

Education Fung F. Lam Sections Vice-President

Once again we have enjoyed a hugely successful year in this new digital era. SMPTE leaders and experts in the television, motion picture, and computer industries were generous in sharing their expertise with our fellow members during three conferences, over 250 section sessions, and more than 20 seminars in the year 1998. We also have added more new members from the computer industry.

Section Chairs' Meeting

SMPTE President David George held two receptions for Section Chairs during the Advanced Motion Imaging Technical Conference in Toronto and the 140th Annual Technical Conference and Exhibit in Pasadena. Members of the Executive Committee joined the Section Chairs to discuss section issues. Everyone enjoyed the experience, which resulted in mutual understanding and renewed friendships.

32nd Advanced Motion Imaging Conference

The Advanced Motion Imaging Conference has earned its reputation as one of the leading forums for providing the latest technical information to industry professionals. This year the AMI Conference was held at the Sheraton Centre Hotel, Toronto, Canada, on February 5-7, 1998. Program Chair Peter Laidlaw, Imagineering, Ltd., arranged the program with the theme "Developments in Storage and Manipulation of Digital Imaging," consisting of four sessions. Jim Morrison, Imagineering, Ltd., chaired the first paper session "Digital Disk Technologies," which included the following papers: Bitstreams—Opportunities in Emerging Technologies; The Need for Abstraction in DVD-Video Authoring Tools; The Future of DVD; Proposal for an 8-Channel Digital Audio Transport



Fung F. Lam

Standard; The High Density Optical Disk for Next Generation; and User Requirements and Technologies for Automated Storage and Retrieval.

Chris Bell of the Movie Network chaired the "Video Networking" session, which included: Video Networks in a Server Centric Environment; 540 Mb/s Serial Digital Interface: The Evolution of Studio Interconnect; Networking Non-Linear Editors for Shared Access: Why, How, and How Much; Luminance, Luma, and the Migration to ATV; High Speed Fibre Channel Networks in Post-Production and Broadcast Studios; Applications of Digital Video: Bandwidth Requirements on Shared Media Servers and Networks.

"Strategies for Migrating into a DTV World" was the title of the Friday morning session, chaired by Costa Babalis of Canadian Broadcasting Corp. It featured the following papers: Client Side Digital Television Production; Technical Solutions for Digital Video Networking; The Design and Operation of a Disc-Based News Service, From Acquisition to Playout; Sxnet: Practical Approach to Digital Video Networking; A Migration Path to Digital Video Distribution as

Applied to the Broad News Operation; Flexibility and Choice; Destination Digital: Description of the Role of Component Digital Video in the Transition to HDTV; and Upgrading to Digital Facility with Future HDTV Considerations.

The afternoon session on "Strategies for Migrating in a DTV World," chaired by Lou Montana of NetStar Communications, Inc., concluded the two-day technical program with the following papers: The Introduction of HDTV into Digital Television Networks; Computer Playback of HDTV Streams; and A Phased Approach to Implementing DTV.

Panel Discussion

"The Future of Television," a panel discussion chaired by Charles Poynton, included the following members: Tom McMann, Microsoft, on multimedia; Lou Montana, NetStar Communications, on satellite programming service; Roger Keay, Rogers Communications, on cable television; Terry Snazel, ExpressVu Canada Inc., on DSS service providers; David Hunter, CTV Television Network, on broadcasting; and Kirk Law, SGI, on the computer industry.

All-Day Seminar

"The ATSC Digital Television Standard Explained"

Over 300 people attended two sessions on the final day of the conference. Craig Tanner, ATSC, chaired the session titled "The ATSC Digital Television Standard Explained." Some ATSC member companies provided major information on the ATSC Digital Television Standard adopted by the FCC on December 24, 1997. SDTV and HDTV formats within the standard and its digital surround sound audio system were explained. The design of the multiplexed bit stream and its provisions for including auxiliary data was also covered.

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PROGRESS REPORT

"Digital Video Broadcasting Techniques"

Albert J. Stienstra, Philips, chaired the session "Digital Video Broadcasting Techniques," examining the new criteria that will impact programming quality in a digital video broadcasting environment. Discussions were also directed to the features, benefits, and differences of each of the delivery systems required to implement digital television. The topics of the afternoon papers were: Introduction—The Global Solution to Digital Broadcasting; The DVB Transmission Standard for Satellite, Cable, and Terrestrial TV; and The DVB Data Container Concept Broadcasting to Intermediate.

2nd Film Conference

A top notch quality film conference was held on June 12-14, 1998. The three-day event included an all-day seminar and a technical presentation featuring 17 papers divided into four half-day sessions. Richard May, Warner Bros., chaired the "Laboratory" session, which began with a film titled *Preserving Memories* presented by the Turner Entertainment Co. The session featured papers by several industry professionals focusing on color timing, preservation, and other functions. The topics were CFI Remote Computer Color Correction System Used for *Titanic*; Achieving Color Match Between Scanner, Monitor, and Film: A Color Management Implementation for Feature Animation; Combining Separation Negatives: Directly to Video; Digital Video to 35mm Film; and Introducing RULE, A New Leader for Telecine Verification.

Doug Greenfield, Dolby Laboratories, chaired the "Exhibition" session with the papers dedicated to new release formats and the present status of the viewing experience. The session also included electronic cinema, world view, and cinema sound. The paper titles were Extending the Audience: Delivering Closed Captions and Descriptive Narration for First-Run Theatrical Films; Image Content-Base Steadiness Correction of Motion Picture Film; Development of Christie Endless Loop Film Transport System; Field Experiences in Measurement of On-Screen Projection System Characteristics; and High Magenta, the

Road to Cyan-Dye Tracks, A Progress Report.

Ed DiGiulio, Cinema Products, and John Hora, ASC, co-chaired the "Production" session with the presentation of *License to Thrill*, a new ride film photographed in 70mm, mainly with a handheld camera, from Thrillco Entertainment. The topics covered such areas as electronic acquisition for film release; data acquisition formatting logging for use in post-production operation; motion techniques; and advances in negative stock. The paper titles were: A System for Consistent Film and DTV/DVD Program Production; New Fujicolor Negative Films; Cinematographer's Computer Workstation—Yorick; Illusion and Perception in Visual Effects; Special Effects, Special Film: An Introduction to Kodak SFX 200T Color Negative Film; and Creating a Light Meter Specifically Designed for Use in Professional Cinematography.

The Digital Domain/*Titanic* "Post-Production" session (highlight of the film program) was chaired by Jon Landau and provided attendees with a comprehensive overview of the creative and technical execution of the multi-Oscar-Award-winning film. Landau explained the unique challenges of the film's production, such as digital water, people, and *Titanic* paraphernalia. 2-D and 3-D effects were also discussed. Many video clips were shown documenting the construction of the studios in Baja, Calif.

All-Day Seminar

"Creative Choices in Cinematography" was the title of the seminar jointly presented by ASC and SMPTE. The speakers were Woody Omens, John Alonzo, Haskell Wexler, and Russ Carpenter (director of *Titanic*) and the topics were The Impact of Lens Selections on Composition; Camera Platforms—Dollies, Cranes and Humans; and Famous Cameramen, Famous Camera Shots. A typical convention set was recreated for this session at the convention center, complete with camera equipment, lights, actors, and crews. Omens discussed lens focal length and demonstrated its effect on perspective. Alonzo demonstrated the handheld camera work and explained how the same story could be told in a

different sequence by moving the camera in various ways. Three-time Academy Award winner Wexler demonstrated the use of Steadicam photography on the set, with the assistance of operator Holloway. The tremendous speed with which a shot could be set up and adapted to changing elements within a scene was shown. The 1998 Academy Award-winning director of *Titanic*, Carpenter, concluded the program with a discussion on the challenges of the *Titanic* shoots.

140th Technical Conference

This Annual Conference was held at Pasadena, Calif., with a kick-off Day-Long DTV Seminar on DTV-Proven Solution chaired by Mark Schubin.

Pre-conference Seminar

Over 400 registrants attended the seminar, which began with the Report From the Top Down Committee. Members of the committee include Shannon Skemp, Comark Digital Services; Terry Smith, Sarnoff Corporation; Jim Kutzner, Comark Digital Services; Bruce Miller, WHD-TV; Merrill Weiss, S. Merrill Weiss Group; William Miller, ABC; Matthew Goldman, DiviCom; Bruce Penney, Tektronix; and Steve Lyman, Dolby Laboratories.

The papers presented included Advanced Tutorial on Format Conversion, by *Charles Poynton*, Poynton Vector; Dealing with Different Aspect Ratios by *John Sprung*, Paramount Pictures; Multichannel Audio for Digital Television: Fact and Fiction from the Trenches by *Tim Carroll*, Dolby Labs; DTV Express: Integrating an ATSC Digital Facility by *Graham Jones*, Harris Corp., and *Ed Williams*, Public Broadcasting Service; 24-Frame Progressive HDTV Teleproduction by *Larry Thorpe*, Sony Electronics; A Universal Format Converter by *Kevin Stec*, Panasonic AVC Labs; Transition to HD Productions: Report from the Field by *Dan Stark*, Video Post Productions; Multiformat HD/SD Server by *Tom Goldberg*, Pluto Technologies; DVD: Home Video in the Digital Age by *Don Eklund*, Sony Pictures; DSS: Experience with MPEG Video; and AC-3 Audio Broadcasting by Direct TV.

"Network Choices" was the topic of

PROGRESS REPORT

a panel session with Tony Uyttendaele, ABC; Bob Seidel, CBS; Jim DeFilippis, Fox; Peter Smith, NBC; Bruce Jacobs, PBS/KTCA; and Chuck Dages, Warner Brothers.

Technical Program—"DTV Reality Check — The First Year"

Thursday Morning Session

John Sprung, Paramount, chaired the morning session on "Image Acquisition," including the titles: Implementation of Intranet Scene Preview for Feature Animation; New Technology on Fujicolor Negative Film; Kodak Motion Picture Films: The Vision Continues; Digital Simulation of Film Images; A Verification System for Cinematographer Image Generation Tools; A Progress Report on the Technology Council Analysis of Traveling Matte Performance Parameters; and Contemporary DTV Acquisition—Some Perspectives on the Related Standards, the Technologies, and the Creative.

Phil Livingston, Panasonic, chaired the session on "Video Compression and Systems Interconnection," including the presentations Video Compression: The Case of the Reluctant Reality; Aspects of Digital HDTV Coding; Factors to Consider When Choosing an MPEG-2 Encoder; Transport Stream Splicing for Broadcast Networks; Fast Transcoding of Compressed Bitstreams by Reusing Incoming Motion Vectors; and Bridging the Gap to DTV.

Thursday Afternoon Sessions

Robert Seidel, CBS Television Network, was the chair for the session on "Transmission and Receiver Technology—Reception Realities." The papers presented were WRAL-HD DTV Complete Field Testing Report; DTV Transmitter Installation Experience and Planning; Optimization of DTV Signals Within a Transmission Plant; Beyond the Studio Walls; Approaches to Planning and Deploying MRC's Innovative Dual (Analog and Digital) Carrier Microwave System; The Latest Technologies Used for NHK's Hi-Vision Broadcasts; and Globo TV's HDTV Experimental Transmission.

The session on "Video Compression and Systems Interconnection" chaired by Phil Livingston, Panasonic included

DTV: The Technical and Operational Challenges; Capacity Requirements of Video Servers in Broadcast Television Facilities; The Futility of Mezzanine Routing and Distribution; Wrappers and Metadata Progress Report; Advanced Television Systems Considerations for Compression; Compatible 1080P Display Using 1080i Compressed Transmission; and Requirements for a Universal Broadcast Communications Device.

Friday Morning Sessions

Gary Morse, Warner Bros., and Dave Bancroft, Philips Digital Video Systems, co-chaired the morning session "Telecine and Digital Electronic Post" comprised of seven papers: Transportation of Video in Mixed Format Environment; Networking Infrastructure for DTV; Format-Independent Post-Production; Digital Film Mastering in the Era of Digital Broadcasting; Presenting Widescreen and Standard Services Side by Side: The BBC Experience; Native 720 Progressive Transfers Using the Data Transfer Method—Or, How I learned to Avoid Interlace and Love the Supercomputer; and The Millennium Mastering Maze—Film in DTV.

Chuck Meyer, NVision, chaired the session "Sound Post-Production and Transmission" comprised of six papers: Improving Microphone Equalization for Dialog; Discreet Multichannel Audio for Post and Broadcast; Program Presentation Using the ATSC Audio System; Metadata Issues for ATSC Audio; Digital Communications for Sound and Images—State of the Art, Fall 1998; and 5.1 Audio—The Final Frontier of DTV.

Friday Afternoon Sessions

Bobby Wayne Pinkston, Dolby Laboratories, chaired the afternoon session "Film Laboratory and Theater Technology." The six papers presented were An Introduction to Kodak Vision Color Print Films; A Review of the Basic Principles of Developer Turbulation; Improvement in Laser Beam Technology for Subtitling on Polyester Prints; Cinema Trends in Curved Screens and Projection Lens; The Embodiment of Perfection: Advancing Applications to the Linear Loop Motion Picture Projector; and

Automatic Luminance Distribution Tuning for High Intensity Xenon Lamp in Motion Picture Film Projection.

Richard A. Mizer, Westpoint Media Resources, chaired the afternoon session "Servers and Video Data Management" with seven papers on Asset Management in the Digital News Environment; Living with Video Servers in a Digital Broadcast Facility; Right Sized Server Solutions: A Blueprint for Efficiency; Open Broadcast Networking; A Broadcaster's Guide to WAN Connectivity; Management of Fibre Channel Based Storage Area Networks (SANs) for Post and Broadcast; and Adding Hyperlinks to Digital Television.

Saturday Morning Session

Garrett Smith, Paramount Pictures, was the chair of the session "Electronic Cinema—Progress Report: Movies as Data." The papers were: Application DLP Technology to Digital Electronic Cinema—A Progress Report and Demonstration; Improving the Quality of Film to Digital Transfers for Digital Cinema; Laser Projection, Sound Screen, and Cyber Cinema—New Ways in Cinema Technologies; A DVB-Compliant Electronic Cinema Solution; Component Serial Digital Video Transport over Wavelength-Multiplexed Fiber Optic System; and Making Digital Cinema Actually Happen—What It Takes and Who's Going to Do It.

David Fibush, Tektronix, and Neil Neubert co-chaired the morning session on "Test and Measurement." The titles were: Objective Picture Quality Measurements: Expectations Today and Tomorrow; Perceptual Effects of Noise in Digital Video Compression; Equipment and Strategies for Service Quality Monitoring for Digital Television Networks; Assessing the Quality of Compressed Pictures Using a Perceptual Model; The Video Quality Experts Group Evaluates Objective Methods of Video Image Quality Assessment; Test Card "M"—Bitstreams for DVB Test and Measurement; and Testing Applications in Uncompressed HDTV Signals.

Sections Activities

Over 350 Section officers arranged more than 300 section meetings for

PROGRESS REPORT

their fellow SMPTE members, providing needed knowledge of the new advanced motion imaging technologies. I would like to take this opportunity to express my heartfelt appreciation and thanks to the dedicated SMPTE leaders and the speakers for their indispensable support. The following describes highlights of Sections activities in 1998.

ATLANTA SECTION invited Ray Ostrum and Gary Lieberman to present a paper on the Accom Attache DDR and the Accom Axial 3000 Editor, explaining the technology involved in the digital disk recorder and editor. David Bird, Philips BTS, addressed three technical situations—multiplexing multiple SDTV channels within 6-MHz DTV bandwidth; how to send both NTSC and DTV signals through a single studio-to-transmitter link; and a combined HDTV and SDTV multiplexing system. Mike Wood, Discrete Logic, presented “Open Platform Tools for Creative Editing and Effects.” The monthly meeting topics also included “A Solution to the DTV Multicasting Problem,” and “A Tour of WUPA” by Gary Kelly.

CHICAGO SECTION held a joint meeting with the local SBE attended by 50 members and guests hosted by WGN-TV. “Fiber Optic Basics,” presented by Mike Duckworth explained various forms of fiber-optic media such as single mode and multimode, distance, weight, bandwidth, various wavelengths used, and laser versus diode emitters. Additional joint meetings were held with SBE on “ATSC and MPEG Technology,” given by Barry L. Hobbs, NDS America Inc.; “Reliability of Mechanical Patching” presented by Greg Brown, Trompeter Electronics; and “Post Production with Windows NT,” given by Bill Farnsworth, Intergraph Digital Media Division.

DALLAS-FORT WORTH SECTION held meetings featuring “Digital Audio and Video for HDTV-Digital Transition,” presented by Carl Amend of NVision, which covered the DTV plant; audio signal formats; computer-based LANs versus real time distribution net; audio in the DTV plant; the studio network; and compression—benefits and realities. “The Wonderful World of Wide Screen” was given by

Chris Soltesz at the Sony Irving facilities. Wayne Kube, WFAA-TV, hosted and presented “See Over the Air HDTV Broadcast Demonstration!” at WFAA-TV.

DETROIT SECTION held a meeting on the subject “Testing An 8-VSB Transmitter” given by Linc Reed-Nickerson, Tektronix, and John Browne, John Browne & Assoc. Reed-Nickerson gave a brief description of coding schemes used in the modulator and an in-depth look at the 8-VSB modulation scheme. S/N, error-vector magnitude, and modulation error ratio measurements were discussed in detail. “Chief Engineers’ Roundtable,” was held at WKBD-TV Southfield, starting with an update on the latest DTV processes, followed by a panel of chief engineers from the local television stations currently implementing DTV.

FLORIDA/CARIBBEAN SECTION invited Carl Amen, NVision, to present his paper on “Digital Audio and Video for HDTV-Digital Transition,” for their meetings at WJXT-TV, Jacksonville, and WMFE-TV 24, Orlando. Dave Bird, Philips Digital Video Systems, had also been requested to give his paper, “Managing the MPEG-2 Transport Stream Through a Broadcast Facility and Associated Noise Reduction Technology,” at WJXT-TV, Jacksonville and WESH, Wymore.

HOLLYWOOD SECTION held their meeting at the Autry Museum of Western Heritage, Los Angeles. “A Closer Look at HDTV,” was presented by Charles Pantuso, HD Vision. Pantuso addressed three areas: why we need a single production standard for HD; how an interlaced production standard can encompass progressive material for film as well as interlaced material for sports and other live events; what HD is for, and how it relates to the viewing experience with examples shown in high definition. Bob Heiber, Chace Productions, had also been invited to give a paper on “Sound Preservation, Restoration or Remastering,” a practical discussion, with samples, of the issues facing commercial sound laboratories

HONG KONG SECTION invited Gwilhern Nicolas, Canal+ Technology, France, to present a paper, “Conditional Access and Interactive TV Solution for

MPEG-2,” at the Hong Kong Industrial Technology Centre. Gwilhern covered some security aspects of the Conditional Access System MEDIA-GUARD and used a demonstration tape to illustrate the interactive services.

HOUSTON SECTION. Chris Todd, MicroSearch, presented “Complete Digital Production in a Box” to demonstrate the Trinity system from PLAY, Inc.—a computer-based system offering a digital production suite in an inexpensive single unit, including graphics and titling, as well as nonlinear editing.

David Bird, Philips Digital Video Systems, gave the paper “A View of DTV and the Future” at Bill Moffitt Productions, NW Houston. “Interactive Chroma Key Technology” was presented by Kirk Hammond, Boeckeler Instruments, at KHTV-TV Channel 29. The Pointmaker Chroma-board System including a video maker, a 5-in. x 4-in. touch-sensitive wall panel, and a digitizing tablet was explained.

ITALY SECTION held a meeting on May 12, 1998, on “The Era of Digital Audio and Video Reproduction” in Milan.

NASHVILLE SECTION. Watkins Film School in Nashville hosted a meeting at the Watkins Institute at which Section Chair Bill Spencer explained the Society to students from various universities and colleges and encouraged them to consider organizing student chapters. Van Flesher of Watkins reviewed the over 100-year history of the school and offered a tour of the facilities.

Neil Neubert, JVC, was the speaker at the meeting on the topic of DTV. He gave a survey of proposed and established standards concerning DTV, including where those standards will lead in the next couple of years. He compared different HDTV technologies and explained in detail 4:2:2 and related processes.

NEW ENGLAND SECTION. Seventy-five members and guests attended the program, “Digital Rebuilding at WLVI-TV,” presented by Franco LaPietra who chronicled the history of technical growth and expansion at WLVI-TV, through corporate ownership. Steve L’Heureux and Calvin Rogers discussed and demonstrated the technical attributes of the

PROGRESS REPORT

MPEG-2 file server system offered by Vibrint Technologies. "Video Transfer/High Speed Video" was presented by Karl Renwanz at Southboro, Mass. The SPRINT system and its carefully controlled "clean room" were highlights of a tour of the facility.

NEW YORK SECTION. Representatives from the major telecine/telescanner field gave technical lectures on "Telecine Technology: State of the Art," describing the core technologies and interesting features of their products. The discussion offered the feel of comparative technologies: flying spot scanning versus line array CCD versus field array CCD; continuous motion versus intermittent motion transports, etc.

Mark Schubin presented his annual "NAB Wrap-up" at the Museum of Television and Radio. Another meeting featured three papers: The Sharpness Indicator Products, by Les Zellan, ZGC; The AATON XTR Pro-Super 16 Camera System with Its New High Capacity Magazine, by Peter Abel, Cine Tech; the Kodak 800 Film Product by Steve Garfinkel, Kodak.

Over 70 members and guests attended the December meeting on "Multichannel Audio for DTV" presented by Shannon Skemp, Comark Digital Services, discussing the purpose of the ATSC Implementation Subcommittee Top Down review of ATSC DTV standards, specifically as it relates to audio.

NORDIC SECTION. Stig-Goran Bergholm, YLE Finnish Broadcasting Co., scheduled two Nordic meetings. Nordic Section managers met to plan their future activities; the second was based on "Presentation of a New 12-Screen Movie Theater Complex."

OHIO SECTION held a joint meeting with the local SBE chapter, hosted by WCMH Columbus, with an attendance of 40 members, guests, and some student members from Hocking College. "ATSC DTV Standards" was presented by Bill Zou, General Instrument Corp., followed by a tour of the channel's new facilities.

"Harris/PBS DTV Express Tour and DTV Implementation and Strategies" was the topic of a panel discussion held at WOSU, Fawcett Centre.

PACIFIC/NORTHWEST SECTION. Over 100 members and guests attended the meeting at Capilano College, North Vancouver, Canada.

"16:9 Format, Film and DTV, Squeezing and Unsqueezing!" a presentation by Bob Morris, Capilano College; Ross Kelsay, Panasonic; Allen Rhodes, Sony Canada; and Curtis Staples, Rainmaker, covered the issues and challenges of ATSC DTV.

"Is Your Installation Digital an HDTV Ready?" was presented by Belden Wire and Cable, at Meydenbauer Centre, Bellevue, Wash. Cable requirements for analog, HDTV, SDI, etc., were discussed.

PHILADELPHIA SECTION held a meeting at WHYY-TV12 on "DTV: Some Options for the Future" presented by Bob Stamer of WHYY-TV, which explored options that permit evolving through the various standards, from today's low-cost ENG systems (DVC-PRO-25) to 4:2:2 production and graphics applications (DVC-PRO-50) to 480p (ADTV DVC-PRO-50), finally arriving at affordable 1080i HD equipment: camera, production switchers, and D-5 VTRs and format converters.

A meeting was held at the Valley Forge Sheraton, King of Prussia, on the Trinity switcher/on-line linear and NL-editor/CG/paint/still store/ DVE/audio mixer, presented by MacLelland of Applied Video Technology, Inc.

ROCKY MOUNTAIN SECTION held its 3rd Annual Technology Conference with the theme "All Things Digital Audio" at the National Digital Television Center, The all-day event was sponsored by Sony and TCI.

A joint meeting with the Denver Chapter of SBE was held at the National Digital Television Center. The program, featured "Conversion to HDTV," presented by Barry Watts, Tektronix, Colorado Springs.

The May meeting was a combination Food, Entertainment, and Technology Presentation at Iteco USA, Inc., Westminster, followed by a tour of the assembly and test area for high-powered digital HDTV transmitters.

ROCHESTER SECTION held a meeting at WNED-TV, Buffalo, N.Y., presented by Harris and PBS. The topic, "DTV Express Truck Tour" is useful for helping television broadcasters prepare for a rapid, cost-effective, safe transition to DTV and for key industry decision makers to understand what the advent of DTV can mean for them.

The 21st Annual Student Film and Video Festival was held on September 15, 1998, at the Carlson Auditorium, Rochester Institute of Technology. Art Cosgrove presented the paper "Digital Television—The Next Generation," which identified technical issues that are still in flux, such as conditional access, channel naming and navigation, network distribution, and local station studio and transmission requirements. Cosgrove also reviewed business development and the economics of the implementation of digital television.

RUSSIA SECTION held a wrap-up meeting in June on Telenoradiotekhnika-98 (the international exhibition of cinematography equipment) at NIKFI. The speaker was Dr. Preobrazhensky.

Fifty-eight members and guests attended a meeting at VNIITR at which Dr. Kostin discussed the result of using general-purpose amplifiers and acoustic systems in home TV theaters.

SACRAMENTO SECTION held a meeting on "High Speed Silicon" presented by Tom Palkert and Paul Duran, AMCC; David Lynch, Gennum; Jim Mears, National; Gene Rice, Cypress, at NVision, Grass Valley. The application of high-speed silicon for ATM, SONET, Fibre Channel, Gigabit Ethernet, and HD-SDI was discussed. Also included was a discussion related to IC process technology, trends, and capacities.

In May the members were treated to a very interesting and thorough tour of COMCAST's headend television cable system facilities in Sacramento. This proved to be one of the more enlightening meetings. Host David McVicker, Carl Hanson, and other group leaders described the earth station link to the central hub as well as links to the outlying hubs. William Zou, General Instrument, presented a paper, "The DTV Solution," explaining GI's ATSC-compliant encoding system, which provides a multistage, cost-effective, flexible approach to migrate from NTSC to SD as well as HDTV.

SAN FRANCISCO SECTION held a meeting on "DVD: What Current and Future Standards Mean for Video Industry" at Silicon Graphics, Inc., Mountain View. The August meeting on "Dolby Digital (AC-3) Audio: Low Bit-Rate with High Perceived Quality" was held at the

PROGRESS REPORT

Dolby Labs, San Francisco. A meeting on "Big TV Screens: Display Technologies for the HDTV Era" was held at the HT Electronics, Fremont, Calif.

TORONTO SECTION members and guests witnessed the Shopper Drug Mart Omnimax Theater, Ontario Science Centre, Toronto. Gordon Harris, Imax Corp., illustrated the challenges of creating film content, domes, and projection system for popular simulators and dome theaters.

Kodak Canada Inc., hosted a meeting on "Film Scanning in the Era of Digital Television" and "Advances in Digital Film Scanning and Recording." Walter Snyder described a scanning technology developed and manufactured by Kodak, which has been incorporated into the Philips Spirit Datacine. This technology is the foundation of a product designed to translate images on film to studio digital television and data formats. Loreto Leombruni reviewed the fundamental architecture of today's high-performance CCD film scanners and laser film recorders. A meeting on "Public Fiber Transmission: A Viable Alternative" was presented by Alex Leyn of PixStream and Brad O'Connell of ABL Canada. Alex Leyn discussed network distribution of studio- and enterprise-quality compressed real-time video, audio, and also network packet/cell jitters and packet/cell loss with its impact on MPEG-2 transport stream. O'Connell outlined various service models for video contribution available to broadcasters and the issues surrounding the delivery of MPEG-2 4:2:2 signals over ATM networks in depth.

David Hunter, CTV/Baton, hosted a meeting on the subject of "Technology Behind the CTV News 1 Service" at CFTO, Channel 9, Toronto. He explained the issues and decisions that shaped the technology used in the design of CTV's 24 Headline News Service and how it was integrated within an existing infrastructure.

WASHINGTON, D.C., SECTION. Over 80 engineering representatives from the area gathered at WUSA-TV for a DTV Roundtable to discuss plans and schedules for the implementation of digital television.

The 1998 Fall Convention and Meeting was held, jointly, with WEBC on "Continuing Migration to DTV, Digital Conversion and Transmission"

on September 25-26 at the Sheraton Fountainbleu Hotel, Ocean City, Md.

"Cable in the Year 2000" was presented by Tom Gorman, Jones Communications, and Tim DeVinney, Alexandria Systems, at Jones Communications, Alexandria, Va. "Fibre Rich" system architecture and telephony over cable and high-speed internet services were described, followed by a tour of the state-of-the-art headend.

Seminars

The Atlanta Section held a one-day seminar on March 14, at the Georgia Power Co. facility with 75 attendees. Michael Isnardi, Sarnoff Corporation, presented a paper entitled "On the Road to DTV, Putting the Bits Together;" Dave Walters, Snell & Wilcox, presented "The Issues Associated with Up-Conversion to HDTV, Down-Conversion to SDTV, and Methods to Minimize the Effects of Successful MPEG Compression and Concatenation." Brett Jenkins, Comark, presented a paper on the issues associated with the transmission and testing of DTV transmission systems; Clyde Smith discussed the suitability of using AC-3 in the studio environment, issues related to processing 5.1 or more channels throughout the plant, and progress in resolving related issues.

The Hong Kong Section held a seminar on MPEG-2 on Thursday, May 21, 1998, at the Hong Kong Industrial Technology Centre. A paper, "Statistical Multiplexing on MPEG-2 Data-Stream by Interactive Conditional Access System," was given by Gwilhern Nicolas, Canal+, supported by C-Cube Microsystems (Asia Pacific) Ltd. and DiviCom Hong Kong.

SMPTE/USC held a one-day seminar on "Production and Display Technologies for HDTV. The program included an overview of the production techniques, transmission systems, and display technologies involved in the delivery of advanced digital television and high-definition TV to the home and small audience environments.

The Toronto Section had another successful EXPERIENCE (the 5th in Toronto) arranged by Harvey Roger.

A day-long seminar entitled "Non-Linear Editing High-Definition Experience" was held at Deluxe Studios, Toronto, with 105 attendees.

The presentations included Introduction and Program Review; Technology and High Definition; Origination Mediums; Soft Framing and Aspect Ratios; Non Linear Platform; ADR, Effects Music Premix; The Art of Foley; Complete Sound Mix; and Surround Sound and the Home Theatre: Distribution Mediums, which demonstrated how the theater world is translated to the viewer's home.

Members of the Committee were Diane Cappelletto, Kodak; Brad Fortner, Ryerson University; Linda Grubb, Immad Broadcast; John Howells, Sony Canada; Jim Morrison, Imagineering; Michael Quast, Alliance Broadcasting; Mark Ritchie, Havey Rogers, and Sue Palmer, Alliance Broadcasting.

The 6th Technical Seminar was held on March 13-14, with the topic "The Tapeless Broadcast Environment." It was a great success as usual. Forty-eight members benefited from this two-day event organized by Chris Bell, Reid Robertson, Fred Benedikt, and Fung F. Lam at the CBC Toronto Broadcast Centre.

The morning of Day 1 had presentations from Todd Roth, ASC, describing network architectures and fibre channel storage, and Bob Johnson, CBC, who gave a technical primer on RAID storage. This was followed in the afternoon by presentations from John Bukowski, Quantel, on news room environments and Bill Roberts, AVID, explaining the many post-production infrastructure issues in the tapeless environment, including a discussion of Meta Data.

The morning of Day 2 had presentations from Jim Denney of SGI, describing the hardware architecture issues for a video computing platform and also the complex topic of asset management, while Wei Chao of Hewlett Packard talked about local area fibre channel networks as well as wide area network issues. The final paper in the program was given by Mike Deming of Sony, explaining the real life design and integration issues of a tapeless news room project he was involved in.

Future Seminar

The Toronto Section will hold the 7th Technical Seminar on Display Technologies in March 1999.