

# Sound & Vision '90 — The Fourth International Conference and Exhibition of the SMPTE Australian Section



Night view of the Darling Harbour Convention and Exhibition Centre, on the shores of Sydney Harbour, Australia.

Sound & Vision, the Fourth International Conference and Equipment Exhibition of the SMPTE's Australian Section, held at the Sydney Showground from Tuesday, July 3, through Friday, July 6, 1990, successfully showcased the latest in film, television, and computer technology and provided an enthusiastic forum for debate on the directions likely to be taken by the industry in the next decade.

The four-day Sound & Vision '90 conference was conducted under the general theme of "Merging the Technologies of Film, Video, Audio, and Computing." The conference program attracted over 600 delegates, including 94 overseas visitors, and contained 53 papers dealing with a broad range of subject areas.

"There was an excellent response towards the show from most of the exhibitors and delegates," commented Derek J. Wilson, incoming SMPTE Chairman, Australian Section. Reinforced by the presence of all major equipment suppliers with an interest in the Australasian region, more than 4500 visitors from Australia, New Zealand, and the South Pacific Region attended the stands of 95 exhibitors in three pavilions — the Royal Hall of Industries, the International Pavilion, and the Ford Pavilion.

SMPTE President Maurice L. French officially opened Sound & Vision '90 by welcoming conference delegates and highlighting the beneficial role SMPTE plays in the film and television industry. Conference Chairman and outgoing Australian

Chairman Rupert Utteridge took the opportunity in his opening session address to announce the establishment of an SMPTE educational scholarship for young engineers.

M. Carlos Kennedy, Past President of SMPTE, summarized a universal theme in his keynote address, "The Global Standards Dilemma — Agreement or Anarchy," discussing the successes and failures of standards bodies and the current climate for developing common emission and VTR standards. "The role of the standards organization now is to document (VTR) formats and, where possible, work to reduce the number by bringing similar formats into a single format," said Kennedy. His address contained both an optimistic and fatalistic final note. "There is today far more agreement than anarchy in global standards, and if we do end up with more than one international EDTV or HDTV standard, perhaps the best solution is to also come up with the best possible standards converter."

## Australia and the EDTV/HDTV Debate

Many Australians believe the early introduction of a non-PAL/NTSC-compatible or perhaps a nondigital HDTV system is undesirable, both economically and technically. "Australian viewers are looking for high-quality programs, not high-quality pictures. And they're looking for wider viewing choice, not wider viewing screens," said David Edgar, SMPTE Papers Chairman and engineering di-

rector for post-production facility, AAV. "My opinion is that it's the wrong thing to introduce into this country at this time. The technology is wrong and our whole industry is wrong to force such a massive capitalization program on both the consumer and the program supplier."

With Australian television network owners currently down-valuing their broadcast licenses, and the fact that, as Mr. Kennedy pointed out, the audience size will not immediately grow as a result of introducing advanced television, HDTV for HDTV's sake is not a topic warmly embraced by many Australian engineers.

## The Papers Program

Following Kennedy's keynote address, papers on the first day were concerned with two Laboratory Sessions — Film Development and Film and Electronic Interface topics — with each category producing highly topical papers that were the subject of lively discussion.

In his paper, "Particle Transfer Roller (PTR) — A New Concept in Film Cleaning, Jeff Deal, Eastman Kodak Co., summarized the current film-cleaning methods: dry, air blast, aqueous, solvent, "tacky," and the DRYPUR cleaning methods before describing Kodak's new particle transfer roller.

"High Resolution Electronic Intermediate System for Motion Picture Film," a paper presented by Richard Krohn, Kodak Australasia, proposed the development of an intermediate

high-resolution electronic system to allow for video-style manipulation of film images. Krohn also called for the industry-wide establishment of digital image standards for motion-picture film. Kodak's proposal includes the development of a high-resolution film scanner for inputting film, digital data recorders used for various operations, an image computing workstation, and a film-resolution film recorder for outputting back to film. Of interest to local industry is the news that engineers at Kodak's Australian facility in Coburg, Victoria, are currently developing the graphics workstation and software for the project.

On Wednesday, the second day, sessions came under the Production category and included topics such as lighting, computer graphics and animation, cinema, high-definition TV, and bit-rate reduction.

In two complementary high-definition papers, Peter Saraga, Philips UK, and Rob van Oostenbrugge, Philips Holland, covered a range of HDTV topics from the European and PAL perspectives. In "Towards Better Television — Today," van Oostenbrugge commented that although Eureka HDTV is a technology-driven project, its implementation is customer-driven — customers being program producers, broadcasters, and consumers. He believes the current driving force towards satisfying viewers in Europe is based on three simultaneous developments: general industry deregulation, new distribution methods such as direct-to-home (DTH) satellite, and the implementation of VLSI IC technology. Van Oostenbrugge's paper discussed a range of marketing and technological aspects of Eureka HDTV such as subscriber Smartcards, Eurocrypt conditional access, 16:9 widescreen, MAC component emission formats, and Eureka's evolutionary approach to HDTV.

Extended PAL in the form of PAL Plus was only one aspect of Peter Saraga's paper, "Towards Better Television — Tomorrow," but it attracted the most interest from delegates. The technical priorities for PAL Plus were suggested by Saraga to be a 16:9 aspect ratio, a reduction in cross-color artifacts, and later, enhanced resolution and digital sound.

"The PAL Plus proposal has ramifications for countries like Australia," comments David Edgar. "In a fragile economy evolution is the best

path, and I think the European approach on HDTV is much more logical — economically and technically — for Australia to adopt."

A paper, "Super 16mm Film for HDTV," by John Bowring, Lemac, proposed the use of the Super 16 widescreen shooting format as an aesthetically attractive and cost-effective medium for blow-up to 35mm or direct transfer to HDTV. Test transfers by personnel at the NHK Science and Technical Research Laboratories have, according to Bowring, shown amazing results. The paper went on to discuss Super 16 methods, frame rates, equipment, and costs.

### Bit-Rate Compression

Bit-rate compression will undoubtedly be one of the hottest technical topics of the 1990s, judging by the enthusiastic Q&A session which followed the delivery of "Optimization of Subband Vector Quantization for Moving Images," by Takanori Senoo, Matsushita, Japan. Internationally co-authored by Bernd Girod, Kunsthochschule für Medien, Köln, Germany, and Andrew B. Lippman, M.I.T., in the U.S., the paper discussed image compression using Lattice quantizers for subband coding, entropy coding, and the application of a Lagrange multiplier method to optimize bit allocation. Using this method, a  $1/50$  compression rate has been achieved for color-moving images at an SN255 of 34 dB. The result has been shown to be easily applicable to 1.5 Mbits/sec media such as CD, DAT, or broadband-ISDN.

Still on bit-rate compression, "The Role of Image Data Compression in Professional Video Recording" delivered by M. Carlos Kennedy, Ampex Corp., was also received with great interest. Kennedy discussed existing compression algorithms and methods used in transmission and the considerations involved in applying them to professional video recording. The application of image compression could, according to Kennedy, result in more efficient and cost-effective video recorders providing higher image quality, lower media costs, and greater performance flexibility.

In his paper, during the Post-Production session on Thursday, Frazer Morrison, Ampex Corp., asked and proceeded to answer the question, "Is Digital Really Perfect?" The paper confirmed the belief of many Australian engineers that digital introduces



*SMPTA President Maurice French delivers the opening address at the Fourth International Conference and Exhibition of the SMPTA Australian Section.*

its own unique distortions, although many agreed with Morrison's comment, "It's not perfect but it's pretty damn close."

The final day's papers included a range of sessions: Aggregation and Automation, Computer Aided Engineering and Training, Systems, Magnetic Recording, New Generation Test and Measurement Systems, and Delivery Systems.

In the paper presented by Craig Norris, Sony Australia, "Direct-On-Air Commercial Replay from Multisegment Cassettes," Norris discussed Sony's BZC-2100 software solution to multisegment replay from its Library Management Systems (LMS). Norris's paper identified several major drawbacks to the idea of recording multiple commercials per cassette, and then described how those drawbacks are overcome by the LMS design.

"Talkback Systems for the Nineties," delivered by Joe Talia, from the Australian company Talia Sound and Vision, showed an exciting new concept in talkback during the Systems session. Talia proposed a stage-by-stage expandable talkback system using software configurable LCD station labelling to handle the increasing numbers of changeable inputs that occur in large studios, stations, and OBs.

Another final-day paper that presented an excellent practical perspective on outside broadcasting was delivered by Warren Berkery, OB manager, the Nine Network. The



*Australian Section Board of Managers: (L-R) Richard Krohn, Functions Chairman; Chris Minahan, Engineering Chairman; Murray Forrest, Manager; Derek J. Wilson, Secretary/Treasurer; SMPTE President Maurice L. French; Rupert Utteridge, Chairman; SMPTE Past President M. Carlos Kennedy; and Eric Hitchin, Manager.*

Nine Network transmitted 120 hours of live programs from the 14th Commonwealth Games in Auckland over an 11-day period earlier this year. While host broadcaster Television New Zealand provided much of the live coverage, the Nine Network equipped and installed a two-studio production and post-production complex within the International Broadcast Centre (IBC) with a total of 24 VTR machines within six edit suites.

### **Scholarships for Young Engineers**

This year's Sound & Vision was also the platform for the launch of SMPTE's (Australian Section) Educational Scholarship, which offered 11 young engineers from all over Australia the opportunity to attend their first international conference and exhibition. The winners were selected from approximately 30 applicants nominated by their management to Section Secretary/Treasurer Derek J. Wilson and reviewed by newly appointed Educational Directors Eric Hitchin and Chris Minahan.

Hitchin sees the scholarship as the beginning of a regular program of similar initiatives by SMPTE. "We also would like there to be more applications from production houses and the film industry next time," he said.

The primary objective behind requesting reports from the engineers was to enable Minahan and Hitchin to select a candidate from the group who would be awarded an additional scholarship to attend the 132nd SMPTE Technical Conference and Equipment Exhibit in New York. Chris Buttress-Grove, ENG repair and maintenance engineer from Bris-

bane television station BTQ7, was consequently chosen as the inaugural winner of the overseas scholarship.

### **The Exhibition**

Of major interest to the film fraternity is the continuing development and enhancement of technology by film equipment manufacturers. EXR films, the introduction of new hybrid technologies such as the HDTV telecine/electronic intermediate system, and cinema digital sound all bode well for the continuing health of the motion-picture industry and the ongoing use of film as an origination medium for cinema and television release.

Test equipment manufacturers were at Sound & Vision '90 in full force, eager to capitalize on the market that television aggregation has opened for monitoring and T&M gear. A promising trend for the exhibition was the increased involvement of professional audio equipment suppliers.

Studio and CCD cameras attracted their share of interest, with excellent practical displays given by several suppliers.

### **Australian Manufacturers**

More than 20 Australian manufacturers and service providers were also represented at the product exhibition. Edit capture and list management software was demonstrated at Sound & Vision '90, as were video and audio routing and distribution and monitoring products, HDTV and digital video routers, talkback systems, and an AVM-200 presentation switcher. Other Australian-designed products on display included lighting consoles,

studio audio monitors, and fiber-optic transmission systems.

### **Banquet**

This year's Sound & Vision banquet was deemed an overwhelming success by Function Chairman Richard Krohn, with more than 200 guests enjoying a magnificent view of Sydney Harbour from the James Cook Ballroom of the Intercontinental Hotel. SMPTE President Maurice French also took a brief opportunity during the banquet to thank all participants in Sound & Vision, and he wished the Australian Section good luck with its continuing membership drive.

### **Harborside Venue for SMPTE '92**

The success of Sound & Vision '90 was a direct result of the preparation, time, and effort put in over the last two years by the 1988-90 Board of Managers of the Australian Section. Incoming Chairman Derek J. Wilson and a newly appointed Board of Managers are already preparing for the Society's next conference and exhibition, SMPTE '92, to be held during September 1992 for the first time at Darling Harbour Convention and Exhibition Centre.

Located on the waterfront of one of the world's most famous scenic harbors, the Darling Harbour Convention Centre is the central component of a recently completed \$100 million tourist redevelopment. The new venue will provide a larger and distinctly up-market backdrop for SMPTE '92, already shaping up as the most important film and television convention yet staged in Australia. —*Brett Smith*