

Conference Technical Papers

The following papers are scheduled for the 104th Conference; they are listed here by topic. The complete Final Program will be mailed to reach all members before the Conference. An announcement of the Conference with registration forms containing the tentative outline of papers sessions has been mailed to the membership. Questions about specific sessions or papers should be addressed or telephoned to Program Chairman E. D. Llerena, Eastman Kodak Co., 1000 Connecticut Ave, N.W., Washington, D.C. 20036, tel. (202) 296 5250; or to Society Headquarters, Att: 104th Conference—Elaine Itzkowitz, (212) TN7-5410.

AEROSPACE

Motion-Picture and Television Methods to Aid the Engineer in Systems Analysis and Evaluation

JOHN L. GLENN, Hughes Tool Co., Culver City, Calif., and FRANK B. POLLARD, Aircraft & Missile Consultants, Manhattan Beach, Calif.

A High-Resolution Image Sensor

FRANK H. EASTMAN III, Astro-Electronics Div., Radio Corp. of America, Princeton, N. J.

A Technique for Anticipating In-The-Field Performance of Low Light Level Television

THOMAS L. POPPELBAUM, Aerospace Electronics Dept., General Electric Co., Utica, N. Y.

Photographic Control System for Project Apollo Launches

ARTHUR N. GREENE, NASA, John F. Kennedy Space Center, Fla.

The Influence of Visual Imaging Experiments on Unmanned Mars Spacecraft Missions

JOHN W. KIEFER, McDonnell-Douglas Astronautics Co., St. Louis, Mo.

Comparison of Imaging Systems for a Mars Orbiter

L. T. SEAMAN and V. KLEMAS, Science Integration Dept., General Electric Co., Philadelphia, Pa.

AUDIO AND VIDEO TAPE

The Problem of Video-Tape Cinching

KEITH Y. REYNOLDS, Memorex Corp., Santa Clara, Calif.

A New Solid-State Preamplifier

DAVID H. SHEPPARD, Ampex Corp., Redwood City, Calif.

A Coherent Light Image Data System

CARL H. BECKER, Precision Instrument Co., Palo Alto, Calif

A Two-Camera Radio Sync Bleep System

JAMES C. CAMPBELL, Division of Television, Radio and Film Communication of the United Methodist Church, Nashville, Tenn.

Automatic Tape Editing—A Step Forward

A. J. BUXTON, Ampex Corp., Redwood City, Calif.

A New Time Code for Automatic Editing

A. J. BUXTON and J. T. HEATHER, Ampex Corp., Redwood City, Calif.

CINEMATOGRAPHY

Recent Work on Varioscopic Cinematography

V. G. KOMAR, NIKFI, Moscow

An Automatic Rangefinder and Focus Control System

JEAN-PIERRE LAVANCHY and GIOVANNI B. ODONE, Paillard S.A., Yverdon, Switzerland

EDUCATION

Film and Education in France

JEAN VIVIÉ, Professeur au Lycée Technique d'Etat Photo Cinéma, Paris

A Remote-Access Instructional Systems Model for a Regional Occupational Center

ARTHUR M. SUCHESK, Southern California Regional Occupational Center, Torrance, Calif.

Case Study Reports on Multimedia Classroom Facilities

WILLIAM MILLARD, University of Southern Calif., Los Angeles

How to Make Effective Visual Technical Presentations

JEROME T. MCGARRY, Audio-Visual Service, Eastman Kodak Co., Rochester, N.Y.

Motion-Picture and Television Aids to Instruction: A Survey and Bibliography

E. B. CRUTCHFIELD, JR., Dept. of Communications, American University, Manakin, Va.

INSTRUMENTATION AND HIGH-SPEED PHOTOGRAPHY

Electroluminescent Diodes as Timing Signal Recorders in High Frame-Rate Cameras

MAXWELL A. KERR, Apollo Systems Dept., General Electric Co., Daytona Beach, Fla.

Thin-Probe Pulsed-Light Photometer for Measurement and Calibration of Timing and Other Pulsed-Light Sources

LEROY M. DEARING, ROBERT E. HILLER and C. HENDERSON BEAL, L. M. Dearing Associates, Inc., Studio City Calif.

Photographic Support in Laser Technology

LEROY E. REID, Autonetics Div., North American Rockwell Corp., Anaheim, Calif.

LABORATORY PRACTICES

Film-Strip Winder

OLDRICH SKUDRNA, Producers Color Service, Inc., Detroit

An Editing Machine for 16mm Double-System Film

GEORGE W. TRESSEL and J. STEPHEN FAWKES, Battelle Memorial Institute, Columbus, Ohio

A Complete Computer-Based Editing System

THEODOR H. NELSON, The Nelson Organization, Inc., New York

Television Applications of Gevachrome T9.02

R. G. L. VERBRUGGHE and R. HUYBRECHTS, Gevaert-Agfa N.V., Mortsel-Antwerp, Belgium, and R. A. EYNARD, Agfa-Gevaert, Inc., Teterboro, N.J.

Gevaert Motion Picture Process 6N1

R. A. EYNARD, Agfa-Gevaert, Inc., Teterboro, N.J.

Gevachrome Print Film, Type 9.02 —A New Laboratory Service

PAUL KAUFMAN, Du Art Laboratories, Inc., New York

Variations in the Quality of Daylight and Its Effect on Color Reversal Films

JOHN W. ZUIDEMA, DONALD R. MILLER and CHARLES M. WALL, Film Testing Div., Eastman Kodak Co., Rochester, N.Y.

Standardized Response From Magnetically Striped Motion-Picture Film

W. K. GRIMWOOD, F. J. KOLB, JR., and D. L. CARR, Manufacturing Experiments Div., Eastman Kodak Co., Rochester, N. Y.

Recording and Calibration of Super 8 Magnetic-Reproducer Test Films

ROBERT C. LOVICK, RICHARD E. BARTOW and ROBERT F. SCHEG, Photographic Technology Div., Eastman Kodak Co., Rochester, N.Y.

Duplicating Negatives and Prints Using Direct-Print Film

C. M. KRETCHMAN and F. W. SPANGLER, Film Emulsion Sensitizing Div., R. A. MORRIS and R. K. SCHAFER, Film Testing Div., Eastman Kodak Co., Rochester, N.Y.

A New Demand-Drive System for Processing Machines Using Spring-Centered Spools

CARL A. FEICHTINGER, Engineering Div., and LAWRENCE R. WITHEROW, Photographic Technology Div., Eastman Kodak Co., Rochester, N.Y.

A Review of the Effects of Squeegees in Continuous Processing Machines

PHIL E. PERKINS, Eastman Kodak Co., New York

The Development and Applications of the Rolling Loop

P. R. W. JONES, South East Engineering Works, Queensland, Australia, and J. P. CARSON, The Rolling Loop Co., Los Angeles

New Approaches in Color Film Printing

HANS CHR. WOHLRAB, Hollywood Film Co., Hollywood

An Integrated Circuit Film Footage Counter

ROBERT J. LEONARD, Michigan State University, Instructional Media Center, East Lansing

An Electronic Device Converting Subtractive Into Additive Printing Data

MARIO CALZINI, Tecnostampa, Roma, Italy

Color Balancing Ektachrome EFB Film in Various Illuminants

DAAN ZWICK and EARL KAGE, Research Laboratories, Eastman Kodak Co., Rochester, N.Y.

MEDICINE

Cinematic Studies of Living Heart Valves

HERBERT D. FERGUSON, Dept. of Medical Illustration, University of Pittsburgh, Pittsburgh, Pa.

OCEANOGRAPHY

Marine Fouling

ROBERT PLOTNER, Sperry Systems Management Div. Great Neck, N.Y.

Comparison of Underwater Camera Tubes

W. F. PARRISH and P. D. LEE, Ocean Research and Engineering Center, Westinghouse Electric Corp., Annapolis, Md.

Underwater Imaging Programs at the Naval Undersea Warfare Center, Pasadena

IVOR LEMAIRE, Naval Undersea Warfare Center, Pasadena, Calif.

Advances in Underwater Color Photography

JAY W. HARFORD, Astro Nautical Research, Inc., Cambridge, Mass.

Photogrammetric Applications to Undersea Tasks

JOSEPH POLLIO, U.S. Naval Oceanographic Office, Washington, D.C.

PHOTOGRAPHIC AND ALLIED SCIENCES

Realistic Pseudo-Photography by Computer: The Fantasm System

THEODOR H. NELSON, The Nelson Organization, Inc., New York

Prism Projection of Motion Pictures in Cartridges and Television Applications

LEON W. WELLS, Panopix Research Inc., Lodi, N.J.

The Bubble Chamber Technique for Photographing Interactions of High-Energy Particles

JOHN H. SONDERICKER, Brookhaven National Laboratory, Upton, N.Y.

Interference Filters: What They Are and What They Will Do

A. MUSSETT, Optical Coating Laboratory Inc., Santa Rosa, Calif.

Some Practical Aspects of Lens Designing by Computer

RICHARD J. HEIMER, Fairchild Space & Defense Systems, El Segundo, Calif.

Color Balance for Optical Projection and Television Display

L. E. DEMARSH and M. M. LIBERMAN, Eastman Kodak Co., Rochester, N.Y.

TELEVISION

Designing a Television Theater

ELMER ELLSWORTH SMALLING III, Tele Tape Productions, New York

A Mobile Film-Video System

ROBERT J. NISSEN, Rosner Television Systems, Inc., New York

Some Considerations in the Television Broadcasting of Color Film

C. B. B. WOOD, British Broadcasting Corp., Surrey, England

High-Quality Color Rendition in Color Telecine

D. H. McRAE, Canadian Broadcasting Corp., Montreal

Review Rooms for Color Television

S. F. QUINN, Canadian Broadcasting Corp., Montreal

Color Telecine Alignment Slides

DAVID CORLEY, D and S Corley Ltd., Islington, Ontario

Combed Aperture Equalization for Color Television Cameras

R. R. BROOKS and W. J. COSGROVE, Radio Corp., of America, Camden, N.J.

A Digitally Controlled Miniature Color Camera

R. H. McMANN, CBS Laboratories, Stamford, Conn., and R. G. STREETER, CBS Television Network, New York

A Combined Video-Processing AGC Amplifier

RICHARD S. WISE, Ball Brothers Research Corp., Boulder, Colo.

New Color Correction Techniques for Color Television Cameras

JOHN F. MONAHAN and ROBERT A. DISCHERT, Radio Corp. of America, Camden, N.J.

Evaluation of Chromaticity Errors in Live Color Television Cameras

JOSEPH WIGGIN, General Electric Co., Syracuse, N.Y.

Color Television Film Camera Design and Operation

GEROW D. BRILL, CBS Television Network, New York

Broadcast Center Color Conversion

RICHARD S. O'BRIEN and K. BLAIR BENSON, CBS Television Network, New York

Determining Television Image Distortions by Means of Moire Patterns

JOHN C. McKECHNIE, Naval Training Device Center, Orlando Air Force Base, Fla.

Interchange of Time and Frequency in Television Displays

A. KORPEL, S. N. LOTSOFF and R. L. WHITMAN, Zenith Radio Corp., Chicago

Television: The Subjective Effects of Filter-Ringing Transients

EARL F. BROWN, Bell Telephone Laboratories, Inc., Holmdel, N.J.

A Computer Control System for Multiple-Channel Television Programming

ROBERT D. POST, National Broadcasting Co., New York

WCAU-TV Modernization

C. ROBERT GROSS, WCAU-TV, Philadelphia

Color Picture Source Synchronization by the Natlock System

D. N. GREGORY, J. L. BLISS, I. D. B. MILLAR and C. J. ALLEN, British Broadcasting Corp., New York

Zero Delay Video Systems

ROBERT J. BUTLER, National Broadcasting Co., New York

THEATER PRESENTATION AND PROJECTION

A Review of the Fundamental Aspects of Motion-Picture Presentation

ROBERT R. E. PULMAN, Rank Theatres Ltd., Surrey, England

An Advanced-Design 6-kW Xenon Projection Lamp

HAROLD PLUMADORE, The Strong Electric Corp., Toledo, Ohio

F-Number Versus Illumination for the Drive-In Theater

KENNETH R. LEONARD, Kollmorgen Corp., Holyoke, Mass.

Contrast in Theater Projection—A Survey With Test Measurements

R. WALLACE TOWNSEND and GLENN M. BERGGREN, Wil-Kin Inc., Atlanta

Color Temperature and the Balanced Spectrum of the Theater Projection System

R. WALLACE TOWNSEND and GLENN M. BERGGREN, Wil-kin Inc., Atlanta

High Standards and Measured Quality in the Theater

R. WALLACE TOWNSEND and GLENN M. BERGGREN, Wil-Kin Inc., Atlanta

Testing Projectors and Lenses Without Film

J. L. WESTHAVER, Xenon Projection Co., San Diego, Calif.

Presentation of the Film "US" at the Confluence Theater, Federal Pavilion, HemisFair '68

WILL SZABO, Will Szabo Associates, Ltd., New Rochelle, N.Y.

The Rating Problem—Lamps in Luminaires

R. E. LEVIN and TOM M. LEMONS, Sylvania Electric Products, Inc., Danvers, Mass.

Three-Dimensional Movies Via Synthetic Stereo

DWIN R. CRAIG, Fairchild Hiller Corp., Germantown, Md.