

Inter-Society Color Council *News*



Number 335

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ATTENTION!!

A CALL FOR POSTER PAPERS at the 1992 ISCC Annual Meeting has been made. The topics for contributions are completely open. The intent is to encourage all ISCC members to share their state-of-the-art color work in the form of written communication. Titles and abstracts should be submitted by March 15, 1992 to

Paula J. Alessi
Eastman Kodak Company
1700 Dewey Avenue
Rochester, NY 14650-1925
Phone: 716-477-7673
FAX: 716-722-1116

NOTICE TO ISCC MEMBERS

We strongly encourage all ISCC members to send us any information on publications which relate to the color sciences, so they may be published in the ISCC News. If at all possible, please send them on diskette (as per the back page of the News).

Should you have any black & white photographs which relate to "color" events, we would be pleased to publish them in future issues as well.

Editor



Long Range Planning Committee meeting in Fredricksburg, VA August 24-25, 1991

Front row, left to right: Ellen Carter, Magenta Yglesias, Ann Laidlaw, Roland Connelly, Allan Rodrigues, Sy Commanday

Back row, left to right: Lou Graham, Evelyn Stephens, Ralph Stanziola, Mike Brill, Bill Thornton, Hugh Fairman

CANDIDATES FOR ISCC OFFICERS AND DIRECTORS



The Nominating Committee is pleased to present the outstanding Council

members who have agreed to let their names be put forward as candidates for the offices of

President-Elect, Secretary, Treasurer and Director. Every year, three new directors are elected while officers are elected every two years.

In order to give voting delegates a wider choice, it is customary for the nominating committee to select five candidates for the three positions on the Board of Directors. In addition, other candidates for any of these offices will be added to the ballot at the request of five voting delegates. Voting is by

letter ballot with ballots counted at the winter Board of Directors meeting in February.

Elected individuals take office at the next annual business meeting, which will be held at Princeton in June, 1992. In the past, the Council was founded and led by some of the leading figures in the color community.

We are fortunate that the following dedicated individuals are willing to assume the responsibility of directing the Council in the future.

Office of President-Elect

The president-elect serves for two years and then automatically assumes the office of president. This arrangement assures that the president is familiar with ISCC procedures and current issues. Holders of this office serve for six years on the Executive Committee, two years as president-elect, two years as president and two years as past-president.



Roland L. Connelly, Sr.

Roland L. Connelly, Sr. has spent over twenty years in the color industry and has been involved in all aspects of color measurement and control. He is

currently President of SheLyn, Inc. Previously, he was manager of Color Science Laboratories at Burlington Industries. While with Burlington Industries, he was responsible for the design, development and implementation of laboratory, production and quality control color systems in all of Burlington's dyeing and finishing operations worldwide (over fifty systems). Currently he is working with the application and development of new color technology for color using industries. This includes all phases of color control including systems, software, hardware and training. Roland's background includes a B.S. and M.S. degree in Textiles from Clemson University. Roland Connelly has been very active in the Council since 1972. He was secretary of Project Committee #18, Colorimetry of Fluorescent Materials and served on the ISCC Board of Directors from 1986-1989. He is currently Interest Group Coordinator responsible for overseeing and assisting the four ISCC Interest Groups. This includes coordination of publicity and scheduling for their programs at the annual meeting. Roland is also serving on the Long Range Planning Committee, which held a meeting in August open to all ISCC members to solicit ideas for making the Council even more responsive to the needs of the membership. Since 1970, Roland has been very active also in the American Association of Textile

Chemists and Colorists (AATCC). He has served as Secretary and Chairman of Committee RA36, Color Measurement, and is a member of seven committees. He was an organizer of the Color Measurement Workshop at AATCC that has been in continuous operation for fourteen years. He is a member of the U.S. National Committee of the International Commission on Illumination (CIE), and a member of American Computing Machinery-SIGGRAPH and the American Society for Testing and Materials. From 1977-1981 Roland served as a U.S. delegate to the International Standard Organization (ISO). From 1981 to the present he has served as Color Measurement Spokesman in textiles for the United States to the ISO.

Office of Secretary

The office of secretary maintains the records and documents of the Council and is responsible for the continuing minutes of the Council. The Secretary is also a member of the Executive Committee. In the past the position has been held by the same individual for a number of years, providing continuity.

Danny C. Rich has served as Secretary of the ISCC for two years. Currently he is also Co-Chairman of Interest Group I, Measurement and



Danny C. Rich

Colorimetry. He served on the ISCC Board of Directors from 1984-1987. Dr. Rich obtained his Bachelors degree in Physics from the University of Idaho in 1973. He then spent two years at Virginia Polytechnic Institute and State University in Blacksburg, Virginia, where he received a Masters degree in Physics in 1977. His research involved laser optics and its application to light scattering experiments. During his studies at VPI & SU he obtained a summer internship in the Sherwin-Williams Research Center in Chicago. While there he met Dr. Fred W. Billmeyer, Jr. who convinced him to transfer to Rensselaer Polytechnic Institute and work toward a Ph.D. in Color Science. In 1980 he completed his program by defending his disserta-

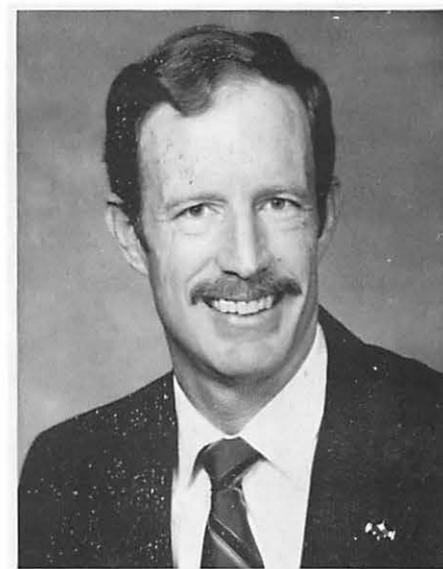
tion entitled, "The perception of Moderate Color Differences in Surface-Color Space". He returned to the Sherwin-Williams Company in the fall of 1980. In the fall of 1984 he became Manager of Research for Applied Color Systems, Inc. in Princeton, New Jersey. In 1989 Applied Color Systems became a part of the Eichhof Group of Lucerne, Switzerland, and combined with the Instrumental Colour Systems of the United Kingdom and Datacolor of Switzerland, is now Datacolor International. Danny currently holds the position of Manager of Advanced Colorimetry and Metrology for Datacolor International. He has published on all aspects of color science, including visual perception, instrumentation, and mathematical modelling.

Office of Treasurer

The office of treasurer is responsible for the finances of the ISCC, maintaining financial records, billing and receiving dues, disbursing funds, preparing income tax forms and chairing the Finance Committee.

Philip S. Hunter has served for two years as ISCC Treasurer. He is President and Chief Executive Officer of Hunter Associates Laboratory, Inc. Previously he was employed as a Financial Analyst with Nuclear Fuel Services, a subsidiary of the Getty Oil Company. He also served four years in the Air Force. His education includes a Bachelor of Business Administration at

George Washington University, Washington, DC, and a Master of Business Administration from Columbia University in New York. Philip has been active in many community and industry organizations. Some of his past service has included President of the Reston Rotary Club, Vice President of the Fairfax County Chamber of Commerce, President of the Manufacturers Council on Color and Appearance. Currently he is a Director on the Boards of the Virginia State Chamber of Commerce, the Fairfax County Chamber of Commerce, the National ESOP (Employee Stock Ownership Plan) Association and the National Chapter of the American Red Cross.



Phillip S. Hunter

Directors

Directors are expected to attend three board of directors meetings a year and provide guidance for the Council. They also undertake at least one other important ISCC assignment or appointment. The candidates in alphabetical order:

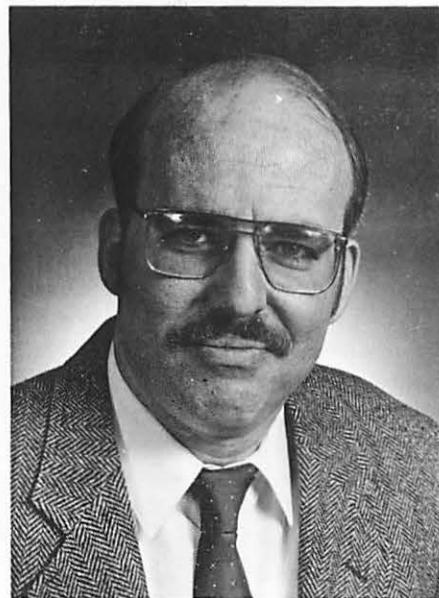
Michael H. Brill has had broad experience in the development and

application of mathematical models and computational physics. This experience has spanned colorant formulation, computer vision, image processing, photogrammetry and radargrammetry, underwater acoustics, and speech processing. He co-originated the Broken Mirror Model of acoustic scattering, the SAR DLT method of radargrammetric triangulation, and the Volumetric Theory of Color Constancy. Michael Brill received his B. A. in Physics at

Case Western Reserve University in 1969, a M.S. in Physics at Syracuse University in 1971 and a Ph.D. in Physics at Syracuse University in 1976. His thesis research resulted in a model of human color vision based on a retina in which spatiotemporal resolution decreases at low light levels to average out quantum noise. This model was designed for object-color perception in a changing visual environment. Based on ideas evolving from this model, Michael

has published many articles on color constancy (illuminant-invariant object-color recognition by human and machine vision). He has also authored or coauthored articles on color reproduction (especially from soft to hard copy), on color rendering, and on other topics in computational colorimetry. Altogether some 53 color science papers have been published along with book reviews and reports, in addition to papers on neurophysiological models, computer vision and underwater acoustics. He was employed from 1977-1979 at Perception Technology Corporation in Winchester, MA. From 1979-1980 he was Chief Scientist at Solotest Corporation in Framingham, MA. He worked in the Intelligent Systems Division of Jaycor in Alexandria, VA, from 1980-1983 and he is currently in the Ocean Sciences Department of Science Applications International

Corporation (SAIC). Michael Brill received the SAIC Executive Science and Technology Council prize in mathematics and computer science in 1986 for a paper with G. West on color constancy. He served as Chairman of the SPIE/SPSE Electronic Imaging Symposium in Santa Clara, CA, in 1990, and co-chaired SPIE/SPSE Conference on Human Vision, Visual Processing and Digital Display at the SPIE/SPSE Electronic Imaging Symposium in San Jose, CA in 1991. Michael is a delegate to the ISCC from the American Society of Photogrammetry and Remote Sensing (ASPRS). He serves on the Editorial Board of the journal, *Color Research and Application*. In addition to his membership in the ISCC and ASPRS, Michael is a member of the Optical Society of America, the Acoustical Society of America and the U.S. National Com-



Michael H. Brill

mittee of the International Commission on Illumination.



Robert Chung

Robert Chung has been a faculty member in the School of Printing Management and Sciences at Rochester Institute of Technology (RIT) since 1980. He holds the rank of Associate Professor and teaches many technical courses, e.g., color perception and color measurement, color separation systems, tone and color analysis, and quality

control at the undergraduate as well as the graduate level. He was instrumental in creating the Tone and Color Lab in the school which houses many state-of-the-art color measurement instruments for graphic arts applications.

In addition to teaching, Bob serves as the Associate Director of RIT's Laboratory for Quality and Productivity in the Graphic Arts, is active in conducting quality system audits and consulting work, which include quality improvement techniques and many aspects of the photomechanical color reproduction process. Bob was instrumental in planning, organizing and presenting many technical sessions and workshops in past quality and productivity conferences for the printing industry. He was the project manager on the design of an experiment using a four-color sheetfed press. He also led the study of the measurement and control of process printing by comparing the eyeball method vs. the SPC method at RIT.

Bob received his diploma in printing technology from Chinese Culture University in Taiwan, his B.A. degree in Industrial Technology from Eastern Washington State University in

Cheney, Washington, and his M.S. degree from RIT in Rochester, New York. Bob received the 1978 Society for Imaging Science and Technology (Formerly Society of Photographic Scientists and Engineers) Itek Award for the outstanding original paper published by a student in the field of photographic science and engineering. Bob was the 1991 recipient of the Graphic Arts Technical Foundation (GATF) Education Award of Excellence, an award presented to one graphic arts educator who has made an outstanding contribution to graphic arts education and training. He is a member of the Technical Association of the Graphic Arts (TAGA) Board of Directors, and the Chairman of the TAGA delegation to the ISCC. He works closely with Milt Pearson, Chairman of the 1992 ISCC/TAGA Williamsburg Technical Conference on Comparison of Colored Images Presented in Different Media. Bob is also a member of Phi Kappa Phi, the American Society for Quality Control (ASQC), the Graphic Arts Technical Foundation (GATF) and the International Graphic Arts Educator Association (IGAEA).

Robert T. Marcus is a Senior Research associate in the Coatings and Resins Division of PPG Industries, Inc. His research interests have concentrated on industrial color matching systems, color measurements and color tolerancing. He has published a number of papers on those topics. In addition to his research activities, Bob teaches in-house courses in color science and technology. Bob's involvement in color began over 20 years ago as an undergraduate at Rensselaer Polytechnic Institute (RPI) in Troy, New York. In addition to a B.S. degree in Physics, he also received a Ph.D in Chemistry (Color Science) from RPI. His graduate research investigated the visual spacing of the Munsell color order system and was done under the direction of Professor Fred W. Billmeyer, Jr.

Much of Bob's early industrial career was spent installing industrial color matching systems in the paint industry. He then left the field of color to become a systems manager in charge of scientific

and engineering computer systems. Upon his return to the field of color, Bob installed and operated a color matching system in the plastics industry. Prior to starting his current position, Bob worked for the Macbeth Division of Kollmorgen Instruments Corporation. At Macbeth he served as Technical Director of the Munsell Color Laboratory and as Technical Manager for Color Data Products. Bob became involved with the ISCC during his graduate studies and has been a member of the Council for 14 years. He has always been active in ISCC Project Committees and was elected to the ISCC Board of Directors in 1980. A change in jobs forced him to resign within the first year. He is currently a member of the American Society for Testing and Materials (ASTM) delegation to the ISCC and serves as the Recording Secretary of the ASTM Committee E-12 on Appearance of Materials. Bob is a member of the Federation of Societies for Coating



Robert T. Marcus

Technology (FSCT) and a member of the U.S. National Committee of the International Commission on Illumination (CIE).

Joel Pokorny is currently Professor in the Department Ophthalmology and Visual Sciences and in the Department of Psychology of the University of Chicago, where he has taught for the past 25 years. He received the A.B. degree from Middlebury College in 1962 and the Ph.D. degree from Columbia University in 1967. His graduate work was in the Department of Psychology. Professor Clarence H. Graham sponsored his dissertation research on visual acuity with chromatically illuminated gratings. Joel and his wife, Vivianne C. Smith, have collaborated on studies of normal and defective color vision, and flicker. They have published over 100 papers in scientific journals. Vivianne and Joel received the 1990 Edgar D. Tillyer Award from the Optical Society of America. The award is given biannually in recognition of distinguished work in the field of vision. Joel has been a member of the ISCC for about 20 years. He was a featured speaker at the ISCC Seminar, Color: The Educator in Art & Design, held at the Fashion Institute of Technology in New York City in 1988.



Joel Pokorny

His talk was entitled, "Color in the Eyes of the Beholder". In 1989 he gave an invited address, "Modern View of Basics of Color Vision Theory" during the Vision and Color Appearance Symposium arranged by Interest Group II at

the ISCC Annual Meeting.

Joel has been active in a number of national and international organizations. The posts he has held include Chairman, Working Group 41, Procedures for Testing Color Vision, of the Committee on Vision of the National Research Council, National Academy of Sciences (1973-1980); Chairman, Standardization Committee, International Research Group on Colour Vision Deficiencies (1985-present); Chairman, Color Technical Group of the Optical Society of America (OSA) (1990-1991); Chairman, Vision and Medical Optics Division, Technical Council, Optical Society of America (1991-1992); and Program Chair (1990) and General Chair (1991) of the OSA Topical Meeting on Noninvasive Assessment of the Visual System. Joel has been a member of the Board of Directors of the International Research Group on Colour Vision Deficiencies since 1988. He has been involved in organizing several international meetings, including the NATO scientific meeting,

"Advances in Understanding Visual Processes. Convergence of Neurophysiological and Psychophysical Evidence". He has served on the Editorial Boards of Investigative Ophthalmology and Visual Sciences (1984-1987) and Clinical Vision Sciences (1986-present). He was a member of the National Institutes of Health Visual Sciences B Study Section from 1979-1983 and has since chaired three Ad Hoc Study Sections.



Donald Woelfel

Donald Woelfel graduated from the University of Minnesota with a B.S. degree in Chemistry and is Vice-President and Technical Director of Colwell General, Inc. He was hired by Colwell Color Cards in 1964 to develop an instrumental color matching and control program. Colwell Color Cards grew into Colwell General Inc. through mergers and acquisitions and today is one of the world's leading color card companies with world-wide locations and affiliations. The quality improvement program Don instituted has not

only worked well internally but also has been used to develop sound working relationships with customers. Color standardization, computer color matching and tolerance control has been applied to a large number of products simulated by the color process. Projects with paint,

paper, plastic, printing and other industries requiring color samples have been produced.

Don worked with Ralph Stanzola in developing the physical aspects and production of the ColorCurve® System. This color system was created to give designers and other creative professionals a vast number of accurate samples and a logical and precise method to communicate with technical and manufacturing people. Don has been involved with the ISCC for many years and is currently Chairman of the Individual Member Group (IMG). Recent changes in the ISCC By-Laws established the Individual Member Group as an ISCC Member-Body. His technical papers have been published in paint and engineering journals. Presentations have been given to various groups, including meetings of Societies for Coating Technology and the SCAI Conference.

*Submitted by: Joy Luke, Chairwoman
Allan Rodrigues Paula Alessi Therese
Commerford Mary Ellen Zuyus*

FROM THE PRESIDENT

The Board of Directors at a recent meeting in Newport, RI considered a recommendation from the Treasurer to increase the Individual Membership Group dues by \$5 per year. This matter was given great consideration by the Board and ultimately passed the Board's vote, and will be implemented effective with the calendar year 1992 dues billing. The purpose of this communication is to let you know the various concerns which were on the Board's mind in taking this action.

From January to September of 1991, the ISCC operated at an approximate deficit of three thousand dollars. The balance of the year will have seen expenses continue at normal levels, but dues income will have been minor at best, since dues are billed and collected for the most part in the first quarter of any year. Thus, the deficit for the year 1991 is likely to be on the order of six thousand dollars, or so. This is not, of itself, a matter for grave concern. The ISCC has assets of about \$60,000 in various bank instruments, and has historically run a deficit one year followed by a surplus another year. The Board, however, looked beyond the bottom line to examine where the money was being spent and noted that the Newsletter costs are ever on the rise. Composition, printing, and particularly postage costs are the biggest offenders. The Newsletter in 1991 will cost about \$16,000 to produce and distribute. The Board reasoned

that there are two major services provided by the ISCC to its membership. The first of these is the Newsletter, and the other is the Annual meeting. Participants in the Annual Meeting pay their own way in the form of meeting fees. Although Annual Meetings have traditionally shown a modest surplus, it was unreasonable to expect the two hundred, or so, persons who attend the Annual Meeting to support through increased registration fees the 600, or so, members whose contact with the ISCC is by choice through the Newsletter. Since the dues income from Individual Members amounts to only about \$14,000, it was thought that an increase from \$25 to \$30 per year would bring a balance to the income and expenses so far as causing those who utilize the various ISCC services to pay for them in kind with their utilization. When the dues structure for Foreign Individual Members was considered, the Board found that a single large cost increase to the ISCC in 1991 stemmed from foreign postage and the cost of converting foreign funds. Accordingly, it was voted to increase the dues of this class of membership by \$10 per year to \$50 per year. These increases will be reflected in your annual invoice for dues which will be in the mail early in the first quarter of 1992. Although the Board in no way relishes the necessity to raise the dues, one can see by the constraints placed on us by the numbers cited above that, unfortunately, we have only to look forward to more of the same kind of pressure in future years.

Hugh S. Fairman

CALLING ALL COLORFUL MUSICIANS!

An ISCC band is forming! If you play an instrument, please let me know.



Depending on how many of us play and what styles, we might have an opportunity to play at the Princeton joint meeting with AIC next year. Who knows, this could become our most active interest group! please send me the following information as soon as possible:

Name, address, phone, fax, instrument, music styles, and music reading proficiency.

Thanks and I look forward to hearing from you.

Roy Berns

Munsell Color Science Laboratory, Center for Imaging Science, RIT
P.O. Box 9887, Rochester, NY 14623-0887
Phone 716 475 2230 / Fax 716 475 5988

Instrument: Guitar, Banjo Style: swing, modern jazz, western swing, bluegrass
Reading: chord charts and jazz fake books

ISCC BOARD OF DIRECTOR'S MEETING SUMMARY

In the spirit of keeping the general ISCC membership informed, this article will summarize the ISCC Board of Directors Meeting that took place on Saturday October 19, 1991, at the Newport Islander Doubletree Hotel, Newport Rhode Island. The Directors present at the meeting were Hugh Fairman, President; Paula Alessi, President-Elect; Danny Rich, Secretary; and Directors Norm Burningham, Ellen Carter, Richard Harold, Romesh Kumar, Ann Laidlaw, Evelyn Stephens, Joanne Taylor, and Magenta Yglesias. Guests included Roland Connelly, Interest Group Coordinator and Allan Rodrigues, Program Chair for the 1992 Annual meeting.

New Sustaining Member. Don Hall, in his new consulting business, has applied to the ISCC for full sustaining membership status. Upon Hugh Fairman's request for investigation, Fred W. Billmeyer, Jr., Chairman of the By-Laws committee, indicated that according to the By-Laws, a sustaining

membership was the correct place for corporate sponsorship. Thus, Don will become an ISCC full sustaining member, just as Montclair State College and the Pantone Research Institute currently are.

Reports of the Officers

Report of the President. Hugh reported on the following Executive Committee actions.

1. It was brought to the attention of the Executive Committee that it was time to begin rotation of some Interest Group Chairs to bring in some new ideas and relieve some of the the current Chairs of their duties. Toward that end, Roy Berns has been replaced by Joanne Zwinkels as Co-Chair of Interest Group I and Norm Burningham has been replaced by Mark Fairchild as Co-Chair of Interest Group II.

2. Paula Alessi has been appointed to an ad-hoc committee for CIE liaison. This is needed because two CIE divisions (I and VI) will be holding meetings in Princeton just prior to the Annual Meeting in 1992. We are in essence their hosts and we need a contact person to direct information to the CIE members.

Report of the Secretary. Three additional copies of TR 91-1 ("1989 ISCC Williamsburg Conference on

Color Discrimination Psychophysics", \$15) and two copies of TR 89-1 ("Guide to Material Standards and their use in Color Measurement", \$15) technical reports have been sold. Income from technical reports sales this past year was \$410.

Report of the Treasurer. A written report was handled by Hugh Fairman in the absence of Phil Hunter. As of September 30, 1991, the ISCC total 1991 income was \$39,484.62 and the total expenses were \$42,713.72. The size of this deficit is of no serious concern since the total assets in our checking and savings accounts and our two Certificates of Deposit is \$60,550.69.

Standing Committee Reports

Report of the Finance Committee. Phil Hunter, Chair of the Finance Committee, recommended that domestic dues be raised by \$5. He made this recommendation in view of the following facts. Newsletter costs absorb 100% of the dues income. We incur increased costs from postage and foreign funds conversion fees. The Council has a large turn-over in membership, i.e. about 15% of the membership per year are dropped. There is a strong feeling among all Board members that the dues should cover the Newsletter costs and that won't happen unless the dues are raised. Thus it was agreed that annual dues be increased by \$5 domestically and \$10 internationally.

Report of the Member-Body Liaison. Joanne Taylor, ISCC Member Body Liaison, reported that she has been identifying and communicating with delegates and delegation chairpersons. The Color and Appearance division of the Society of Plastics Engineers has been re-instated. The American Society for Photogrammetry & Remote Sensing (ASPRS) has appointed Dr. Michael H. Brill as delegation chairman. The Society of Motion Picture and Television Engineers (SMPTE) and the National Paint and Coatings Association (NPCA) have dropped their membership. An updated listing of

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the current member-body delegations will be included in the new membership book to be published this year.

Report of the Membership Committee. Ann Laidlaw, Chair of this Committee, reported that as of October 18th, there were 635 IMG ISCC members, including 27 students, 24 retired, 14 honorary, 73 foreign, and 497 domestic. There were also 172 member body delegates, liaisons, and editors.

Report of the Publications Committee. Joanne Taylor suggested that the "RIT Corner" column in ISCC News be changed to a "University Corner" to allow other schools with color science and technology programs to have an outlet.

Norm Burningham was appointed staff photographer to take pictures for the Newsletter at ISCC functions. Many thanks to Norm for volunteering to give it a try!

Report of the Ad-hoc Committee on Financial Reporting. Allan Rodrigues, Chair of this Ad-Hoc Committee, handed out a written report showing the reporting scheme proposed for the ISCC budgeting process. It features a spreadsheet format with detailed row and column assignments. Budgeted and actual amounts are always shown. The ISCC Treasurer as well as anyone planning an ISCC function that requires a pre-approved budget will use this reporting scheme.

Report of the Problems Committee. Allan Rodrigues, Chair of the Problems Committee, reported that two committees have completed their work recently. Project Committee 48, Slide Collection, chaired by Nancy Jo Howard will turn in a final report and will then close. Project Committee 47, Education Resources, does not have enough people to carry out the necessary work. Thus the work of this project committee will close and its members will try to accomplish their needs through activities of Interest Group IV, Color Education. Project Committee 45, Physiological Response to Color, indicates that all studies have been completed but the analysis of the

last study is not quite complete. The results will be published as either a Technical Report or in a trade journal. After that, the committee would have met it's scope and objectives and can be declared closed. Hugh Fairman reported on the activities and progress of Project Committee 44, Uniform Color Solid. Paula Alessi reported that the bibliography from Project Committee 32, Image Technology, is now in electronic format. A poster presentation will be made at the 1992 Annual Meeting.

Annual Meeting Reports

1992 - Princeton, NJ. Allan Rodrigues, a co-chair for the meeting, reported that there are now 15 papers submitted for the meeting and no more papers will be accepted. A program including paper abstracts will be handed out. There will be an exhibit of color matching systems on Wednesday afternoon. Only color matching systems will be allowed. The exhibit chairman will be Joe Campbell. We will seek corporate sponsorship of events taking place throughout the meeting period. The social program includes the usual wine and cheese party on Sunday and the awards luncheon on Monday. Datacolor International (formerly ACS) will host a picnic and tour of their facilities on Monday evening at no cost to ISCC. Tuesday will be the AIC Silver Jubilee banquet. Vans will be provided for handicapped transportation to and from the hotel and meeting rooms and vans will run from the hotel to the Monday picnic. There will be an accompanying persons tour to Ellis Island and the Statue of Liberty.

New Business

A proposal was received from A. Nemcsic (Hungary) describing a project to design and build a museum and school of color in Budapest, Hungary. The Technical University of Hungary has offered a \$380,000 building to house the museum and school and he has goals of raising a matching figure to start the program and facility. Given all financial

needs of the ISCC, we are in no position to contribute to this cause. We will inform A. Nemcsic that we concur with the spirit of the foundation's objectives but we are not prepared to make any financial contributions to the establishment of this foundation.

The remainder of the meeting was spent discussing Executive Committee recommendations to the Board based on the results from the Long Range Planning retreat held in Fredricksburg, Virginia in August.

The first recommendation involved the topic of limited commercialism at ISCC annual meetings. The ISCC does not wish to develop a formal policy of encouraging or discouraging exhibits because of the amount of work associated with exhibits. However, the ISCC will allow limited exhibits of commercial equipment, products, or services, when it is appropriate. The Council will restrict the hours of operation, maintain an even footing for all exhibitors, and provide oversight by assigning an exhibits coordinator. The 1992 ISCC Annual Meeting will be the first time we will conduct a commercial vendor exhibit under the direction of a coordinator. It will also be possible for vendors to provide commercial handouts to be placed in the area of the ISCC meeting registration tables.

There was a recommendation that a study group be formed to investigate how we might improve the quality of our Annual Meetings. Ellen Carter will chair this study group to explore issues relating to location, organization and co-sponsorship. A location with better conference facilities should be found. The rooms should be conference-ready meaning that slide and overhead presentations can be adequately viewed by all with no obstructions like pillars to block anyone's view. Also, facilities should be sought that would better accommodate participants interacting together outside the meeting rooms, perhaps in smaller hospitality suites. Some feel that the location should be isolated and enticing enough to maximize interactions among all participants for the entire duration of the meeting and hopefully avoid any

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desire or need to wander off-site. The organization of the Annual Meeting should also be addressed. Some feel that the symposium should open the meeting and be the central focus with some kind of input from each Interest Group. The Interest Group and Project Committee Meetings could follow with themes that might build from ideas that were introduced by the symposium. Some expressed a desire for more workshops of the kind we held in the past. The pros and cons of member body co-sponsorship of Annual Meetings should also be addressed.

There was a recommendation that each Interest Group should have its own constituency. Each IMG would be assigned to one or more Interest Groups. A mailing list would be maintained and a recording-correspondence secretary from each group identified. Interest Group chairs would require the secretaries to prepare correspondence, record minutes and write reports. There will be more information on the details of this recommendation in the coming

months.

There was recommendation to improve the integration of new members into the ISCC. A "buddy system" will be implemented to pair each new member with an ISCC Board member to serve as a mentor. The "Board Buddy" will write a letter welcoming the new member and identifying their interests to point the way for them to get involved in ISCC activities. The new member orientation meeting will be held on the first day of the annual meeting without any conflicts. All Board members will attend. Coffee and soda will be served at the new member orientation meeting to make it more of an informal social event.

It was recognized that the Member Body Liaison function is too large a task to be successfully carried out by one individual. Thus, three more persons will be assigned to assist Joanne Taylor in the Member Body Liaison Standing Committee.

Based upon the realization that the IMG comprises most of the ISCC membership, the recommendation was

made to investigate the possibility of allowing the Individual Member Group members to become voting members of the Council. All IMG members would get 1 vote, Member Body delegates would automatically become IMG members and thus get 1 vote. Currently, a Member Body gets only 3 votes. The change would add 7 votes but dilute the significance of those 10 votes against the 500 IMG votes. The Board of Directors currently has 14 votes which would also pale against the number of IMG votes. The general feeling was that this move would focus the Council in the right direction but it is important to discover what the implications of this change would be. Hugh Fairman, our President will begin by studying every occurrence of this type of change with respect to the ISCC constitution and By-Laws.

That completes the business conducted at the October, 1991 Board of Director's Meeting. Questions can be directed to any Board member. The next Board meeting will take place in conjunction with the 1992 Williamsburg Conference in February of 1992.

LONG RANGE PLANNING COMMITTEE - REPORT

The Long Range Planning Committee (LRPC) consists of Lou Graham (chair), Roland Connelly, and Ann Laidlaw. The LRPC met several times following the 1991 ISCC Annual meeting, to plan a Long Range Planning retreat. The results of the retreat are presented below.

Objective. The objective of the retreat was to make specific proposals to the ISCC Board for improving the interaction between the ISCC and its

various members. These proposals were to be long-term in nature, and will require thoughtful implementation by the Board and members.

Report on retreat. The retreat was held August 24-25, 1991 in Fredricksburg VA, and was attended by sixteen members interested in the direction and structure of the ISCC. Under the direction of a facilitator, the attendees raised six questions for further discussion. The attendees then broke into four groups, and considered two of the questions at a time. The entire group reassembled to present brief responses for each question to all the attendees. (The questions and short answers follow in Appendix A, along with a list of those attending the retreat.)

Questions for sub-groups. 1. What should the structure of the ISCC organization be?

2. How can we diversify meetings to

increase/decrease the technology levels of meetings?

3. How can we raise the level of the ISCC's image with its constituency?

4. What measures can be taken to improve inter-member relationships/groups?

5. Should Member-Bodies continue?

6. Should ISCC allow limited commercialism?

The format of the discussions within the small groups was to have each member in turn comment on the question, until each member passed on that topic without comment. The subgroup then voted on the responses, narrowing their answer to three or four items. In this manner, new ideas were solicited without lengthy discussion as to implementation or detail. When the reduced answers were presented to the larger group, other attendees could request clarification, but lengthy debate was still avoided.

continued from page 9

At the conclusion of the retreat, each attendee was asked to note an idea presented at the retreat which concerned them, and an idea which the person found significantly positive. These responses are tabulated in Appendix B, and contributed to the recommendations of the LRPC (Appendix D).

Following the retreat, Hugh Fairman circulated (to the Board and executive committee) a proposal for implementing some of the items discussed. (See Appendix C.) The LRPC issued a brief set of recommendations for consideration by the Board at the October 19 meeting (see Appendix D).

Conclusions. The recommendations of the Long Range Planning Committee

include the following:

- A. Establishment of an executive office and staff for ISCC.
- B. Marketing of ISCC.
- C. Reorganization of Interest Groups.
- D. Reorganization of Member Bodies.
- E. Improvement in integration of new members.
- F. Improvement in quality of annual meetings.
- G. Establishment of local chapters.

We recommend that each of the above seven subjects be assigned to a task force. The LRPC realizes that this sounds like a slow process, but the task forces should be expected to meet and prepare proposals for implementation by the February board meeting.

The Long Range Planning Committee is striving for a balance

between (1) moving as quickly as possible in as many areas as possible and (2) making thoughtful, consensus decisions that will suit the ISCC in the long term.

Members please note. Full copies of this report and appendices may be obtained simply by writing:

Louis A. Graham
 Lou Graham & Associates, Inc.
 1207 Colonial Avenue
 Greensboro NC 27408
 (919)379-1809 voice
 (919)370-9154 fax
 OR Ann Laidlaw
 SheLyn, Inc.
 1108 Greccade Street
 Greensboro NC 27408
 (919)274-1963 voice
 (919)274-1971 fax



THE CONFERENCE: The Inter-Society Color Council and the Technical Association of the Graphic Arts will co-sponsor a conference.



Comparison of Colored Images Presented in Different Media that are Intended to Simulate Each Other or Another Image February 23-26, 1992; Colonial Williamsburg, Virginia.

The two and one half day conference will address the problems associated with comparing and evaluating images that are intended to match or simulate another image when they are presented in different media. The program will consist of both invited and contributed papers and is intended to provide a forum to address and discuss critical issues associated with this topic.

Participants should be prepared to discuss the papers presented and the conference will be structured to encourage such participation. To aid in this interchange attendance will be limited and will be available on a first come, first serve basis. Registrants will receive pre-conference abstracts and are encouraged to be familiar with the pertinent literature.

Because, many of the problems associated with the comparison of images in different media involve

appearance concepts the conference is dedicated to the Memory of Richard S. Hunter, pioneer in the measurement, instrumentation and technology of appearance.

Arrangements. The conference will be held at the Woodlands in Colonial Williamsburg Virginia. A group booking has been arranged including a modified American plan and full facilities usage. This includes room accommodation, breakfast, dinner and visiting privileges to Colonial Williamsburg. Daily accommodations fees are \$76.50 per person for double occupancy and \$101 for single occupancy. Reservations can be made by contacting Colonial Williamsburg directly at 800-HISTORY; ask for group reservations under ISCC-92A by January 15, 1992.

Registration. The fee for the conference is \$200 for participants and \$30 for accompanying persons. This fee includes all social events. Registration will begin at 4:00 pm Sunday February 23, 1992 and will be followed by a reception at 5:00 pm.

Conference registration can be made through Mr. James Grady, arrangements chairman, by January 15, 1992. Checks

should be made payable to Inter-Society Color Council. Refunds cannot be made after February 3, 1992. For additional registration information call Jim Grady at 313/585-7200. For other information contact Milton Pearson, conference chairman, RIT Research Corporation, 75 Highpower Rd., Rochester, NY 14623, phone 716/475-5290.

Program. The technical program will consist of paper sessions on Monday morning and evening, Tuesday morning and afternoon and Wednesday morning. Monday afternoon is open to allow the attendees to enjoy the attractions of Colonial Williamsburg. A reception is scheduled for Sunday evening following registration.

The program will address such topics as: Appearance modeling, White point and monitor calibration, Data transmission, Adaptation, Color transforms and look-up tables, Present techniques, Color independent measurement (are there any), Transparency input; Reflection output Tolerances for pictorial images, Dealing with media of different luminances ranges, Influence of surface properties of image interpretation.

BOOK REVIEW

The Advancement of Colour, A History of the First Fifty Years of the Colour Group (Great Britain) 1941 – 1991



Edited by M. B. Halstead and J. G. Holmes, published by The Colour Group (Great Britain), 17 Castlebar Road, London W5 2DL, UK,

1991, ISBN 0 901 623 01 6, 214 pp, paper cover, 145 x 205 mm (5 3/4 x 8 1/8 in.). Price: £7.50 + packing and postage.

This most useful book was created to commemorate the 50th anniversary of The Colour Group (GB). It is a very comprehensive treatise and thus provides an interesting and useful history of color activity in England and of the people involved. This book should be in the library of everyone involved with color in the UK and of everyone involved with color internationally.

The content of this book, as well as any book, can be gleaned from a glance at the Contents page. The listings include: Objectives of the Color Group, Forward by Professor Wright, titles of the 13 chapters and 10 appendices. The chapter headings provide a concise summary of the contents of the book. The Chapters are: 1. Beginnings, 2. The first twenty years – The Physical Society Colour Group, 3. Independence, 4. The next thirty years – The Colour Group, 5. Local sections, 6. Working parties, 7. Symposia, 8. Summer visits, 9. Publications, 10. Awards, 11. Other organizations, 12. Art, design and colour education, 13. What comes next?, and Acknowledgements.

The Appendices are identified as follows: 1. Honorary Fellows, 2. Award Winners, 3. Patron Members, 4. Membership Statistics, 5. Officers of the Colour Group, 6. Science meetings, 7. Attendance at Science Meetings, 8. Symposia, 9. Summer visits, 10. Exhibitions.

The Objectives of the Colour Group are listed in the book, namely:

a. To promote the study of colour in all its aspects and also the related aspects of vision.

b. To provide an opportunity for the various people and/or groups of people concerned with the scientific, industrial, aesthetic, and educational aspects of colour to meet and become familiar the problems of each other.

c. To take all such steps as shall be necessary or desirable in endeavors to enable a representative opinion to be formed on various questions of standardization, specification, nomenclature and all other matters as the Group shall consider necessary in order to assist research.

d. To encourage and promote investigations of colour phenomena and the measurement of colour and endeavor to ensure that the United Kingdom of Great Britain and Northern Ireland shall be aware of developments in other countries of the world.

e. To assist in the dissemination of colour knowledge.

The Forward by Prof. David Wright, one of the founders of the group, contains some interesting tidbits of history. He states, "When you come to read Chapter 1 of this History, you will discover that the Colour Group was not only conceived almost by accident, but was also born prematurely – in just over three months!....In the United States the Inter-Society Color Council, which is ten years older than our Colour Group, also embraces a very wide range of colour interests among its membership and I know I had their example very much in mind when making our plans, although their Constitution is rather different from ours."

Chapter 1 – Beginnings, opens with: "The wartime blackout of 1940 was scarcely a propitious time for starting a new society concerned with vision. Enthusiasm and dedication were needed and fortunately both were there, sufficiently to get the 'Colour Group' off to a good start. The roots go back to the Optical Society. John Guild of the National Physical Laboratory had published fundamental papers on the algebra and geometry of trichromatic

colour mixture in the Transactions of the Optical Society in 1924–25....In the 1930s, the Physical Society took over the Optical Society in a most friendly and constructive merger and, perhaps to its surprise found itself concerned with visual phenomena....So it was that the program for an evening meeting of the Physical Society on 8 March 1940 had, largely by chance, four papers on colour."

The book contains portrait photographs and biographical sketches of a few people well known by name to many of us in the field of color, namely John Guild (1889–1979), William David Wright (born 1906), John Guyscliffe Holmes (born 1909), Gordon James Chamberlin (born 1904), Robert William Gainer Hunt (born 1923), Margaret Bessie Halstead (born 1928), and David Alan Palmer (born 1933). There is also a historic informal group photograph of the presentation on 5 July 1973 of the specially commissioned stained glass roundel to David Wright at the second AIC Congress at York University. The presentation by the Colour Group was to mark his 67th birthday and his retirement from the Applied Optics Section of Imperial College, London, both of which occurred in July 1973. Everyone in the picture is having a good laugh, especially Dorothy Nickerson.

Some of the important accomplishments of the Colour Group are documented in Chapter 9, Reports and Publications. It includes a discussion of documentation in the field of Colour Terminology as it evolved over the years. The subject of Defective Colour Vision in Industry is documented at length. Activity in documentation of Colour Systems was abandoned because of the full descriptions published by Judd in his book "Color in Business, Science and Industry". The history of the publications Colour News and the Journal of the Colour Group are documented. These publications contained some very valuable papers, but publication was terminated in 1975 with the planned start of Color Research and Application in 1975. A biblio-

continued from page 11

graphy of papers on color was published by the Color Group at intervals from 1969 to 1980.

Chapter 10. Awards, was of particular interest to this reviewer because it contains a page and a half on the history of the Newton Medal. A silver medal, two inches in diameter, is bestowed on the person selected at intervals of two or three years to deliver the Newton Lecture. The award was first made in 1963. It honors the lecturer, but it is not presented for a particular scientific work. Two other awards are bestowed by the Colour Group. The W. D. Wright Award established in 1978 and the C. James Bartleson Award in 1988.

The Wright award is a travel grant to help students attend overseas conferences such as AIC, CIE or the International Research Group on Vision. Applications for the award are

solicited. The value of the award was originally to be 200, but it is now index-linked. The award is often shared by two or more persons.

The Bartleson award was established to recognize work of international significance in the field of colour science and to encourage excellence in this field. Mrs. C. J. (Trudy) Bartleson established a trust fund for the award. The award consists of a monetary prize of 1,000 and a medal. It is expected that awards will be made at approximately two year intervals and that a total of five awards will be made.

Copies of the book can be obtained from Miss M. B. Halstead, 5 Farmlands, Enfield, Middlesex, EN2 8JE, ENGLAND. For postage and packing to addresses in England add 50 pence to the cost; for overseas shipment, add 250 pence. Note that payment is to be made in sterling.

Harry K. Hammond III

NEW STANDARDS ON SAFETY SIGNS AND COLORS

The American National Standards Institute recently approved a series of four new standards containing information needed to specify colors, formats, and symbols for safety signs and labels for use in environmental, industrial facility, and product applications. A fifth standard is expected to be approved shortly.

The standard of most interest to ISCC members is ANSI Z535.1, American National Standard Safety Color Code, which sets forth the technical definitions, color standards, and color tolerances for Safety Colors, and describes the applications of these safety colors to specific purposes in connection with accident prevention.

The standard establishes a safety color code that will alert and inform persons to take precautionary action or other appropriate action in the presence of hazards.

The new standards constitute a revision and expansion of ANSI Z53.1 (1979), Safety Color Code for Marking Physical Hazards. The "ordinary surface color" Safety Colors in Z535.1 are changed only trivially from the colors in Z53.1. They are: red, orange, yellow, green, blue, purple, white, gray, black, and brown. They are defined in terms of the 1931 CIE system for standard illuminant C, and in terms of the Munsell system. For each, the Munsell notation and CIE coordinates of the standard color and six tolerance samples, plus and minus hue, plus and minus value, and plus and minus chroma, are specified. Both visual and instrumental test methods for establishing conformance to the standard are described in detail. The last two sections were extensively revised and brought up to date as of the end of 1989.

In addition, an entirely new section

of the standard, Color Specifications and Instrumental Test Methods for Fluorescent Materials, was established. Two sets of specifications are provided. A set designated "restricted" consists of specifications for red, orange, yellow and green colors that are identical to those specified by the CIE for fluorescent colors for visual signaling in Publication CIE No. 39.2, 1983. They are meant to be used when the primary consideration is the differentiation among the three fluorescent colors red, orange, and yellow, used together in a single system. The set designated "unrestricted" consists of specifications for red-orange, yellow, and green. They are meant to be used when the primary consideration is the differentiation between only yellow and red-orange fluorescent colors, but it is required that these colors remain distinguishable for long periods of time. There is only one specification for green.

Most of the technical revisions leading to ANSI Z535.1 were carried out by Fred W. Billmeyer, Jr., who drafted the fluorescent color section, and W. Nick Hale, Jr.

The remaining new standards in the Z535 group are: ANSI Z535.2, American National Standard for Environmental and Facility Safety Signs; ANSI Z535.3, Criteria for Safety Symbols; and ANSI Z535.4, American National Standard for Product Safety Signs and Labels. A fifth standard, ANSI Z535.5, Accident Prevention Tags, is expected to be approved in the very near future. Where color is concerned, each of these standards refers back to Z535.1 for its specification.

These American National Standards are the result of some 12 years of development work by ANSI Accredited Standards Committee Z535 on Safety Signs and Colors. On this committee, Fred W. Billmeyer, Jr., serves as representative of the ISCC, with Norbert L. Johnson as alternate. The Chairperson of the Committee is Dr. Belinda L. Collins, also an ISCC member.

Fred W. Billmeyer, Jr.

ATTENTION

A CALL FOR PAPERS referring to the Interest Group I session at the 1992 ISCC Annual Meeting has been made.

The title for this session is "Problems in Color Measurement for Recipe Predictions". Since the theme of the 1992 Annual Meeting centers around computer color formulation, papers should focus on describing what you believe needs to be done to make computer color matching an ideal industrial tool. This will be your opportunity to present computer color

matching problems to the vendors of such computer color formulation systems, consultants and other participants.

Titles and abstracts should be submitted by March 15, 1992 to:

Dr. Joanne Zwinkels
National Research Council
Institute for National Measurement
Standards
Ottawa, Ontario K1A 0R6
Canada
Phone: 613-993-9363
FAX: 613-952-1394

ATTENTION

A CALL FOR PAPERS referring to the Interest Group II session at the 1992 ISCC Annual Meeting has been made.

The title for this session is "Recent Advances in Color Appearance Specification". The Inter-Society Color Council would like to take advantage of the fact that there is a CIE Division 1 meeting in Princeton on June 18 and 19, immediately preceding the 1992 ISCC Annual Meeting by providing a forum in which recent color appearance specification advances beyond colorimetry can be presented and discussed. Suggested topics may include experimental data on chromatic adaptation or color appearance, discussion of empirical or theoretical models for predicting color appearance, tests of color appearance models, and descriptions of applications in which color appearance models have been successfully used.

Titles and abstracts should be submitted by March 15, 1992 to:
Dr. Mark D. Fairchild
RIT Munsell Color Science Lab.
P. O. Box 9887
Rochester, New York 14623-0887
Phone: 716-475-2784
FAX: 716-475-5988

NEWS FROM MEMBER BODIES

TCR REPORT ON RA36 MEETING



Tuesday,
November
19, 1991
Doral Inn,
New York

Meeting called to order 4:00 P.M.
Minutes of May 9, 1991 meeting
amended and approved.

New member Linda Dyson welcomed
to RA36.

Old Business:

Joint letter ballot 91-1 on Nine-Step
Chromatic Transference Scale.

One negative ballot received,
correction made to the procedure, and
approved by the author of the negative
ballot. Other changes were editorial in
nature, and incorporated other
comments received. Procedure will be
submitted to TCR for letter ballot.

Reports From Subcommittee Chairs.

- Revision of Methods #153 and 145.
Laidlaw reported on work completed to

date. (Draft included with previous
minutes.)

Committee discussion resulted in
amendment of method name and scope:
Color Measurement of Textile:
Reflectance Spectrophotometry.
Interested committee members may
submit amendments to the draft to
Laidlaw for further revision. Harold
moved that RA36 issue new Method:
Color Measurement of Textile:
Tristimulus Colorimetry. Motion
carried. Harold to head subcommittee
with Willis, Stephens. Connelly moved
that RA36 issue new Method: Color
Measurement: Transmittance
Spectrophotometry. Motion carried.
Randall to chair subcommittee with
Demers, Simon, Russell, Wright.

- Color Technology Workshop.
Report by Connelly on successful '91
sessions. Subcommittee to meet in
February to plan 1992 workshop session.

- Publications, reported by Connelly.
Color Technology in the Textile
Industry supply at AATCC is nearly
exhausted. Publication needs to be
revised and reissued. Connelly solicited

ISCC PUBLICATIONS ARE AVAILABLE

ISCC Technical Reports and Proceedings of conferences may be purchased from the ISCC Secretary. Recent reports include Committee #22's "Guide to Material Standards and their use in Color Measurement" and Fred Billmeyer's comprehensive report on the 1989 Williamsburg conference on Color Discrimination Psychophysics. A complete listing and price list is on page 18 of the ISCC Membership Directory. Publications may be ordered from Dr. Dan C. Rich, ACS Datacolor, 5 Princess Road, Lawrenceville, NJ 08648

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new or existing articles for publication in new edition. Subcommittee consists of Simon, Harold, Demers, headed by Connelly.

- Subcommittee on revising the Gray Scale video consists of Wagner, Whitworth, headed by Revels. Revels is reviewing the existing video, will circulate to other subcommittee members.

- Subcommittee on creating new video to demonstrate sample presentation technique for color measurement consists of Whitworth and Jay, headed by Laidlaw. Subcommittee has not yet met, has no activity to report. Whitworth reminded the committee of a motion carried at a previous meeting to modify the BASIC code program included in Method #173 to allow users to input L*,a*,b*.

Revision was never completed by the committee. Randall volunteered to revise the program.

Whitworth reminded the committee that he had previously submitted proposed changes to Evaluation Procedure #1, although the procedure was not up for review. Ricard moved that Whitworth's changes be letter balloted, and the motion carried. Willis will implement.

ICE report. Laidlaw reported on successful Color Science paper session at 1991 meeting in Charlotte.

Budget request of \$1000. to acquire white and chromatic fluorescent standards.

ISO commitments reported by Connelly.

- Need caution in measurement of dark samples.

- Round Robin needed to determine necessity for neutral Gray Scale chips.

- Evaluation of Gray Scale for Color Change SEK2 (as modified by US) instrumental method. This method is a new draft international standard and will be balloted internationally. Connelly and Randall have collected data from several observers, will present results by February meeting.

New Business:

Willis discussed memo received from Mike Brill describing new calculation for .H*.

Brill's memo will be distributed with minutes for review by RA36 members, but this distribution does not constitute an endorsement or recommendation.

Whitworth moved that committee activities be tabulated to solicit activity by more members. Motion carried.

Harold moved RA36 request review of all of its Test Methods prior to publication in each year's Technical Manual. Motion carried. Wagner noted difficulty in managing RA36 methods containing many equations, etc.

Meeting adjourned at 5:25 P.M.

Ann Campbell Laidlaw

ADVANCES IN COLOR VISION, FIRST TOPICAL MEETING

In honor of Robert M. Boynton
Beckman Center, University of California at Irvine
January 31-February 1, 1992

GENERAL OBJECTIVE AND SCOPE



The first topical meeting of the Advances in Color Vision to be held

January 31-February 1, 1992, in Irvine, California will highlight important new results which have accrued in research on color vision. Sponsored by the Optical Society of America in cooperation with the Optical Society of Japan, the meeting this year will be held in honor of Robert M. Boynton to recognize his contributions to research in color vision, to the training of American and Japanese color vision researchers.

This topical meeting will consist of invited, contributed oral and contributed poster papers.

TOPICS TO BE CONSIDERED

The role of color in perception
Color constancy
The physiological bases of color vision
Applications of color vision
Color discrimination

INVITED SPEAKERS

The following is a partial list of invited speakers:

Charles D. Gilbert, Rockefeller University
Mary M. Hayhoe, University of Rochester
Mitsuo Ikeda, Kyoto University, Japan
Peter K. Kaiser, York University, Canada
John Krauskopf, New York University
Peter Lennie, University of Rochester
Donald I. A. MacLeod, University of California, San Diego
Allen L. Nagy, Wright State University
Julie L. Schnapf, University of California, San Francisco
Vivianne C. Smith, University of Chicago
Keiji Uchikawa, Tokyo Institute of Technology, Japan

For further information contact
Optical Society of America
Meetings Department
2010 Massachusetts Ave., NM
Washington, DC 20036
(202)223-0920

INTER-SOCIETY COLOR COUNCIL APPLICATION FOR INDIVIDUAL MEMBERSHIP

Name _____ Date _____

Dr. Mr. Ms.

Company/Affiliation _____

Street _____

City, State, Zip _____

Telephone (____) _____

Home

Fax (____) _____

Business

Signature _____

My chief interests in color are:

education

art

industry

science

My work relates to the following products and services:

Name other interests _____

My present and past business, professional or educational connections with color are: _____

My particular interests in color are: _____

I belong to the following national organizations or associations: _____

I learned about ISCC from: ISCC Newsletter Other source: _____

Please tell us the individual or organization that interested you in ISCC

ISCC dues are shown on the reverse side. Applications for membership dated prior to July 1 should be accompanied by full annual dues; those dated July 1 and later should be accompanied by 50% of annual dues. You have the option of subscribing to Color Research & Application at special membership rates. If you wish to do so, please add \$60.00 (US) or \$90.00 (overseas) to the amount of your check.

This application and remittance should be sent to

Ms. Ann C. Laidlaw, Membership Committee, c/o SheLyn, Inc., 1108 Grecale Street, Greensboro, NC 27408

Telephone: (919) 274-1963

EXCERPT FROM THE BY-LAWS OF THE INTER-SOCIETY COLOR COUNCIL, INC.

Constitution, Article II — Aims and Purposes

The Council shall operate solely and exclusively as a non-profit organization with the aims and purposes:

- A. To stimulate and coordinate the work being done by the various members leading to the description and specification of color by these members.
- B. To promote the practical application of this work to the color problems arising in science, art, and industry, for the benefit of the public at large.
- C. To promote communications between technically oriented specialists in color and creative workers in art, design, and education, so as to facilitate more effective use of color by the public through dissemination of information about color in both scientific and artistic applications.
- D. To promote educational activities and the interchange of ideas on the subject of color and appearance among its members and the public generally.
- E. To cooperate with other organizations, both public and private, to accomplish these objectives for the direct and indirect enjoyment and benefit of the public at large.

Council Activities

The ISCC is the principal professional society on the field of color in the United States, encompassing the arts, sciences and industry, pursuant to the Aims and Purposes described above. Other national organizations with an interest in color are Member-Bodies of the Council and appoint delegations to participate in the Council's work. Individual members are the largest single group. The Annual Meeting, usually held in April, includes meetings of the Project Committees and sessions of four Interest Group: Measurement & Colorimetry; Vision & Color Appearance: Art, Design & Psychology; and Color Education. There is also a main program devoted to a specific aspect of color plus a Poster Paper session. Joint programs with one of the Council's Member-Bodies are interesting and educational.

In most years there is a separate topical Williamsburg Conference, often in February, where a single color subject is explored in depth with participants from all over the world providing state-of-the art information. Attendance at these conferences is usually smaller than at Annual Meetings, reflecting their topical nature and permitting interaction between speakers and participants.

The ISCC is the U.S. Member of the Association Internationale de la Couleur (AIC), which holds general meetings quadrennially and topical meetings annually. Color Research & Application, published bimonthly in English, is the principal international journal in this field; it is endorsed by ISCC. It reports recent research and opinions of colorists, review books and reports on national and international color meetings. Membership in ISCC permits subscription at more than a 50% discount. The ISCC News, a bimonthly newsletter, reports the color activities of the Council, its members, Member-Bodies and international color organizations. Members receive the ISCC News at no cost. Member-Bodies and Sustaining Members receive 10 copies of the ISCC News.

Categories of Membership

	Annual Dues
<i>Individual Member.</i> Any person interested in color and desirous of participating in the activities of the Council.	\$30.00
<i>Student Member.</i> Full time students.	\$10.00
<i>Member-Body.</i> Any non-profit national organization interested in color and desirous of participating in the activities of the Council.	\$100.00
<i>Sustaining Member.</i> Any organization not eligible as a Member-Body, or any individual, interested in color and wishing to support the work of the Council. Receives 10 copies of ISCC News.	\$250.00
<i>Retired.</i> Treasurer must be notified, in writing, of retirement before dues have been billed.	\$10.00
<i>Library Subscriptions.</i> Receives all ISCC mailings, including ISCC News.	\$40.00
<i>Overseas Member.</i> A surcharge of \$20 is added to \$30 dues to cover additional mailing costs.	\$50.00

ASTM NEWS

ASTM

ASTM
Committees
D-1 on Paint
and E-12 on

Appearance are holding concurrent meetings at Fort Lauderdale, Florida, in late January, 1992 (See Calendar). The Paint Committee is drafting a 14th Edition of the *ASTM Paint Testing Manual*.

A Third Edition of the compilation of *ASTM Standards on Color and Appearance Measurement* has just been published. The first edition published seven years ago was compiled by Richard Hunter and a few members of the Appearance Committee. The content of the third edition was coordinated by Richard Harold of Hunterlab. He also co-authored the second edition of Hunter's book, *The Measurement of Appearance*.

The 1991 compilation is a 420 page, soft cover volume containing 70 ASTM standards for measuring chromatic and geometric attributes of appearance, including color, color difference, gloss, haze, opacity, hiding power, reflectance, retro-reflectance, transmittance, yellowness and whiteness.

For more information or to place an order, call (215) 299-5585 or FAX (215) 977-9679. ASTM accepts major credit cards. If not satisfied, you can return the volume within 15 days for a prompt refund.

Harry K. Hammond III

CALENDAR

Please send information on Member Body and other organization meetings involving color with dates, places, and information source to:

Harry K. Hammond, III
BYK-Gardner, Inc.
2435 Linden Lane
Silver Spring, MD 20910
(301) 495-7150 FAX (301) 585-4067

REGULAR CALENDAR see page 18

ASTM

Artists' Paint and Related Materials Meeting Agenda 19-20 January 1992

The Subcommittee will meet Sunday, 19 January and Monday, 20 January 1992 at the Crown Sterling Suites Hotel (formerly Embassy Suites), 1100 S.E. 17th Street Causeway, Ft. Lauderdale, FL 33316. Reservations (305-527-2700) must be received by 28 December 1991 to get the convention rate.

SUNDAY 19 JANUARY

1:00 - 5:00 pm DO1.57.08 Toxicity Labeling and DO1.57.12 Determination of Toxicity, Woodhall Stopford, MD, Chairman.

MONDAY 20 JANUARY

8:00 - 9:30 am DO1.57.02 Lightfastness of Pigments, Tom, Vonderbrink, Chairman. Test data from Atlas, Q-Panel, and Hallmark on fluorescent testing. Further discussion of the bulb problem, and Rav Kinmouth's request for caveat in revision of D4303.

9:30 - 10:45 am DO1.57.04 Specification for Artists' Paints, Al Spizzo, Chairman.

10:45 - 11:00 am Break.

11:00 - 11:30 am DO1.57.09 Watercolors, Tom Vonderbrink, Chairman.

11:30 am - 12:30 pm DO1.57.07 Physical Properties, Steve Sheehan, Chairman.

12:30 - 2:00 pm Lunch.

2:00 - 3:30 pm DO1.57.10 Consumer Evaluation, Joy Luke, Chairwoman. Discussion of negatives on proposed lightfastness test methods by N. Searle and Z. Pinney; discussion of editorial comments by A. Spizzo and Z. Pinney.

3:30 - 4:30 pm Discussion with the Pencil Makers Association on their participation in the development of a lightfastness standard for colored pencils. & DO1.57.11. Gouache Paints, Takahiro Takagawa, Chairman. A report will be presented in Mr. Takagawa's absence.

4:30 pm - 5:00 pm Subcommittee DO1.57, Mark Gottsegen, Chairman. Resolution of negatives, disposition of ballots, and other business.

If there are additions or changes to this Agenda, please let me know as soon as possible: Mark Gottsegen, Department of Art, UNC Greensboro, Greensboro NC 27412-5001 USA. telephone (919) 334-5571.

LONG RANGE CALENDAR

1993

ASTM COMMITTEE D-1 ON PAINT, Jan. 20-23
Embassy Suites Hotel, Ft. Lauderdale South, Florida. Information: Scott Orthey, (215) 299-5507.

ASTM COMMITTEE D-20 ON PLASTICS, Mar. 1-4
Atlanta, Georgia. Information: Katharine Schaff, (215) 299-5529.

LUX EUROPA 1993, Apr. 4-7

Chartered Institution of Building Services Engineers, Edinburgh, Scotland. Information: CIBSE, Delta House, 222 Balham High Rd., London SW12 9BS.

TAGA ANNUAL CONFERENCE, May 2-5

Technical Association of the Graphic Arts Annual Technical Conference, Minneapolis - St. Paul, Minnesota. Information: Karen Lawrence, (716) 272-0557.

AIC-7TH CONGRESS, Jun. 14-18

International Colour Association - 7th Congress, Technical University of Budapest, Budapest, Hungary. Information: Prof. Antal Nemcsics, Technical University of Budapest, Conference Office, Building Z, Room 101/b, H-1521 Budapest, Muegyetem rkp.3-9, Hungary, Phone and FAX (36-1) 185-2218.

ASTM COMMITTEE D-1 ON PAINT, Jun.

Franklin Plaza, Philadelphia, Pennsylvania. Information: Scott Orthey, (215) 299-5507.

IESNA ANNUAL CONFERENCE, Aug. 8-12

Illuminating Engineering Society of North America, 87th Annual Conference, Houston, Texas. Information: Valerie Landers, (212) 705-7269.

AATCC - CONFERENCE AND EXHIBITION, Oct. 3-6

American Association of Textile Chemists and Colorists, Montreal, Quebec, Canada. Information: AATCC, (919) 549-8141.

ASTM COMMITTEE D-20 ON PLASTICS, Nov. 15-18

Fort Worth, Texas. Information: Katharine Schaff, (215) 299-5529.

1994

ASTM COMMITTEE D-1 ON PAINT, Jan.

Embassy Suites Hotel, Ft. Lauderdale South, Florida. Information: Scott Orthey, (215) 299-5507.

TAGA ANNUAL CONFERENCE, May 1-4

Technical Association of the Graphic Arts Annual Technical Conference, Baltimore, Maryland. Information: Karen Lawrence, (716) 272-0557.

ASTM COMMITTEE D-1 ON PAINT, Jun.

Atlanta Georgia. Information: Scott Orthey, (215) 299-5507.

IESNA ANNUAL CONFERENCE, Aug. 7-11

Illuminating Engineering Society of North America, 88th Annual Conference, Maimi, Florida. Information: Valerie Landers, (212) 705-7269.

AATCC - CONFERENCE AND EXHIBITION, Oct. 11-14

American Association of Textile Chemists and Colorists, Convention Center, Charlotte, North Carolina. Information: AATCC, (919) 549-8141.

1995

TAGA ANNUAL CONFERENCE, Apr. 2-5

Technical Association of the Graphic Arts Annual Technical Conference, Orlando, Florida. Information: Karen Lawrence, (716) 272-0557.

CIE, Sept.

New Delhi, India

AATCC - CONFERENCE AND EXHIBITION, Oct. 8-11

American Association of Textile Chemists and Colorists, Hyatt Regency, Atlanta, Georgia. Information: AATCC, (919) 549-8141.

1996

TAGA ANNUAL CONFERENCE, May 5-8

Technical Association of the Graphic Arts Annual Technical

Conference, St. Louis, Missouri or Dallas, Texas. Information: Karen Lawrence, (716) 272-0557.

AATCC - CONFERENCE AND EXHIBITION, Oct. 8-11

American Association of Textile Chemists and Colorists, Oprtkabd Hotel, Nashville, Tennessee. Information: AATCC, (919) 549-8141.

1997

TAGA ANNUAL CONFERENCE, May 4-7

Technical Association of the Graphic Arts Annual Technical Conference, Montreal or Quebec City, Canada. Information: Karen Lawrence, (716) 272-0557.

AATCC - CONFERENCE AND EXHIBITION, Sep. 28-Oct. 1

American Association of Textile Chemists and Colorists, Marriot Marquis, Atlanta, Georgia. Information: AATCC, (919) 549-8141.

1998

TAGA ANNUAL CONFERENCE, May 3-6

Technical Association of the Graphic Arts Annual Technical Conference, Chicago, Illinois. Information: Karen Lawrence, (716) 272-0557.

AATCC - CONFERENCE AND EXHIBITION, Oct. 4-7

American Association of Textile Chemists and Colorists, Philadelphia, Pennsylvania. Information: AATCC, (919) 549-8141.

1999

TAGA ANNUAL CONFERENCE, May 2-5

Technical Association of the Graphic Arts Annual Technical Conference, Philadelphia, Pennsylvania. Information: Karen Lawrence, (716) 272-0557.

AATCC - CONFERENCE AND EXHIBITION, Oct. 12-15

American Association of Textile Chemists and Colorists, Convention Center, Charlotte, North Carolina. Information: AATCC, (919) 549-8141.

CALENDAR

1992

ASTM COMMITTEE D-1 ON PAINT, Jan. 19-22

Embassy Suites Hotel, Ft. Lauderdale South, Florida. Information: Scott Orthey, (215) 299-5507.

ASTM COMMITTEE E-12 ON APPEARANCE, Jan. 20-23

Embassy Suites Hotel, Ft. Lauderdale South, Florida. Information: Bode Buckley, (215) 299-5599.

ADVANCES IN COLOR VISION, Jan. 30-Feb. 1

Optical Society of America Topical Meeting on Advances in Color Vision, Irvine, California. Information: (202) 462-6272.

SPSE/SPIE SYMPOSIUM, Feb. 9-14

Electronic Imaging: Science and Technology, The San Jose Convention Center, San Jose, California. Information: Khe Nguyen, (408) 954-5486.

IS&T ANNUAL MEETING, Feb. 10-15

Society for Imaging Science and Technology, 45th Annual Conference, East Rutherford, New Jersey. Information: (703) 642-9090.

AATCC WINTER MEETING, Feb. 11-13

American Association of Textile Chemists and Colorists, Hilton at University Place, Charlotte, North Carolina. Information: Jerry Tew, (919) 549-8141.

ISCC - WILLIAMSBURG CONFERENCE, Feb. 23-26

"Comparison of Color Images Presented in Different Media" cosponsored with TAGA, Colonial Williamsburg, Virginia. Information: Milton Pearson, (716) 475-5290.

ASPRS/ACSM Annual Mtng & Convention, Feb. 29-Mar. 5

American Society of Photogrammetry and Remote Sensing Annual Meeting, Albuquerque Convention Center, Albuquerque, New Mexico. Information: Denise Cranwell (301) 493-0200.

ASTM COMMITTEE D-20 ON PLASTICS, Mar. 8-12

Asheville, North Carolina. Information: Katharine Schaff, (215) 299-5529.

TAGA ANNUAL CONFERENCE, Apr. 5-8

Technical Association of the Graphic Arts Annual Technical Conference, Westin Bay Shore Hotel, Vancouver, British Columbia. Information: Karen Lawrence (716) 272-0557.

ISO MEETING, Apr. 6-11

International Standards Organization Meeting, Paris France. Information: Bill Martin, (919) 549-8141.

COLOR MEASUREMENT FOR THE TEXTILE INDUSTRY, Apr. 28-29

Clemson University, Professional Development, Color Measurement for the Textile Industry, Hyatt Regency, Greenville, South Carolina. Information: Kay James, (803) 656-2200.

IS&T IMAGING '92, May 10-15

The Society for Imaging Science & Technology 45th Annual Conference, The Meadowlands Sheraton, East Rutherford, New Jersey. Information: (703) 642-9090.

AATCC SPRING MEETING, May 12-14

American Association of Textile Chemists and Colorists, AATCC Technical Center, Research Triangle Park, North Carolina. Information: Jerry Tew, (919) 549-8141.

SID '92, May 17-22

Society for Information Display International Symposium Seminar and Exhibition, Haynes Convention Center, Boston, Massachusetts. Information: Paul M. Alt, (914) 945-2437.

CORM ANNUAL MEETING, May 19-20

NIST, Gaithersburg, Maryland. Information: Albert Parr, (301)-975-3739.

ASTM COMMITTEE D-1 ON PAINT, Jun. 21-24

Marriott, Minneapolis, Minnesota. Information: Scott Orthey, (215) 299-5507.

ISCC - ANNUAL MEETING, Jun. 21-24

Nassau Inn, Princeton, New Jersey. Information: Dr. Allan B. J. Rodrigues, (313) 583-8245.

AIC INTERIM SYMPOSIUM, Jun. 23-24

Computer Colorant Formulation, Nassau Inn, Princeton, New Jersey. Information: Dr. Allan B. J. Rodrigues, (313) 583-8245.

ASTM COMMITTEE E-12 ON APPEARANCE, Jun. 24-26
Nassau Inn, Princeton, New Jersey. Information: Bode Buckley (215) 299-5599.

IESNA ANNUAL CONFERENCE, Aug. 2-6

Illuminating Engineering Society of North America, 86th An-

nual Conference, San Diego, California. Information: Valerie Landers, (212) 705-7269.

XVII ISPRS CONGRESS, Aug. 4-13 17th

International Society of Photogrammetry and Remote Sensing Congress in conjunction with 27th International Geographic Congress and 1992 Global Change Conference, Washington Convention Center, Washington, District of Columbia. Information: Judy Peesel (301) 493-0290.

WWDU '92, Sep. 1-4

Third International Scientific Conference - Work With Display Units, International Conference Center, Berlin, Germany. Information: Dr. Ahmet Cakir, ERGONOMIC Institute Ltd., Soldauer Platz 3, D-1000 Berlin 19, German Federal Republic.

OSA - ANNUAL MEETING, Sep. 20-25

Optical Society of America Annual Meeting, Albuquerque, New Mexico. Information: Optical Society, (202) 223-8130.

IMAGING THE FUTURE, Sep. 21-25

The Royal Photographic Society Science Committee Symposium on Imaging the Future, University of Cambridge, England. Information: Dr. M. R. Pointer, Kodak Ltd., Research Div. W-93, Harrow, Middlesex, HA1 4TY, England, tel. 44-81-427-4380 or FAX 44-81-863-4798.

AATCC - CONFERENCE AND EXHIBITION, Oct. 4-7

American Association of Textile Chemists and Colorists, Hyatt Regency, Atlanta, Georgia. Information: AATCC, (919) 549-8141.

USNC/CIE ANNUAL MEETING, Oct. 11-13

The United States National Committee of the CIE Annual Meeting, Embassy Suites Resort, Scottsdale, Arizona. Information: Dr. Ian Lewis (602) 991-9260, FAX (602) 991-0375.

FSCT, Oct. 21-23

Federation of Societies for Coatings Technology, 70th Annual Meeting and 57th Paint Industries Show, McCormick Place, Chicago, Illinois. Information: (215) 545-1507.

GIS/LIS Conference, Nov. 6-12

Geographic Information Systems and Land Information Systems Conference sponsored by the American Society of Photogrammetry and Remote Sensing and several other organizations, San Jose Convention Center, San Jose, California. Information: Denise Cranwell, (301) 493-0200.

IS&T E/W SYMPOSIUM III, Nov. 8-13

The Society for Imaging Science & Technology, Maui Westin Hotel, Maui, Hawaii. Information: (703) 642-9090.

ASTM COMMITTEE D-20 ON PLASTICS, Nov. 15-19

Miami, Florida. Information: Katharine Schaff, (215) 299-5529.

OPTICON, Nov. 15-20

Optical Society of America OPTICON '92, Boston, Massachusetts. Information: Optical Society, (202) 223-8130.

AATCC FALL MEETING, Nov. 17-19

American Association of Textile Chemists and Colorists, The Doral Inn, New York City, New York. Information: Jerry Tew, (919) 549-8141.

NEWSLETTER EDITOR Michael A. Hammel

Send photo material (black and white if possible) to:

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Please note: the deadline for submission of material is the 1st of even numbered months.



meeting reports



contributions from members

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American Society for Photogrammetry and Remote Sensing (ASPRS)	Optical Society of America (OSA)
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Detroit Colour Council (DCC)	Society of Plastics Engineers, Color & Appearance Division
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