San Francisco’s Moscone Center is a tried and tested venue for AES events, and it was to this prime location on the sunny west coast of the USA that the Society returned for its 133rd Convention in late October. Pushing out on a number of innovative fronts, the convention organizers successfully pulled off the challenging feat of offering something for everyone in audio engineering at the same time as highlighting a number of specialized “tracks.” Four full days of technical program highlighted the most recent research and developments, as well as providing valuable learning opportunities for the audio community. Three packed days of exhibition offered a showcase for the latest products and technology in the industry.

Bob Moses, recently appointed as AES executive director, commented on the enduring need for on-site conventions. “During the first six months of my executive directorship, I’ve spoken with hundreds of exhibitors, educators, attendees, event developers, and participants,” he says. “Virtually every one of them has emphasized the value of the human connection. Social media remains a vital and constantly growing part of our messaging effort. But, the opportunity for face-to-face networking remains indisputable. On-site conventions will continue to play an integral role in the AES mandate to help our attendees ‘Listen, Learn, and Connect.’”

Back in January the committee began to develop innovative new programs for the event. Veteran cochairs Valerie Tyler and Jim McTigue recruited a stellar collaborative team, mixing seasoned convention pros with enthusiastic new chairs to ensure a highly relevant convention. “Our objective was to infuse our events with meaningful tracks that anticipate and inform shifting industry trends,” Tyler said. Highlighting these new track introductions was a Project Studio Expo with a two-day series of clinics on best practices and techniques, on all aspects of creating and operating a small studio. This year’s convention also saw the introduction of two new tracks—the Networked Audio track and the Sound for Pictures track.

**OPENING CEREMONY**

At the opening ceremony, during lunch time of the first day, Bob Moses launched the 133rd Convention saying that for those who had been obsessing about this event for the past nine months it was amazing that they were now here. His enthusiasm about the achievement was palpable as he introduced Jan Abildgaard Pedersen, AES president.

“AES is a growing, stronger, and more relevant organization for everyone working with audio in the future,” said Pedersen, welcoming delegates to San Francisco. Proposing a “great vote of thanks” to Roger Furness, now deputy director, Pedersen said “Roger, you have meant a lot to the AES and a big thank you from the Society.” He offered grateful thanks to some of the people who make the AES what it is, highlighting the overwhelming number of volunteers and AES members who make the society live. Jim McTigue and Valerie Tyler, convention chairs, were warmly thanked along with their committee for bringing this particular event together.

Adding his own welcome to those of his colleagues, convention cochair Jim McTigue commented that the last time the Society had been in the city, the San Francisco Giants had just won the World Series and it looked as if they were on the way to doing it again. (This indeed came to pass a few days later, to widespread jubilation and partying in the streets.) He offered his...
Thanks to Valerie Tyler and all the others on the committee, saying that the exceptional and informative program showed where we have been as well as all the pathways into the future. Particular thanks were offered to individual track and theme chairs, and to Dolby for its generosity in hosting committee meetings. McTigue was also keen to acknowledge the input of the Technical Council in helping to get the convention on the road.

AWARDS PRESENTATION AND KEYNOTE ADDRESS

Dieerm de Vries, chair of the Awards Committee, then presided over one of the most extensive presentation ceremonies in the Society’s history, with ten Board of Governors’ awards, six Fellowships, a Citation, a Distinguished Service Medal, and an Honorary Membership (see the sidebar for details). The best paper award for this convention was presented by the papers chairs, Veronique Larcher and Alan Seefeldt, there was no award given for the student paper competition. The winner of the peer-reviewed paper category was Hiroshi Akino and colleagues, for the paper “On the Study of Ionic Microphones.” de Vries offered thanks for the many excellent candidates who were nominated for awards. The prestigious Honorary Membership, which recognizes a person (not an AES member) of outstanding repute and eminence in the science of audio engineering or its allied arts, was presented to Ron Uhlig for his work on stereo variable area and digital soundtracks on 35-mm film. (The importance of film sound was also recognized with the recent formation of the AES Technical Committee on Sound for Digital Cinema and TV).

Multimillion award-winning producer Steve Lillywhite took to the stage as a lively and entertaining keynote speaker for the opening ceremony. He’d wanted to come on to “Eye of the Tiger,” he joked, but decided it wasn’t appropriate. Introducing the theme of a talk he recalled that when coming through customs on the way into San Francisco he had given his job as record producer, whereupon the customs guy said “I don’t know they make records any more.” This was a salutary lesson about the way the business and people’s perceptions about it have changed in recent years. Back in 1972 Lillywhite had been very lucky to get a job in a recording studio—Philips in London. It was the last studio of its kind that had a control room and a separate room called “Room B” where the tape machines were installed. He had become a very good tape operator, working the machine in this room, and there had been a long chain of command from artist to producer to engineer to him to start the machine rolling. He recalled a painful event when he’d forgotten to press record with a full orchestra going into overtime. How, he wondered, had he come from pressing the buttons to being a producer?

Punk rock in fact had launched Lillywhite’s production career. “What better than having bands that can’t play to having a producer

AES AWARDS AT THE 133RD

BOARD OF GOVERNORS AWARD

KYUNGWHOON CHEUN in recognition of cochairing the 43rd AES International Conference in Pohang, South Korea, September–October 2011.

RICARDO ESCALON in recognition of cochairing the 2010 Latin American Conference in Bogota, October 2010.

JULIUS (JAY) P. FOUTS in recognition of his work on behalf of the Audio Engineering Society during more than half a century.

CESAR LAMSCHTEIN in recognition of chairing the 2011 Latin America Conference in Montevideo, August–September 2011.

GUNTHER MELENDEZ in recognition of chairing the 2012 Latin America Conference in Guatemala, Guatemala, August 2012. His award was accepted on his behalf by Joel Brito.

JOHN (Jong-Hoon) OH in recognition of cochairing the 43rd AES International Conference in Pohang, Korea, September–October 2011.

VILLE PULKKI in recognition of chairing the 45th AES International Conference on Application of Time-Frequency Processing in Audio in Helsinki, Finland, in March 2012.

JEFF M. SMITH in recognition of chairing the 46th AES International Conference on Audio Forensics in Denver, USA, in June 2012.

MICHAEL SANTUCCI in recognition of chairing the 47th AES International Conference on Music Induced Hearing Disorders in Chicago, USA, in June 2012.

MARCELA ZORRO in recognition of cochairing the 2010 Latin American Conference in Bogota, October 2010

CITATION

CARLOS INDIO GAUVRON in recognition of outstanding contribution to the dissemination of audio knowledge in Latin America. (Not present to receive the award.)

FELLOWSHIP AWARD

JUHA BACKMAN for his contribution to bringing about high-quality audio for mobile devices.

DAVID BIALIK in recognition of his outstanding contributions to AES activities in the field of radio broadcast engineering.

POPPY CRUM for her work in neuroscience and psychoacoustics, allowing a better understanding of how we listen to audio.

GARRY MARGOUS in recognition of his many years of activities in audio engineering, having worked in areas as diverse as loudspeaker development and digital audio coding.

JORGE MORENO in recognition of his many years of work in researching new technologies in audio measurement as well as his dedication to audio education in Latin America.

WOON-SENG GAN for contributions to signal processing, education, and research leadership in the field of Audio Engineering.

JOHN STORYK in recognition of his four decades of work in the areas of room design, acoustical treatment, and modification.

DISTINGUISHED SERVICE MEDAL AWARD

JOHN VANDERKOOP in recognition of his many years of work as AES Journal editor and as a member of the Board of Governors.

HONORARY MEMBER

RONALD E. UHLIG in recognition of his pioneering engineering achievements to enhance the film sound experience for the audience, including the development of international standard setting technology that allowed stereo variable area soundtracks to replace monaural film sound, and later, the development of digital data read/write capability for 35mm digital audio.
133rd CONVENTION AWARDS PRESENTATION

From left: Diemer de Vries, chair of the Awards Committee; John Vanderkooy receives the Distinguished Service Medal; winners of the Best Paper Award (see panel below); Board of Governors Award presented to Ricardo Escallon.

From left, Board of Governors Awards were presented to Jay Fouts (accepted by Bob Chira), Cesar Lamschtein, Gunther Melendez (accepted by Joel Brito), and John Oh.

From left, Board of Governors Awards were presented to Ville Pulkki, Jeff Smith, Michael Santucci, and Marcela Zorro.

From left, John Oh receives the Board of Governors Award on behalf of Kyungwhoon Cheun, and Fellowships were presented to Juha Backman, David Bialik, and Poppy Crum.

From left, Fellowships were presented to Garry Margolis, Jorge Moreno, Woon Seng Gan, and John Storyk.

BEST PAPER AWARD

HIROSHI AKINO, HIROFUMI SHIMOKAWA, TADASHI KIKUTANI, and JACKIE GREEN for their paper “On the Study of Ionic Microphones.”

Paper 8745.
that can’t produce?” he quipped. On weekends his boss had allowed him to take in his own sessions, so he found a local band and did some demos. He wasn’t much of an engineer, by his own reckoning—they used to have mixing competitions but he always lost as he made the vocals too quiet and the drums too loud. He subsequently left his very safe studio job to work for Island Records and Chris Blackwell. He got his first hit in 1978 with Siouxsie and the Banshees, “Hong Kong Garden.” “If only I knew how I did it!” he laughed. Candidly, Steve was happy to admit that fear has driven him on—it had been a very important feature of his career. The culmination of his career came in the 1980s rock era with the Rolling Stones, and he claims to have learned more from them than they learned from him. Dispelling some of the technology myths, he explained that he’s made the worst records on the best equipment and the best records on the worst equipment. Lillywhite thinks technology is important, he just can’t work it himself. He uses his ears rather than his eyes to get the results he wants. Winning music doesn’t have to be in time or tune either, as there is no winning formula for a hit. His only rule is “don’t eat in the control room”—it’s like church to him, a place to be approached with reverence.

The audience was captivated by Lillywhite’s humor, candor, and relaxed style, as he recalled his surprisingly successful career. Warm applause greeted his departure from the stage as the convention rolled into action.

PROJECT STUDIO EXPO USHERS IN NEW ERA OF AUDIO TRAINING

Attended by nearly two thousand visitors, the Project Studio Expo (PSE) at the AES 133rd Convention proved to be an exciting new feature. Created in partnership with Sound On Sound magazine, the two-day event was a “show within a show.” It was generously sponsored by M-Audio, Akai Professional, Presonus, AVID, Lynda.com, and Sennheiser. Presentations included practical clinics, authoritative question-and-answer sessions; in-depth presentations focused on emerging recording techniques, workflow, technology innovations, and invaluable advice on best practices from leaders in the field. Craig Anderton, executive editor of Electronic Musician offered this plaudit: “I was really impressed with the PSE. As in really impressed. I can’t believe how well the concept was realized... Lots of seminars, standing-room-only crowds, wireless headphones for best fidelity and no ambient noise, enthusiastic attendees... AES has discovered its fountain of youth.”

A highlight of the PSE was an address by multiplatinum engineer/producer Young Guru about the origins of hip-hop and insights into his role as a producer/engineer and psychologist to bring the best performance out of superstar artists. Other presentations covered small-room acoustics, microphone techniques, tracking, mixing, editing, mastering, performance, and use of mobile devices such as the iPad in music production. Bob Moses, AES executive director, explained that the PSE represents a new direction for the AES, in bringing high-profile audio community leaders directly to end-users for training and mentorship. Senior editors from major trade publications enthusiastically endorsed the PSE in advance of the show and appeared together in a panel at the event.

EXHIBITION AND BUSINESS THRIVE DESPITE HURRICANE

Despite the best efforts of Hurricane Sandy to disrupt travel plans for the show weekend, over 11,000 attendees joined the throng at the Moscone Center to meet representatives from audio equipment companies large and small. “The exhibition hall was packed on Saturday,” said Bob Moses, “but Hurricane Sandy took a lot of wind out of our sails. People fled for the airport on Sunday and Monday as flights were canceled around the country.” At the AES 133rd nearly 300 exhibitors presented their products on the show floor, ranging across the entire panoply of technology areas included within audio engineering. More than 10 percent of them were entirely new to the convention.

Support from the business community extended beyond the exhibition floor, as a number of sponsors supported tracks of events in the technical program. THAT Corporation and Audio Precision returned as co-sponsors of the Product Design Track, as did Dolby as long-time sponsor of the Broadcast and Streaming Track. Renkus Heinz sponsored the Live Sound Track. Perhaps most notably, inMusic brands M-Audio and Akai Professional served as Convention Platinum Sponsors and were instrumental in bringing Young Guru to the event. Sponsors and exhibitors expressed themselves pleased
with their participation in the show, offering the following examples of their feedback, among others: “M-Audio and Akai Professional’s Platinum Sponsorship of this year’s AES gave us the valuable opportunity to be a part of how AES itself is evolving. We appreciate the direction AES is headed, particularly with its healthy focus on project studios and the Project Studio Expo,” said Lee Cwik, tradeshow and events manager, inMusic Brands. “This year’s AES was extraordinarily exciting for Sennheiser,” remarked Joe Ciaudelli, director, advanced projects & engineering services. “We debuted our Digital 9000 wireless system. Our Recording Sound Academy round table drew an standing-room-only crowd. And, we introduced our Neumann KH 310 reference monitors at the NARAS Skywalker Sound event.” Eric Mayer, president of U.S. operations for DPA Microphones reported, “We were happy to find that DPA Microphones made a big splash at AES this year thanks to the Yamaha/ResInno Grand Rossa piano and DPA hearing stations that were on display. We were frequently complimented for the open design of our booth and for the inviting sound of the piano music.”

Among the new product launches in San Francisco were Focusrite’s Forte portable audio interface, which is a premium two-input, four-output USB 2.0 audio interface for Mac and PC, with two remote-control mic preamps from the RedNet range. Prism Sound also unveiled its new Lyra family of audio interfaces, based on its forerunner, the Orpheus, but with a smaller package and lower price. New, too, on the DAW front was Sony Creative Software’s Sound Forge Pro Mac, developed from the ground up for Mac OS X as a multichannel audio recording and editing application to complement the existing Windows-based version of the package.

Visitors were crowding around Slate’s revolutionary touch-screen mixing console, the Raven MTX. Featuring multichannel operation on a 46-inch custom-built touchscreen, the display was designed by the company itself using the latest innovations that enabled an ultra-thin 2-mm glass surface with proprietary nano technology to ensure a slick and smooth surface. Essentially this puts the DAW control surface under the user’s fingertips. Also on the console front, Lawo introduced its 2nd generation mc256 production mixer, offering the ability to host true two-man operation with fully decentralized control of all mixing parameters. The new console also offers illuminated rotary knobs and button glows for coding the channel strips. There was great interest, too, in Fairlight’s introduction of its Quantum audio post-production system, combining moving faders with touch-screen interfaces and a jogger wheel, as well as integrated HD video. Adding to the digital recording picture was iZ Technology’s Radar 6 multitrack hard-disc recorder that can store up to 24 tracks at sampling rates up to 192 kHz, onto SD card, thumb drive, or high-performance solid state drives.

Genelec was introducing its Smart Active Monitoring (SAM) concept, bringing its range of DSP monitors under a new marketing umbrella. All of the models in the range are capable of automatically adapting to the acoustical environment in which they operate, and digital networking enables the assembly of flexible computer-controlled systems. It also unveiled its SpeakerAngle app for Android, designed to help users rotate their speakers (up to 7.1) to the correct position within industry recommendations. Moving to outboard equipment, Millennia Music and Media Systems launched its ultrahigh-performance parametric EQ, named the NSEQ-4, and designed to have the same Dove topology constant-amplitude phase-shift circuit filters as the related NSEQ-2 valve and solid-state unit.

A refurbished truck from Soundcraft showcased Soundcraft and Studer mixing consoles, and other products from the Harman range including JBL’s LSR monitoring systems and AKG microphones and headphones. Studer’s Vista consoles benefited from an upgrade to the VistaMix software that includes automatic microphone mixing (enabling active participants’ mic channels to be kept open while silent ones are faded down).

Prominent on the show floor, as new visitors to the convention, were members of the China Audio Video Association (CAVA), led by the Bingkun Zhao, general secretary. The AES has recently set up a new section in China and membership in the region is growing, under the leadership of Shusen Wang, chair of the Beijing Section. So it was with great pleasure that the Society welcomed this delegation to San Francisco.

**WORKSHOPS AND TUTORIALS FOR ALL**

Tutorials cochairs, Vene Garcia and Mike Wells, along with workshops cochairs, David Bowles and Jeff McKnight, put on a stellar program of events to suit all interests. “Our game plan was to cover as many significant issues as time would allow,” Vene Garcia remarked. “We also tried to balance the presentations with traditional and contemporary subject matter. This approach was exemplified by Bobby Owzinski’s Social Media event and Scott Hull’s Vinyl Mastering presentation.” “Presentations on Large and Small Room Acoustics and Sound System Intelligibility actually represent a minitrack on room acoustics,” added Mike Wells.

Bobby Owzinski’s Social Media for Engineers and Producers workshop took the audience into the challenges of strategies for developing and maintaining a fan base using Internet

**CONVENTION REPORT**
tools such as Facebook and YouTube. On a different note entirely, Peter Mapp and Ben Kok from the Technical Committee on Acoustics and Sound Reinforcement offered a practical look at the problems of and solutions to sound system intelligibility. Following on from the recent successful AES conference on the topic in Chicago, Ben Kanters brought delegates up to speed on ways of building hearing awareness into audio curricula. With the increasing incidence of hearing disorders, particularly from entertainment media, it is Kanters’ view that audio education programs must take this topic more seriously when training the next generation of audio professionals.

On behalf of the Technical Committee on Perception and Subjective Evaluation of Audio Signals, chair Sean Olive led a distinguished panel in the discussion of spatial audio evaluation methods. Poppy Crum, Martin Dewhirst, Ville Pulkkki, and Thomas Sporer covered current and future best practices for subjective evaluation of the spatial aspects of sound, with the goal of helping promote methods that provide more accurate, reliable, and meaningful data. Further on the spatial theme, Frank Melchior of BBC professionals.

Peter Mapp and Ben Kok from the Technical Committee on this topic more seriously when training the next generation of audio building hearing awareness into audio curricula. With the increasing such essential issues as networked audio, emerging audio technologies, and auditory perception. A glance at the titles features we received enabled us to develop multifaceted sessions covering such essential issues as networked audio, emerging audio technologies, and auditory perception. A glance at the titles featured in these sessions substantiates their comprehensive intent,” Larcher emphasized. Engineering Briefs enabled authors of practical, application-oriented papers to contribute the results of their work in four separate sessions. A large number of poster sessions provided a forum for authors of scientific papers to discuss their work with interested participants in the foyer outside the conference halls.

Among notable paper presentations was Durand Begault’s on multimodal information management, in which he investigated the sorts of cues and interfaces needed for auditory communication displays in next-generation data-link systems involving multiple synthetic speech messages. Selecting among multiple incoming messages is a challenge, and the research considered the difference between physical pressure-sensitive switches and flat-panel “virtual switches.”

Networked audio systems featured in a papers session chaired by

INTERESTED DELEGATES GATHER AROUND A POPULAR POSTER PRESENTATION.
AES THANKS THE 133rd CONVENTION COMMITTEE

Top row (L-R): Alan Seefeldt and Véronique Larcher (papers); David Bowles and Jeff McKnight (workshops); Bob Megantz (facilities)
2nd row: Vene Garcia and Mike Wells (tutorials); Chris Smith (special events); Jessica Livingston (tours); Bill Wray (historical)
3rd row: Steve Martz (games); David Bialik (broadcast and media streaming); Conrad Cooke (product design); Tim Shuttleworth (networked audio); Brian McCarty (sound for pictures)
4th row: Ezequiel Morfi and John Krivit (student/career events); Jim McTigue and Valerie Tyler (convention cochairs)

Student volunteers with their coordinators, Michael McConnell and Evan Peebles.
reviewed, from both the technology and device perspectives.

Live Sound, Game Audio, Networked Audio, and Broadcast and Media Streaming tracks completed the picture, along with an additional four workshops “with height,” held at Pyramind close to the convention center, specially set up to demonstrate surround and 3-D audio formats including a height dimension.

OUTSTANDING SPECIAL EVENTS
Celebrating the creative history of California, its pioneering artists and engineers, special events at the convention organized by Christopher Smith included a session with Mr. Bonzai on the “San Francisco Sound.” Bands like The Grateful Dead, Sons of Champlin, Huey Lewis and the News defined a lifestyle and spirit that is still very much alive today. Here at the 133rd Convention, top Bay Area artists provided insights into their recording craft, their creative process, and how recording has changed in today’s analog/digital hybrid world. We also got to see a rare film of “The Wrecking Crew,” a group of LA-based studio musicians from the 1960s who played on hits for the Beach Boys, Frank and Nancy Sinatra, The Monkees, and others. Behind every recording was an elite group of engineers, using ground-breaking and innovative techniques to capture the distinct sound of the musicians. Produced and directed by Denny Tedesco, son of legendary, late Wrecking Crew guitarist Tommy Tedesco, the film featured interviews with Brian Wilson, Cher, Roger McGuinn, and many Wrecking Crew members, including Glen Campbell, a durable superstar, in his own right. Tedesco held a Q&A with special guests following the screening.

Among the great Platinum series of events, Bob Ludwig held a packed session on “Mastering for iTunes,” during which Eric Boulanger and Bob Katz discussed the need for every mastering engineer to be familiar with the requirements of this ubiquitous format. Also in the series, Michael Romanowski of NARAS moderated a panel of superstar engineers and producers to reminisce about their most memorable moments in the studio and their interactions with a wide range of artists.

Produced and directed by award-winning audio dramatist Sue Zizza with sound design by David Shinn, “Poe—A Life and Stories in Sound,” starred Phil Proctor of the Firesign Theater as Edgar Allan Poe in a one-hour live audio drama performance featuring scenes from some of the author’s most famous short stories and moments from his life. The production was coordi-
nated by Broadcast and Streaming Media chair, David Bialik, to illustrate the diversity of live audio production.

Graham Blyth’s organ concert took place in St Mary's Lutheran Church, on the two-manual Taylor and Boody organ consisting of over 2000 pipes. In a program entirely of Bach, Blyth delighted the audience with the sounds of chorale preludes, toccatas, and concertos on this challenging instrument.

James “JJ” Johnston was the Richard C. Heyser Memorial lecturer, introduced by Jürgen Herre and hosted by the Technical Council at the 133rd Convention. Johnston spent much of his career at Bell Labs doing work on audio coding, contributing substantially to the widespread standards that we know today such as MP3 and MPEG-2 AAC. His talk went into our present understanding of perception and suggested that there is a need for greater communication and understanding between the technical and artistic sides of our industry. “It might be a dream,” he said, “but there is a lot to learn by exchanging information, allowing information to be tested, learning what is really going on, and taking advantage of modern science, in the service of art.”

STUDENTS LOOK TO THEIR CAREERS

Student members form a significant proportion of the international body that is the Audio Engineering Society. The AES is where they come to learn from the pros, get introduced and put their careers on the rails. Thanks to coordinators John Krivit and Ezequiel Morfi, a full-on program of student and education events was on hand at the 133rd. In addition to the recording competitions that have become a standard feature of the convention student events, SPARS had organized a speed counselling session with experts from the industry, in cooperation with AES, GANG (Game Audio Network Guild), Women’s Audio Mission, and Manhattan Producers Alliance. Students were privileged to benefit in their recording competitions from the advice of a world-class panel of judges including Shawn Murphy, Jim Anderson, and Martha de Francisco, while Ian Corbett had arranged recording critique sessions during which students were encouraged to bring their recordings for feedback in a noncompetitive setting.

The student party was held at Coast Recorders and Michael Romanowski Mastering, a historic studio with the largest tracking room in San Francisco, designed by Bill Putnam over 40 years ago. As part of the event a special award was presented to Record Plant founder and industry stalwart, Chris Stone.
“My goal was to profile the diverse range of SF’s pro audio community,” said Jessica Livingston, technical tours chair. “From a cutting-edge video game creative campus to a top-flight school and SF’s latest live performance venue, these tours were designed to be instructive, colorful, and entertaining.” The 133rd AES Convention Technical Tours included Tamalpais Research Institute (TRI), which was created by Grateful Dead founding member, Bob Weir. TRI is a $5+ million, state-of-the-art recording and broadcast facility located in San Rafael. The 11,500-square-foot complex features a 2,000-square-foot main studio, a smaller studio, two mixing rooms, and five additional isolation rooms. The entire facility is interconnected for audio and HD video recording.

Other tours included a trip to nearby Dolby Labs to hear the new Atmos system; Fenix, the latest addition to San Rafael’s night life scene with a state of the art studio for recording and streaming live shows; Ex’Pression College for Digital Arts; 25th St Recording; Polarity Post Production and Outpost Studios; Fantasy Recording Studios, which was celebrating its 40th year; and Electronic Arts, the world’s largest video game publisher.

**HISTORICAL PROGRAM**
Bill Wray, the ever hard-working cochair of the Historical Committee, had arranged a compelling set of events to celebrate audio’s evolution over the past 100 years. Of particular note was Nicholas Bergh’s talk on the evolution of electrical recording at RCA Victor Studios between 1925 and 1953. Mike Adams spent an hour on Sunday morning recalling Lee de Forest, “the man who invented the amplifier,” while Ioan Allen presented a two-hour entertaining and evocative look at the influences of sound mixing on motion picture presentation.

**TECHNICAL COUNCIL AND STANDARDS MEETINGS**
Coordinated by Bruce Olson, Standards Committee chair, and Mark Yonge, Standards manager, there was a full program of stan-
standards meetings, covering the many and diverse areas of audio engineering. A new project on transmitting MADI over twisted pair links was launched, as well as discussion of the new project to standardize a file format for exchanging head-related transfer functions. Francis Rumsey and his colleagues on the Technical Council led a comprehensive bill of Technical Committee meetings covering the many fields of endeavor that make up audio engineering. The formative Technical Committee on Sound for Digital Cinema and TV was confirmed, appropriately considering the emphasis on the topic at this event in San Francisco.

AES COMMITTEES
In the background, and unseen by the majority of delegates to a convention, much of the business of the Society takes place in committee rooms where future conferences, publications, and strategy of the organization are planned. The Annual Business Meeting at the outset of the convention confirmed that AES membership is remaining high, at around 14,000 individuals. During the Regions and Sections meeting representatives of AES sections from around the world met with the Society’s vice presidents to share examples of exciting local events and membership initiatives. The Board of Governors met on the evening of the last day of the convention, during which the society’s future policy and direction was debated.

AND FINALLY...
Good technical facilities and assistance are crucial to the success of a convention, and the sterling efforts of Bob Megantz, facilities chair, were appreciated by all those taking part. A team of volunteers organized by Michael McConnell and Evan Peebles was also on hand to ensure the smooth running of this complex event, and their efforts are to be commended.