Marketing Manager, put on the most realistic demonstration of surround music that I have heard at a trade show in years! I visited Magneplanar's suite the last day of the CES, after having experienced numerous other company product demonstrations. Showcased was the company's new Magneplanar 3.7s, the latest Magneplanar loudspeaker to undergo a major revision after more than a decade on the market. The 3.7s were positioned as the front stereo pair and Magneplanar 1.7s (introduced at last year's CES) as the surrounds,

with a Magneplanar CCR center channel (\$3,000), all powered by Bryston electronics—four SST<sup>2</sup> Amplifiers and the SP 2 Surround Processor—and a Denon universal disc player. At \$5,500 and \$1,995 per pair, respectively, these are without question the best performance value in loudspeakers that I have experienced. American-made throughout, these high-resolution full-range ribbon, planar loudspeakers set a new benchmark for high-fidelity performance in loudspeaker design. No other demonstration at the CES came close to the sonic and spatial realism, and seamless response and time coherence delivered by the Magneplanars! Unlike box loudspeakers, the Magneplanar panels disappear sonically, yet the resulting sound sounds astonishingly lifelike and *real*, with natural-sounding low-frequency extension and power. Uniquely, the center channel signal was derived from the two front stereo channels in the 4.0 configuration. This is an American company that knows how to design loudspeakers and deliver true performance value and long-term utility through innovative engineering and cost-conscious manufacturing executed by American workers. I wish more companies would pattern themselves in the same way and innovate with true cost-conscious performance engineering and long-term utility value. As a result, the industry would be healthier and enthusiasts, who

value true performance, would be far more appreciative.

The dimension of depth once again was the main focus of just about every major electronics company. The major consumer electronics companies continue to bet that 3-D displays and associated electronics will generate tens of billions of dollars in the next couple or three years. Most have plans in place to sell second-generation 3D-capable devices this year and next in a marketing effort to secure a leading share in 3-D deliverability. The marketing strategy carried over from 2010 extends to 2011 to provide a significant impact in determining who's going to be the leader of the new market, which now includes 3-D digital cameras and video cameras.

Stereoscopic imaging is the final frontier to viewing entertainment and all other content in the future. We are at the early stages of the technology, and while at present the technology is beset with problems, as time passes, perfection will be the aim, resulting in a “lifelike” three-dimensional viewing and listening experience. Already, the technology has proven to far surpass the poor picture quality associated with the anaglyph process seen through cardboard green and red glasses. The impact of high-definition 3-D viewing will result in a new era of holosonic® spherical surround™ sound, to provide the complementary three-dimensional sound dimension

necessary to realizing a fully engaging and compelling home theatre experience.

As reported in Issue 153, December, 2010 and continued in this issue, the Technology Conference At Sea™ on the Home Theater Cruise™ (November 13 to 20)

focused on dimensional imagery and sonics, with seminar topics on the ins and outs of optimizing 3-D home entertainment, HDMI v1.4 connectivity, mixing and reproducing aggressive surround sound soundtracks, and guidance on how to address the challenges of the home theatre environment.

Why 3D? Why now? Motion picture companies and content producers are eager to produce more 3-D content. Three-dimensional video is set to become a mainstream motion picture technology. 3net, the 3DTV joint venture between Discovery Communications, Sony Corp., and IMAX is scheduled to launch early this year. This will be the first 24/7 fully programmed, general entertainment 3D television network in the U.S. It has been developed to be a 100 percent native 3-D channel, with the goal of producing everything in stereoscopic 3D, even 3-D commercial spots. 3net will feature what the partners boasted will be the world's largest library of native 3-D television content. The announcement was made during Sony's press event at the CES.

Now is the time for professional production and consumer electronics companies to engage in the process of research and development to perfect three-dimensional imagery exhibited in movie theatres and in home theatres. This is the future of television.

Still, as 3D is still in the early stages, the technology didn't sell well in its first year, and it still seems years away from being a mature product. DisplaySearch found that sales of the required "active shutter" glasses fell behind sales of 3DTVs. The Santa Clara, California, research firm predicted that 2014 3DTV sales will soar to 90 million, but that assumes "the availability of quality material to watch." Compared to DisplaySearch's estimate that more than 40 million "connected TVs" offering access to Internet media will ship worldwide this year, 3DTV's initial introduction has been dismal. Nielsen in September reported that 3DTV may not sell itself. That survey found that the share of people who regarded themselves as "very likely" to buy a 3DTV over the next 12 months fell from 25 to 12 percent after seeing the technology in action. Those who said they were "not at all likely" to buy 3DTV jumped from 13 to 30 percent after firsthand exposure. Nielsen's study found that would-be buyers are bothered about the price of 3DTVs, having to wear special glasses, and not having enough 3-D content to watch. Yet according to research firm iSuppli, by 2012, 27.4 million 3DTVs will ship worldwide, and by 2015 shipments will reach 78.1 million units, representing a compound annual growth rate of 80.2 percent between 2010 and 2015. Still, the fact is 3DTV sales are lackluster.

At this year's CES, a new technology division appears to be in play, that between "active glasses" and "passive glasses" 3DTV displays.

Toshiba exhibited glasses-free 3DTVs—called autostereoscopic—one engineering prototype 55 inches diagonally and another 63 inches. Sony also showed a prototype glasses-free 3DTV in three different sizes.

Samsung, in addition to showing second-generation active-shutter glasses 3DTVs, announced a joint venture with RealD to develop a

new hybrid system for LCD displays based on ReadD's active-switching RDZ technology. RDZ employs a hybrid active/passive mechanism, with the shutter system placed in the 3DTV instead of the eyewear. The LCD modulator realtime switches between clock-

wise and counter-clockwise circular polarization. The technology is said to deliver full 1080p resolution, while maintaining compatibility with 2-D imagery, along with a brighter picture than passive glasses systems. The same eyewear used in RealD equipped commercial theatres can be used. The technology avoids the problems associated with syncing active glasses to the display emitter, which reduce the viewing angle.

Passive polarized systems use a screen-integrated patterned retarder film technology that cuts HD resolution in half in order to maintain compatibility with passive

3-D eyewear and are said to introduce crosstalk interference with black-and-white imagery, in addition to reduced image brightness. VIZIO's new line of Theater 3D comprises 21 1080p LCD 3DTVs ranging from 22 to 71 inches diagonally and use the passive polarized 3-D glasses system. VIZIO said at the CES that the new passive 3DTVs will offer up to a two-times-brighter picture with significantly less crosstalk and flicker than current active-shutter 3DTVs.

In other 3-D developments, iPONT International, a Hungarian specialist in 3D technology, showed a fully functioning set-top box that can handle live 3DTV feeds (3D YouTube), real-time streaming 3-D Internet content (ESPN, DirecTV, Sky3D), and non-HDCP protected 3-D Blu-ray for autostereoscopic displays. The 3D1 will be packaged with a yet-to-be-named autostereoscopic display by the end of the first quarter of 2011. The company touted Tridality™ autostereoscopic LCD displays, which claim multiple viewing angles up to 120 degrees using a parallax-barrier viewed at an optimal distance of approximately 11 feet. The company's widest multi-viewer displays are 42, 55, and 65 inches diagonally.

Interestingly, many of the biggest players in the 3DTV space are attempting to develop autostereoscopic technologies as well.

These developments are certain to create confusion and indecisiveness on the part of potential buyers, who now have to carefully consider the three 3-D format display technologies or autostereoscopic options that use a lenticular lens system with pixels directed separately at the right and left eyes, eliminating the need for polarized or active-shutter glasses. While autostereoscopic is the holy grail, we're years away from a 3DTV that can display a full-HD 1080p 3-D image to everyone in a room without glasses. The glasses-free models now depend on the viewer positioned in a certain location, and even then the imagery is not optimized.

With confusion eminent, dealer training and brick-and-mortar store demonstrations will be critical to the success of 3DTV. Potential customers will be wise to seek out demonstrations and reviews, such as those that we publish in *Widescreen Review*, prior to purchase.

An in-depth report on new products introduced and shown at the CES will appear in Issue 155, March 2010.

## Hollywood Directors Tout Blu-ray Disc™ Format

Fox Home Entertainment and Panasonic sponsored a discussion amongst three well-known directors during the CES. Oliver Stone, Michael Mann, and Baz Luhrmann touted the "spectacular" and



"stupendous" benefits of the Blu-ray Disc™ format. The threesome exchanged views in the Panasonic booth, with a backdrop of almost 100 plasma HDTVs under the banner "Technology: Hollywood, The Director's Vision." The panel was moderated by Geoff Boucher of the *Los Angeles Times*.

During the discussion, which touted Blu-ray's exceptional picture and sound quality, clips from the directors' critically acclaimed films were shown on two big screens, including *Moulin Rouge*, *Romeo+Juliet*, *The Last Of The Mohicans*, *Wall Street*, and *Wall Street: Money Never Sleeps*. The directors provided commentary following the viewing. Luhrmann, after watching the "Silly Love Songs" clip from *Moulin Rouge*, probed the studio executives in the audience to allow him to go back and adjust the red in the scene.

Boucher asked them if they were optimistic about the future while referencing the proliferation of technology and people watching movies on cell phones and tablets. Oliver Stone related how it made him sad that his own daughter viewed movies on the PC in a bright room while multitasking. "Blu-ray is the best of the last hardware???", Stone lamented, adding his concern that people may never have access to physical books, records, comic books, and movies in the future. Collectors be alert; according to Stone, there is a real possibility that a Blu-ray collection will be quite valuable by 2050.

Mann and Luhrmann expressed optimism in the future of technology with bigger screens and 3D. They were very bullish about the Blu-ray Disc format.

## Robert Margouleff's AES Keynote Address

During the 129th AES Convention in San Francisco this past November, the Opening Ceremonies Keynote Address was given by Grammy-winning engineer/producer and studio owner Robert Margouleff. Bob has been published numerous times in *Widescreen Review* over the course of our 19-year history and has been a featured speaker on the Home Theater Cruise on the topic of discrete multichannel audio.

Bob thrilled the AES crowd with his thoughtful examination of the pro audio industry and its future. His speech was subtly titled, "What The Hell Happened?" Bob's history and experience is unique and unequaled, dating back to his getting started in the Greenwich Village and off-Broadway theatre scene of the 1960s, to documentary combat photography, to filmmaking with members of Andy Warhol's Factory, to his historic work with Stevie Wonder, and to his founding of Mi Casa Multimedia with partner Brant Biles, the premier studio enterprise engaged in leading-edge 7.1-channel soundtrack creation. While making the film *Ciao Manhattan* and preparing the soundtrack for that film with composer Gino Piserchio, Bob discovered the Moog synthesizer, which became his new passion—making sound and music using the synthesizer. This passion would drive him during a career, which included hundreds of records and soundtracks.

Bob's synthesizer album *Zero Time* was recorded with a synthesizer called Tonto (The Original Neo Timbral Orchestra) played by Malcolm Cecil and Bob. Stevie Wonder sought out Bob and Malcolm to correlate with and they moved to Jimi Hendrix's Electric Lady Studios, where they completed *Innervisions*. With their help Stevie Wonder brought synthesized electronic music to rhythm and blues, and they became part of the creative music community. In 1974, Stevie, Bob, and Malcolm moved to Los Angeles's Record Plant, where they built a custom studio equipped with the first API quadraphonic console and quad monitoring. The Grammy-award winning *Superstition* was made in that quad studio. Bob related that "monitoring in quad in the studio changed the sound of my recordings forever. It gave the artist the opportunity to occupy the same space as the

music. ...Every step of the way, our work was full of technological change and collaboration. It was driven by creativity and an unconsciousness about the future."

So, "What the hell happened?"

Bob dissected the tumultuous changes that the music industry has faced in recent years as digital consumer technologies have progressed. "The last 10 years alone have proven that without a doubt we're in the midst of a genuine revolution in music, film, and television. This revolution is not just the media business, but in a more profound way, our entire culture has been in transition on many levels; primarily, in how the role of technology continues to affect our lives—socially, personally, and especially in business. ...While many of these phenomena are still trying to figure out ways to monetize, what they all have in common is that they have been game-changers. They've not only changed the way we think about and experience entertainment—especially music—but they've changed our behavior and relationship to the content and the artists who created it. No interlocutors, no screening structure. It's democratic, it's on demand, and it's one-to-one-to-one..."

Here's just some of What the Hell is Happening:

**Web Personalization.** "The Web site knows who you are and presents content and commercial messages based on your interests. One-to-one. Your Friends and fans are there, too, as part of a vast, yet still very personal, word-of-mouth network."

**On Demand.** "We've gone from a push business (broadcasting) to a pull business (on demand). People get what they want when they want it—and it's all inside the computer and their set top boxes and handheld devices (which by the way, can all share the same subscriptions, playlists, and content)."

**Instant Gratification.** "We've been trending away from quality toward incredible convenience. Consumers want content NOW, so on-demand, streaming and downloading are their convenient choice, even at the expense of quality. But this will be temporary. Improved bandwidth and compression are enabling better and faster delivery."

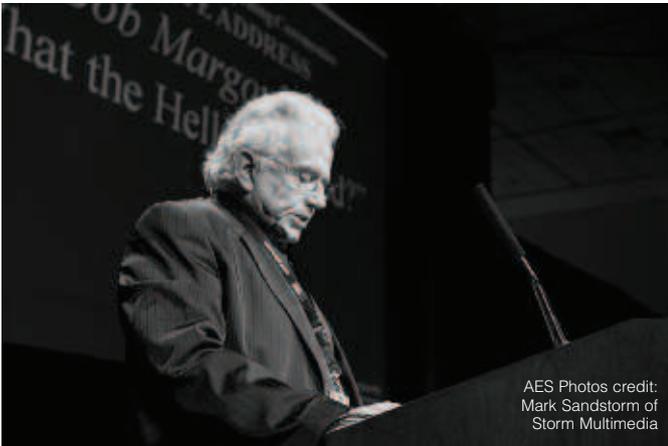
**Niche Marketing.** "It's no longer a captive mass market. It's a lot of different markets. Narrowcasting, collectively, is bigger than broadcasting."

**Community.** "Worldwide communication advances allow ideas to mingle across distances. Social networking brings people together and allows them to create or join communities. When these advances happen, they happen to many people simultaneously; so many people tend to see the next step forward at the same time. Through social media people find each other and work with each other using file transfer and Skype. Unfortunately, one thing they can't do is touch one another. Let's face it, we can't do everything in the bedroom or the garage. We need to make sure artists have a place to collaborate in—and that place is the recording studio."

**Digital Marketing.** "iTunes has turned dollars into dimes by selling singles instead of albums. There's nothing wrong with that. If you only have one great song on your album, that's the song you're going to sell. The consumer will buy 10 songs from 10 different artists instead of 10 songs from one artist. GREAT! But if you have a whole album's worth of wonderful songs, maybe you'll sell the whole album."

Bob exposed that art and quality still rule. Some essential things have not changed. "Music or film—the song or the story—will never be the same as entries on Facebook or Twitter, because they are not created by the public. They depend on the artist. Content is king and never forget it. Because content is king in our world, our job is either to be an artist or to support the artist. There's a lot to be done by media professionals.

"For the singer, songwriter, filmmaker, do what your heart tells you. You don't need anyone's permission. You can create and publish in one stroke. That's a good thing.



"For the engineer, quality counts. We need to strive for the highest possible quality of creation—so that every bandwidth can be served. (Even though many people are listening on ear buds, others are listening in 7.1 home theatres.) The ability to stream high quality is only going to get better. Many people don't even know what high quality is. They've never heard it. The reason that 'good enough' is acceptable to the majority is that they've never heard what 'great' sounds like. The perception of what the high-resolution surround sound experience offers is that it isn't worth the expense or the inconvenience of making room for more speakers. That couldn't be farther from the truth."

Bob predicted, "There will be a convergence of convenience and high resolution in the future, with more and more people able to access quality. The question becomes, 'How do we bring that great experience to the masses?' Certainly not by catering to the lowest end and outputting source materials that only live up to those low expectations. This is a Top-Down industry, not a Bottom-Up one. We must continue creating high-quality content offered through high-quality delivery formats before everyone loses. This convenience trend has the potential to promote a downward spiral if you let it—but we're not going to let it, are we?" Applause!

Bob posed the question, "Where do we go from here?" Answer: "Here's the lesson I've learned from my own story—you know, the story about how a Moog Synthesizer changed my life. You need to look around at all the newest technology available to you, and do something great with it! That's what Mark Zuckerberg did when he created Facebook at the first moment in time that the technology enabled him to do so. That's why Blockbuster gave way to Netflix, and Netflix has been smart enough to start figuring how to stream movies in high-definition. 4G is replacing 3G and what that will make possible remains to be seen. I, for one, believe that surround audio will be everywhere—in homes, cars, and headphones. And what that means for music creation and production in the near future will be revolutionary.

"It's not just going to be streaming audio, but streaming discrete and encoded surround audio. With spatialization programs like DTS Neural, Dolby, and Gen audio, surround on earphones will be a reality. Maybe it's time to try surround music again.

"Artists, do it for yourself. Create check-in points from your history, allow people to see your roots. Don't depend on the fat cats; they don't seem to get it. Build your fan base. Now you've got to get people to stick to you, and slowly grow your key tribe. It's not only music and tickets, but so much more. You're creating a club. Don't worry so much about getting paid. Build a sticky platform and grow your tribe.

"Even though they took most of the money, the record companies of old did something of value. The A&R guys were fans and mentors for the artists, the producers were collaborators, the engineers and high-priced studios ensured that the product was good for now and good for the ages. The promo guys cut through the noise and got your single on the radio. The execs wrote checks. Artists today could use more of those kinds of collaborators.

"Some of the record companies are succeeding—like the small company within a big company called Interscope. They understand the artist, the studio, narrowcasting, and social media.

"I want see more humanity back in the business. Not everyone in the world has an iPad—not everyone in the world has a computer. Music has changed the way we live our lives. It can't just be about profit. The good news is that this revolution has freed it from purely profit-making business and has allowed the artist to say what he wants and make the music and film he wants.

"I think there is a trend beginning, of people getting out of their home studio micro environments and heading back into a more collaborative environment. After all, music is the tribal beat of our culture. There is no substitute for people playing together in the same space. It goes hand in hand with musicians realizing that they need good-sounding rooms. Everything can't be done in a converted bedroom or closet, and who wants to work isolated and alone with no feedback? I think we will see recording co-op's where individuals share good-sounding spaces.

"The entertainment business today is healthy. People are building studios and buying musical instruments. Bands are playing in clubs. People are selling their music and films online, and shooting viral videos on YouTube. People are spending half of their waking hours with media.

"Yes, we're supposedly coming out of a deep recession. Unemployment is high and consumer spending is down. People aren't building home theatres like they did during the real estate boom. The highest-end equipment may be only for that small slice of upper crust that worries about the death tax. And electronics are increasingly being manufactured in China.

But everything good we have done and what we do going forward can still capture peoples' imaginations. 3-D home theatres will happen, and it won't be long before they are reasonably priced and out of the box. The kids who listen on ear buds today will have homes and families to entertain and educate tomorrow.

"Keep working to perfect your craft. Keep supporting the artist.

"And just remember that content is king."

Robert Margoueff's entire AES Keynote Address, co-written and edited by Dan Kavanaugh, can be downloaded at [www.widescreenreview.com](http://www.widescreenreview.com). **WSR**

