Inter-Society Color Council *News*

ANNUAL MEETING REPORT

REPORT OF THE PRESIDENT
LOUIS A. GRAHAM

The past year has been one of change for ISCC: the office of Secretary was transferred from Dr. Fred Billmeyer to Ms. Therese Commerford. In addition, your Board of Directors moved to implement another recommendation of the Long Range Planning Committee: a three-day meeting. By so doing, additional time has been provided for the Project Committees. This has also allowed for the simultaneous presentation of three workshops on important subjects: Illumination, Education and the OSA uniform color scales.

These changes, in combination with the program on "Color, Coating and Design" by James A. Cave at the Louisville Meeting, have produced in the Louisville meeting a most worthwhile result. We would like to thank all those involved.

The 1983 Williamsburg Conference under the Chairmanship of Dr. William A. Thornton and Charles Jerome, with co-sponsorship from the I.E.S., was an outstanding success with fine presentations and active participation in all the discussion.

The 1984 Williamsburg Conference is well into the planning stages under the able direction of Richard Ingalls. The subject will be the important current color topic, "Color and Imaging," and many notable speakers are already committed for the program. Note now the date of February 12-15, 1984.

Through the liaison and direction of Dr. Allan Rodrigues, the 1984 annual meeting will be held on April 8-10 in cooperation with Detroit Color Council. The location will be Southfield, Michigan, outside Detroit. The program will include an exclusive evening visit to the Henry Ford Dearborn Museum.

While we are in Detroit, ISCC can also welcome its newest member-body, the Association for Finishing Processes of the SME. Your Board of Directors unanimously approved their application in a final vote on Saturday, April 9.

AATCC (specifically AATCC Committee RA-36) held a conference on "Practical Application of Color Technology to Textiles" in March in co-sponsorship with ISCC.

The Board of Directors of ISCC regularly meets three times a year in winter, spring and fall in full day sessions to conduct the business of your Council. Each Director works in one or more specific functions for the Council, and all deserve your support and thanks.

Retiring from the Board are: Joy Turner Luke, William A. Thornton, Ralph Stanziola.

Joining the Board are: Daan Zwick, Anna Campbell Bliss, Ralph Besnoy.

To note some of the recent standing committees' changes: Joyce Davenport, now President-Elect and Chairperson for the Problems Committees, has reluctantly relinquished her role as

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Member Body Liaison to William Thornton.

Rolf Kuehni has just now been appointed Membership Chairman.

Richard Ingalls has taken over from Joy Turner Luke on Long Range Planning.

You have noted, and will continue to note, significant contribution to ISCC activities from all of these loyal workers.

Now, let me note several items of importance to you and ISCC.

The Macbeth Award nominations are now being solicited. The Chairman this year is Robert Hoban. For procedure, please consult Bob or the By-Laws of ISCC.

Honorary membership in ISCC is one of the recognitions extended to distinguished persons in the field of color. Nominations are being received by your Secretary for approval by your Board of Directors. This will also be covered in the Newsletter.

The year of 1982 was kinder to ISCC than to many other organizations. 1983 looks better; let us work to color it green and growing.

REPORT OF THE SECRETARY
THERESE R. COMMERFORD

Three new directors were elected to the Board, as reported in the last issue of the Newsletter. Replacing Directors Joy Turner Luke, Ralph Stanziola, and William A. Thornton are: Ralph Besnoy, AATCC, IMG; Anna Campbell Bliss, ASID, IMG; and Daan M. Zwick, SMPTE. The newly elected directors will serve on the ISCC Board for the next three years, 1983 to 1986.

The Board of Directors approved the election of the Association for Finishing Processes of the Society of Manufacturing Engineers as a member body of the Council at its meeting on April 9, 1983. The Council extends its welcome and best wishes to the Association.

I regret to announce the resignation of two member-bodies during the year – House and Garden and the Institute of Food Technologists. House and Garden, which has sponsored a color program for the past 37 years is changing direction and has decided to retire this successful venture. The resignation of IFT reflects the move into other areas of the food industry of those people whose interest in color and knowledge of the Council made the Institute an active contributor to ISCC. In addition, N. V. Philips' Glaeilampenfabricken of the Netherlands resigned as a Sustaining Member of the Council. Needless to say, ISCC regrets the loss of these valuable members and hopes each

will reconsider joining the Council in the near future.

The following table is a list of the number of ISCC members in each of several categories as of May 1, 1983. This number fluctuates from month to month, with new members being continually added:

ISCC membership on May 1, 1983:

Membership Category	*Number of Members*
IMG: United States	545
Canada	12
Other Countries	71
IMGR (retired)	20
IMGS (student)	10
Honorary members	14
Delegates	253
AIC representatives	24
Member-Body Liaison	35
Sustaining members	1
Library subscribers	19
Total membership*	914

*Many delegates and AIC representatives are also IMG's; hence, the total membership is not the sum of the above items.

At its meeting on April 9, 1983, the Board elected Kenneth L. Kelly, APS, IMG, as Honorary Member of the Council.

The Board also confirmed the appointments by President Louis A. Graham of several new chairmen of standing committees: Publicity, F. W. Billmeyer, Jr.; Long-Range Planning, R. D. Ingalls; By-Laws, T. G. Webber; and Membership, R. G. Kuehni. In addition, W. A. Thornton was appointed Member-Body Liaison.

An amendment to the By-Laws has been proposed, and approved by the Board. This amendment will be Article XI, Suspension of Rules, and will allow a two-thirds majority of the Board to suspend a by-law or standing rule for a stated purpose and for a specific time. The amendment will go to the Delegates for a vote later this year.

The Journal, "Color Research and Application," continues to receive endorsement by the Council. Many outstanding papers have been published in the Journal this past year. ISCC members are encouraged to enter their subscriptions at a special member rate.

In the past year, ISCC cosponsored meetings with two of its member-bodies. The Illuminating Engineering Society and ISCC cosponsored the very successful Williamsburg Conference, "Color and Illumination – Man Lights, and So Colors, His Environment," on February 6-9, 1983. The Council, together with the American Association of Textile Chemists and Colorists, cosponsored a successful symposium, "Practical Applications of Color Control," in Greensboro, North Carolina on March 8-9, 1983. Additional cosponsored meetings of the Council and its member groups are planned for 1984, including the annual meeting. This will be held in Southfield, Michigan, on April 8-10, with the Detroit Color Group and the Detroit Paint Society as cosponsors with the ISCC.

REPORT OF THE TREASURER AND FINANCE COMMITTEE EDWARD T. CONNOR

The financial condition of your Council remains strong. As of December 31, 1981 the Fund Balance (net worth) was $34,389, an increase of $6,193 during the year 1982. Contributing to this increase was greater income realized from Annual Meeting than expected, interest on investments and expense controls.

The approved Budget for the Calendar year 1983 follows. Included for comparison purposes are Budgeted and Actual (momentarily unaudited) figures for 1982. The 1983 Budget projects an income increase, primarily based upon the Williamsburg Conference which was not held in 1982. The Budget includes a new category of expense, that of Publicity/Special Projects ($1,500), in accordance with emphasis being placed on these areas by your Board of Directors. The 1983 projected surplus is $3,410.

INCOME:

	1982 BUDGET	*1982 ACTUAL*	*1983 BUDGET*
Dues	$15,000	$14,197	$14,000
Reprints/Mailing List	300	561	400
Annual Meeting – Net	1,500	4,089	1,500
Williamsburg – Net	0	0	5,500
ISCC Crests	1,080	869	300
Interest	1,500	3,082	2,000
	$19,380	$22,798	$23,700

EXPENSE:

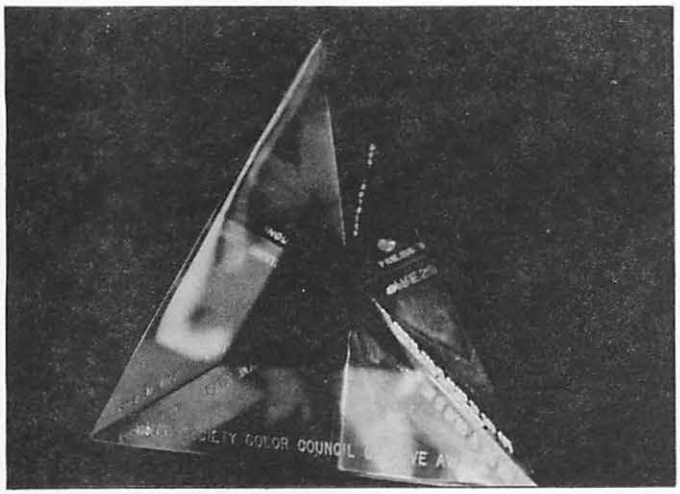
Newsletter			
Print/Mail	$11,000	$ 9,525	$10,000
Paper	600	0	1,000
Amort. of N/L Cover	1,023(1)	0	0
Membership List	825	825	825(2)
Committee Expense	400	0	400
Publicity/Special Projects	0	0	1,500
President's Office	200	0	200
Secretary's Office	3,500	3,500	3,500
Treasurer's Office	800	660	800
Directors' Meetings	700	428	500
Audit	700	700	800
Service Awards	300	385	400(3)
ISCC Crests	770	517	165
Miscellaneous	400	65	200
	$21,218	$16,605	$20,290
EXCESS OF INC. VS EXP.	($ 1,838)	$ 6,193	$ 3,410

(1) Consumed in 1981 and written off in full in 1981. Should not have appeared as expense on 1982 Budget.

(2) Amortized over 2 years – $825/year in 1982 and 1983.

(3) Expense over 4 years – 1982 through 1985.

May I extend my sincere thanks to the members of the Finance Committee: Mr. Charles G. Leete, Mr. William N. Hale, Jr. and Mr. Warren B. Reese, and to my fellow officers, the Board of Directors and all of the members of the Inter-Society Color Council for their guidance and cooperation during this successful year for your Council.



EUGENE ALLEN RECEIVES GODLOVE AWARD

Professor Eugene Allen of the Center for Surface and Coatings Research, Lehigh University, Bethlehem, Pennsylvania, received the 1983 Godlove Award at the Annual Meeting of the Inter-Society Color Council in Louisville, Kentucky, at a Luncheon Meeting of the Council at the Galt Hosue on April 12, 1983. The Award was presented by Dr. Albert C. Zettlemoyer, longtime friend, recent President of the American Chemical Society and Former Provost of the University.

In his presentation, Dr. Zettlemoyer recalled that Professor Allen has been interested in color since graduating from Columbia University in 1938. He obtained his Master of Science from Stevens Institute in 1944 and his PhD from Rutgers University in 1952, majoring in spectrophotometry. He received these advanced degrees while working for Picatinny Arsenal during the war years and then at American Cyanamid from 1945 to 1967. He received the Senior Research Award from Cyanamid in 1958 enabling him to study in England for a half year on the effect of ionizing radiation on textiles. In 1967, he joined Lehigh's Center for Surface and Coatings Research as Director of the Color Science Laboratory. In 1982 he received the Armin J. Bruning Award from the Federation of Societies for Coatings Technology in recognition of his significant contributions to the development of the science of colorimetry and spectrophotometry in the Paint and Coatings Industries.

Dr. Zettlemoyer then read the following citation: "For immeasurably adding to the development of the application of the physics and mathematics of colorant behavior in paints, plastics, printing inks, and textiles, and the ISCC proudly presents its highest award, the Godlove Award, to Professor Eugene Allen of Lehigh University."

Zettlemoyer went on to explain that Allen has played a most important role in the research and application of computer color-matching programs that are so routinely applied today. His papers describing the mathematical methods for application of Kubelka-Munk equations to computer color matching laid the foundation on which all subsequent methods have been based. His interest in radiative transfer theory and mathematics has extended to the application of advanced theories for explaining the interaction of light and matter that will be of interest to scientists for generations.

In addition to his scientific accomplishments, Gene and his wife, Bede, have contributed much to the community in which they live and work. Bede is a professional pianist. She has taught for many years at Julliard School of Music in New York City. Gene is also an accomplished pianist. Together they frequently play four-hand compositions.

RESPONSE BY THE GODLOVE AWARD RECIPIENT

Thank you, Dr. Zettlemoyer. I feel that second only to the thrill of receiving the Godlove Award is the pleasure and honor I experience in having you present it.

This event is the high point of an association with the Inter-Society Color Council that has extended over the last thirty years. This organization is one of the most unusual and interesting groups that I have ever seen or, for that matter, heard of. There is, first of all, its structure: it is a loose confederation of organizations of the most extreme variety. Who ever heard of the American Philatelic Society and the American Association of Textile Chemists and Colorists coexisting under one roof? It is also a collection of problem subcommittees, again concerned with the most diverse topics imaginable, extending from the color of tooth enamel to the evaluation of pigment strength. Then there is the budget, which, as long as I can remember, has been minimal. Next, there is its vitality; it has kept its present structure and manner of operating practically since its inception, and shows no sign of changing; when you have a good thing going there is no need for change. Finally, there is the spirit of camaraderie that pervades all of its meetings, so different from the conventional professional societies.

The first ISCC meeting I attended was in 1952, and I will never forget it. In that year I was told by my boss in American Cyanamid, George Royer, that he wanted the company to become proficient in the field of colorimetry. I told him that I knew all about colorimetry. As an analytical chemist, I always thought that colorimetry meant analyzing a solution by measuring the depth of its color. But Dr. Royer told me about the CIE, about Hardy's Handbook of Colorimetry, about Illuminants A and C, and about metamerism. He also suggested that I attend the ISCC meeting in New York.

Now I had previously attended many meetings of scientific societies, and was well accustomed to indistinct pronunciation, shocking grammar (like "this spectra") and illegible slides; above all I was used to the tremendous *impersonality* of the presentations. I arrived at the ISCC meeting a little late, and heard Isay Balinkin, who was chairman of the Problems Committee at that time, introduce each of the problem subcommittees. He would first tell an anecdote or story relating to that particular problem, and then introduce the chairman of the

subcommittee who would report. For example, when he introduced the subcommittee on color differences, I think it was, he related that in his hotel that morning the bellhop, after having shined all the shoes on the floor, had put one black and one brown shoe outside his door. When he showed them to the bellhop, the guy said, "Well, I'll be damned. That's the second pair like that I saw today!" Not only had I never heard a joke at a scientific society meeting before, I had never seen anyone smile.

Later in the meeting Dorothy Nickerson was awarded a specially made pin by the ISCC. The pin was beautifully designed, and was only one of its kind, fabricated for the occasion. This was before the days of official awards; it was merely a heartfelt thank you from the people in the ISCC to a dynamic scientist and activist. All this was my first introduction to the people in the field of color, and I said to myself that this was the field for me.

I think it was the next day that I attended a meeting of Subcommittee 18, Colorimetry of Fluorescent Materials. At that time I was not as wise in peer self-defense as I am today. No sooner did I sit down than I was volunteered for secretary. The only trouble was that I didn't understand what in the world anyone was talking about. I wrote down verbatim whatever anyone said. The next day I got hold of Ed Stearns, who was at the head of Cyanamid Bound Brook's Optics Lab at the time, and asked him to explain fluorescence to me. This he did in only 30 minutes, during which time I learned more than with many professors in a full semester. So I was able to put my scribblings in some kind of order and present a coherent set of minutes to the committee at the next meeting. I was promptly made chairman. This was ten times worse than being secretary. It was only much later that I learned the secret of how to conduct a committee meeting: You arrange everything beforehand by phone.

I was professionally interested in fluorescence because Cyanamid made fluorescent whitening agents. After I had familiarized myself with fluorescence and done some theoretical work in the field, I used to give occasional talks for lay audiences. One day I found myself on a program with Ralph Stanziola, who used to work for Cyanamid at that time. The audience consisted mainly of housewives, and the idea was to show how fluorescent whiteners had found their way into all the detergents on the market. I was supposed to explain the basics of color, and then Ralph was to show the application to fluorescent whiteners. I gave my piano demonstration, and I may as well show it to you, since I see that there is a piano here by a strange coincidence.

First I play a C on the piano, then a G above the C, and then an E on top of that. If I play the three notes together, you will hear a chord, and in that chord you will be able to distinguish all the three notes. The ear does not blend the notes to produce a new note, but is capable of hearing all three notes simultaneously. But if the ear acted the way the eye does, you would not hear the chord but you would hear a single note instead, like this:

To make this more striking, I will now play six bars of "America," first with chords the way the ear usually hears it. I will not play it as the ear would hear it if it behaved like the eye. I will assume that the ear will average out the frequencies in each chord. It would sound like this: That has a weird charm of its own, but it's not America!

Well, that demonstration went over quite well. Having softened up the audience, I turned them over to Ralph. Now, we had a striking demonstration that we used to use. We would turn out all the lights in the room, and then direct an ultraviolet lamp around the room to show the way all the men's shirts glowed. Ralph spoke for a while, and then at the proper time took out the UV lamp and shone it around the room. The women were wearing blouses made of synthetics. The blouses did not glow, but what *did* glow were the bras. Ralph had effectively undressed all the women in the room!

In the early sixties, our sales department at Cyanamid asked me whether it would be possible to come up with a computer color matching program in time for a certain meeting that was to occur in two weeks. Cyanamid wished to be the first to offer this kind of service for their dyestuff customers. Since this was obviously a matter of life and death and my job, I put everything aside and devoted, literally, day and night to the problem. Our computer at that time was an IBM 1620, which occupied an entire room and probably had much less capacity than today's home computers that fit on your dining room table. Also we did not have the ability to communicate with the computer in civilized fashion, that is to say, by means of typewriter-like keyboard. What we had to do was to punch up a deck of cards and then feed them into the computer. The monster would swallow the cards and then sit still for about a half hour working out all of the possible matching formulas, while I sat biting my nails. Then there would usually be a bug in the program, and I had to locate the offending punched cards, change them, and start all over. As the zero hour approached, the matches we were getting looked weirder and weirder. But finally I found a major error in the program, and we began to get reasonable matches. On the strength of these, we were able to announce that we had a computer color matching program for dyestuffs in time for the meeting.

Now let me immediately make sure that I am not going to leave you with a wrong idea. When you write a computer program for color matching, it is very nice if you can make the program efficient and mathematically elegant. But it is much more important for you to have an exact knowledge of what kind of calculations the formulator or batch shader needs. In order to get this exact knowledge you have got to spend a great amount of time in the plant and gain an intimate familiarity with every aspect of the color formulating or batch shading process. You almost have to take your computer out to the plant floor and suffer along with the shader as he makes his adds according to your recipes. If you have this kind of practical experience, your computer color matching program will be a good one, even though the Fortran listing looks like someting out of Finnegan's Wake.

You recall the mythological figure who could not lose a fight because each time he was thrown down contact with the ground gave him renewed energy and he would jump up with twice his former power. This story is really a profound alle-

gory. Prolonged and repeated contact with the batch shaders and color formulators, who do the groundwork for the production of colored goods, is a vital necessity for anyone who expects to write a color matching computer program.

Now let me say a few words about one particular direction in which I would like our science of color to move. The kind of study I have in mind is an ideal one for our society, the Inter-Society Color Council. I think we are ripe for the development of a real aesthetics of color; more generally, an aesthetics of vision, in which color would play a major part. I am not thinking of the elementary principles of color harmony; this would be basic stuff for what I have in mind, but only a part of it. I am referring rather to the fundamental study of why one arrangement of colored objects is good and another bad. You notice that I ally myself on the side of those who believe that there is an absolute good and an absolute bad in art. Let me give you an example of the kind of thing I am talking about, taken from the field of music.

Lately I have been giving a talk called "Music and Gestalt." In this talk I have an interesting demonstration; it's too bad that I don't have the equipment to present it to you now. I play portions of recordings of two compositions side by side. One is from a piece called the "Warsaw Concerto," and the other is a portion of the first movement of the First Piano Concerto by Brahms. These two pieces have a great amount of superficial similarity; in both the piano is cast in a heroic mold, both have a thunderous tympani accompaniment, both are in the minor key, both are agitated and stormy. Yet the Brahms piece is a great work, while the other is a bunch of junk. How can two pieces of music that are so much alike, that seem to be made of very much the same stuff, be so different in value? This is where a science of aesthetics would be very helpful. I have begun to do some thinking on this problem, and am trying to play with the idea that the greatness of a musical composition is related to the quantity of information it contains. This is not merely a tautology, but has some validity; if I had more time, I would try to explain.

I would like very much to see the same kind of thing done in the field of the visual arts; specifically, it would be extremely useful to establish some basic rules about the aesthetics of vision and color. With our present knowledge of color science, we would have a powerful tool to help us, a tool that was not available to everyone who has previously considered the problem of aesthetics. As an example, I can mention the Optical Society Color Scales that I saw demonstrated in the workshop at this meeting. A cross-section through the OSA color solid is beautiful in an absolute sense, yet would have been impossible to achieve without our present level of knowledge and sophistication in color science.

Much has been written about the rules of color harmony. But the science of color harmony, if it is a science, bears the same relationship to the aesthetics of vision as musical harmony bears to musical aesthetics. We have to lean on the study of harmony in both cases, but we have to go much deeper in order to understand why a certain work of art is great and another one is not. It would be wonderful if science, which today often works on such problems as how many warheads can you put on a guided missile, would concern itself with the ancient Greek problem of aesthetics.

I would like to close by paying tribute first to my graduate students with whom I have come in contact since my arrival at Lehigh University. Second, I am indebted to my colleagues in the field of color, many of whom are in this room. I would especially like to mention Dorothy Nickerson, who encouraged me at the start of my career in color, and who acted as a role model for me and was really responsible for getting me started and involved. Then I would like to acknowledge my other colleagues among the faculty at Lehigh. I would like at this time to single out Dr. Albert Zettlemoyer, who was provost of the University and who is a past president of the American Chemical Society. Whether he knows it or not, he served as a constant reservoir of guidance and encouragement for me during my tenure at the University. Finally I would like to thank my strongest source of inspiration, my wife.

Thank you all.

Eugene Allen

Left to right: Lou Graham, Fred Billmeyer, S. L. Davidson

SERVICE AWARD CITATION

Mr. President, Ladies and Gentlemen;

Today I have the privilege on behalf of the Inter-Society Color Council of presenting the first Service Award to a member of the Council "for long and faithful service to the organization."

It is a privilege I am especially aware of, having had the opportunity of working closely with him.

For the six years that I served the Council as its Treasurer, I saw Presidents and Presidents-elect come and go. He never went; he just stayed and worked for the Council.

He received his B.S. degree in chemistry from the California Institute of Technology in 1941 and his Ph.D. in physical chemistry from Cornell University in 1945. At Cornell he studied under Peter Debye on the measurement of molecular weight and particle size by light scattering.

From 1945 to 1964 he was associated with the plastics department of E.I. du Pont de Nemours and Company, Wilmington, Delaware. In addition, he held from 1951 to 1964 the

position of Lecturer in High Polymers in the Department of Chemistry, University of Delaware, and in 1960-61 he was Visiting Professor in Chemical Engineering at the Massachusetts Institute of Technology.

In September 1964, he assumed the position of Professor of Analytical Chemistry, Rensselaer Polytechnic Institute, Troy, New York, where his duties include teaching and research in both polymer science and the science of color measurement. He will retire from Rensselaer in 1984 and move his color science program to the Rochester Institute of Technology. He is a member of Phi Kappa and Sigma Xi honor societies, a fellow of the American Physical Society, of the Optical Society of America, and of the American Association for the Advancement of Science, a member of the American Association of Textile Chemists and Colorists, the American Chemical Society, the Canadian Society for Color, the Colour Group and the Society of Dyers and Colourists (Great Britain), the New York Society for Coatings Technology, the Society of Plastics Engineers, and the Inter-Society Color Council. He is author of 225 technical papers in the fields of polymer chemistry and color, and of the books "Textbook of Polymer Science," "Synthetic Polymers," "Experiments in Polymer Science" (with E. A. Collins and J. Bares), "Principles of Color Technology (with Max Saltzman), and "Entering Industry: A Guide for Young Professionals" (with R. N. Kelley).

He is active on many committees, including D-1 (Coatings), D-20 (Plastics), and E-12 (Appearance), of the American Society for Testing and Materials; TC-1.3 (Colorimetry) and TC-2.3 (Materials) of the International Commission on Illumination (CIE), and the U.S. National Committee of the CIE. He is a member of the Board of Directors of the Color and Appearance Division of the Society of Plastics Engineers. He is a Trustee of the Foundation for Analytical Research in the Arts, a Trustee and Secretary of the Munsell Color Foundation, past Secretary of the Inter-Society Color Council, Editor-in-Chief of the journal "Color Research and Application," a member of the Advisory Board for the series "Chemical Analysis," and a Section Editor for "Chemical Abstracts."

He has received two major awards from professional societies: the Armin J. Bruning Award of the Federation of Societies for Coatings Technology in 1977, and the Macbeth Award of the Inter-Society Color Council in 1978.

He married the former Annette Trzoinski of Wilkes-Barre, Pennsylvania. They have three children and reside at 1294 Garner Ave., Schenectady, New York.

Among the many services that he has performed for the ISCC has been that of Secretary. He assumed the office in 1970 and held it to the last Annual Meeting in 1982. Previously he had served as a Member of the Board of Directors from 1964 to 1966, President-elect from 1966 to 1968, and President from 1968 to 1970. It was during the period from 1974 to 1980 when I was Treasurer that I found how much he really did for the Inter-Society Color Council.

The one activity that I recollect, and there were many others, that was so indicative of the work he did for the Council was when Color '77 was held at RPI in 1977 under the sponsorship of the Inter-Society Color Council. He was the chairman of the Arrangements committee and I was in charge of Finances. We had both been to Color '73 at York University in England and we both knew we had a high standard to match. The Council should be proud of the work that he did personally in arranging the meeting. I am, – and all I did was handle the money. Despite that, we even made a few hundred dollars, but more important than that, we earned the respect and admiration of all of the members of the International Colour Association (AIC) for the way the operation was run and for the very successful meeting. It seemed that everything was on our side when even the rain stopped just before we boarded the boat for our memorable trip on Lake George. Incidentally, it was the first time that the boat company had chartered the boat for that particular time and it was also the last.

We have worked together in many other organizations. I remember when we performed as part of "The Rat Pack" on color for the annual meeting of the Federation of Societies for Paint Technology in St. Louis in 1962 and we all flew out together in a private plane after making stops in Wilmington and Pittsburgh after leaving Newark. He was the one we picked up in Wilmington. Even before then, when he was chairing an ISCC Problems Committee on Color Standards, I acted as his Secretary. We must have just started the work at that time because we were involved in calibrating spectrophotometers and the results were "shocking."

He has continually amazed me by taking pages and pages of minutes at meetings that come out repeating exactly what was said at the meeting.

I remember so much more but his is not the time or place to do so. I will tell you just one more. It concerns the time that we were attending the same meeting and he had arrived and registered before I did. I asked for him, but they had no record of him. They did, however, have a "Mr. Meyer" registered, and his first name was "Bill."

Therefore, on behalf of the Inter-Society Council in recognition of his many services to the organization, it gives me great pleasure to have the privilege of presenting the first "Service Award" to Dr. Fred W. Billmeyer, Jr. Fred . . .

Leonard Davidson

REPORT OF THE 1983 ANNUAL BUSINESS MEETING

The 1983 annual business meeting of the Inter-Society Color Council was called to order by President Louis A. Graham at about 1:00 P.M. Monday, April 11, 1983, following the first group luncheon of the 52nd annual meeting of the Council, in Louisville, Kentucky. President Graham informally announced the results of the election of directors for terms now beginning, and to run until 1986. He then presented the annual report of the president, which is reproduced elsewhere in this Annual Report issue.

President-Elect Joyce S. Davenport spoke briefly on the status of the Problems Committees. This report also appears in this issue of the Newsletter.

The Secretary, Ms. Therese R. Commerford, and the Treasurer, Mr. Edward T. Connor, then gave brief oral reports, referring to their written reports which also appear in this issue.

President Graham presented Certificates of Appreciation to retiring Directors Joy Turner Luke, Ralph Stanziola, and William A. Thornton, thanking them for their unstinted help to the Council.

The business meeting was purposely brief to allow time for presentation of the first Service Award to Dr. Fred W. Billmeyer, Jr. The meeting adjourned about 1:25 P.M.

Respectfully submitted,

Therese R. Commerford, Secretary

REPORTS OF STANDING COMMITTEE CHAIRMEN

REPORT OF THE BY-LAWS COMMITTEE T. G. WEBBER, CHAIRMAN

Although it is an implied power of any deliberative body to operate under suspension of rules in its own good interest, this procedure is not spelled out under ISCC By-Laws. The Board voted on April 9, 1983 to submit the following new By-Law to voting delegates for approval:

Article XI – Suspension of Rules

The Board of Directors by a two-thirds vote of the entire Board may suspend a By-Law or standing rule for a stated purpose and for a specific time.

A discussion of the present method of nominating candidates for Director resulted in no recommendations for change.

REPORT OF THE LONG RANGE PLANNING COMMITTEE RICHARD D. INGALLS, CHAIRMAN

A LONG RANGE PLAN for the ISCC will be presented in detail at the Fall Board meeting with the term *long range* being used in the literal sense. What should the ISCC be doing ten to twenty years from now and what is our plan going to be. This committee chairman has chosen to consider this problem and its relationship to the education of tomorrow's youth in basic and useful color knowledge. By preparing color information and color illustrations that can represent the best understanding of color science and its practical application in the arts and industries, we can prepare material for publication.

The committee plan to disseminate color information to tomorrow's youth would be aimed at putting the color information with appropriate and acceptable color illustration, in the hands of youth as they grow, from elementary age to adult education. Printers and publishers would be provided with separation films and standards on request. When space is available on press and when pages are open in magazines and trade journals, the publishers would be able to print color information in the spaces. As the available space varies in size according to the area and format a particular printer or publisher uses, the ISCC could provide films for pages of different sizes, and portions thereof. The publisher would have the films available when it is necessary to fill up space and he would have the opportunity to serve the community and his readers with the correct color information. He often has a vested interest in doing this, because these young people will be his future customers. If they know something about color they do not have to be taught during the business transaction.

The plan to be submitted in the fall will include details as to the method of accomplishing this and will include a means of distributing the color material. The Committee on Color Education Resources and Materials and other pertinent ISCC groups will be asked to work with the Long Range Planning Committee to prepare the information. Illustrations would then be prepared and color separations would be made with duplication of the separated films to serve the purpose. Announcements through GATF, RIT, trade magazines, and news releases would follow.

This is a departure from the work already in progress for the Long Range Planning Committee which will be carried on in another effort. That responsibility will deal with the valuable suggestions and work led by Joy Turner Luke and will deal with the short range future.

REPORT OF THE PUBLICATIONS COMMITTEE MARY ELLEN ZUYUS, CHAIRMAN

The newsletter has published several intersting letters to the editor over the past year as well as items of general interest. In addition, 5 copies of Volume 7 of the newsletter (1975-1982) have been bound and sent to depositories.

REPORT OF PROJECT COMMITTEE 6 SURVEY OF COLOR TERMS C. JAMES BARTLESON, CHAIRMAN

Committee on standby status. No report.

REPORT OF PROJECT COMMITTEE 18 COLORIMETRY OF FLUORESCENT MATERIALS

The editor has been informed that this report will be available for a later issue.

REPORT OF PROJECT COMMITTEE 22 MATERIALS FOR INSTRUMENT CALIBRATION DANNY C. RICH AND CHARLES J. SHERMAN, CO-CHAIRMEN

The editor has been informed that this report will be available for a later issue.

REPORT OF PROJECT COMMITTEE 25D STRENGTH OF COLORANTS – DYES LEONARD A. WEINER, ROBERT TAUSENFREUND, CO-CHAIRMEN

No report has been received.

REPORT OF PROJECT COMMITTEE 25F STRENGTH OF COLORANTS – PIGMENTED FIBERS SECTION GEORGE SONN, CHAIRMAN

No report has been received.

REPORT OF PROJECT COMMITTEE 25P STRENGTH OF COLORANTS – PIGMENTS JOYCE DAVENPORT AND JACKIE WELKER, CO-CHAIRMEN

Introduction

Both manufacturers and users are interested in the tinting strength of pigments and this frequently leads to written specifications between supplier and user for acceptable limits on this pigment property.

However tinting strength is not an easily defined pigment property. Broadly defined as the amount of pigment needed to produce some given color shade, this can lead to ambiguities. For example, both white and black pigments can have a measurable tinting strength but with the white, it is related to the ability to scatter light, while with the black it relates to the ability to absorb light. With most color pigments, the absorbing property predominates, but with yellows and oranges both properties have significance and it is not clear what is meant by the tinting strength.

With this as a problem, subcommittee 25 was formed and soon thereafter split into 3 sections: pigments, plastics, and dyes. 25P, the pigments section, struggled for a while with a definition of tinting strength, soon abandoned that as hopeless, and sought to document measurements of tinting strength out of which it was hoped a definition would emerge.

The first attempts at round robin measurements for a pair of green and a pair of red pigments produced random results but succeeded in little else of practiced statistical significance. The second attempt was a more controlled experiment of so much depth that it has taken over 2 years to complete it and summarize the results:

Description

Subcommittee 25 – Pigments – Experiment in Tinting Strength

Four different laboratories participated – two pigment manufacturers and two paint companies.

Each lab dispersed two phthalo green pigments – a lot and its standard – using identical materials and methods. The dispersions were duplicated.

Each dispersion was let down into a white base paint at three different levels – so that the resultant paints had a tint 12.5% weak and another 12.5% stronger than the medium tint level.

All of the paints were sprayed on two panels – one primed and the other unprimed.

Finally the four labs measured their own panels and those from the other labs at four places with 2 modes of measurement – specular included and specular excluded.

From the measurements, the tristimulus value X, Y, and Z were calculated; and the reflectances at the maximum absorbing wavelength – 640mm was recorded.

The data were arranged for an analysis of variance so that each experiment contained 192 points covering the variables just described.

Experiments were arranged by each labs measurement of each labs panels for the four recorded variables: X, Y, Z and 640mm. This gives a total of 64 experiments.

From this analysis, coefficients of variation were calculated which represents the standard deviation expressed in a percent tinting strength unit.

These coefficients were tabulated so their practical significance could be analyzed. The tabulations are attached.

Experimental Variation
Coefficient of Variation in % Tinting Strength

Variable Measured	*Between Reflectance Measurements*	*Between Different Sprayed Panels*	*Between Different Grinds*
X	.8	1.2	2.1
Y	.7	1.4	2.4
Z	1.7	2.8	4.0
640 MM	.7	1.3	2.6

Measurements of Actual 25% Tinting Strength Range Panels

By Variable Measured

X	Y	Z	640
19.8	19.8	28.3	21.7

By Lab Producing Panels For Each Measured Variable

Panels By	X	Y	Z	640	Avg.
W	19.2	19.2	27.5	21.3	21.8
D	17.4	17.4	24.2	19.2	19.5
K	18.6	18.7	26.3	19.8	20.8
C	24.0	23.9	35.3	26.5	27.4

REPORT OF PROJECT COMMITTEE 27 INDICES OF METAMERISM RALPH BESNOY AND ALLAN B. J. RODRIGUES, CO-CHAIRMEN

At the annual meeting held in Louisville, Ky., Dr. Rodrigues described the visual experiment that is currently underway. The light booth and painted panels have been shipped to RPI – attention Mr. Chen a new student of Dr. Fred Billmeyer. After completing the data gathering exercise Mr. Chen will ship the booth and panels to Ralph Besnoy in order to obtain data from the textile industry.

Roy S. Berns, a student of Dr. Billmeyer, described his work on chromatic adaptation. Mr. Berns submitted a draft of a paper soon to be published, – "Proposed Indices of Metamerism With Constant Chromatic Adaptation."

Dr. Rodrigues reviewed results of the questionnaire on "metamerism."

A number of people – A. R. Robertson, R.G. Kuehni, F. W. Billmeyer, C. McCamy, K. McLaren either have or will submit nomenclature for "metamerism" related phenomena of industrial concern. Eventually these suggested nomenclature will be presented to the membership for open discussion.

REPORT OF PROJECT COMMITTEE 30
COLOR IN THE BUILDING INDUSTRY

Committee on standby status. No report.

REPORT OF PROJECT COMMITTEE 32
IMAGE TECHNOLOGY
PAULA J. ALESSI, CHAIRMAN

The editor has been informed that this report will be available for a later issue.

REPORT OF PROJECT COMMITTEE 33
HUMAN RESPONSES TO COLOR
MARY BUCKLEY AND WALTER C. GRANVILLE, CO-CHAIRMEN

The Committee has met three times since last May to explore direction and to structure our working path. The dates were September 24, 1982, February 9, and March 3, 1983. The minutes of these meetings are included.

The working committee (members are from the New York area) has proposed to develop a guide, for members of the ISCC, which is mentioned in the minutes. We are in the process of exploring material which we feel is sensitive and extremely important to the process of organizing material that clarifies not only our human experiences but the particular color phenomena we experience.

REPORT OF PROJECT COMMITTEE 34
COLOR DIFFERENCE PROBLEMS
SY COMMANDAY, CHAIRMAN

At the Annual ISCC meeting in Louisville, KY held on April 12, 1983, 16 people attended the Project Committee #34 session. Of these, 8 are listed as active members. A high priority item for this committee is to appoint a co-chairman to assist in coordinating the various activities planned for this group. Due in part to the relatively low attendance, no name has as yet been selected for this position.

It was decided that our first order of priority was to set up an experiment for the collection of data to be run through the various color difference equations. For this purpose, Cal McCamey is to obtain a "travelling" light box for visual evaluations. Danny Rich will devise the parameters for measurement (visual and instrumental) of the samples. He will also obtain previously collected data (which can then be run through any new color difference equations). Roland Connelly will obtain samples for further measurement in accordance with the CIE recommendations (other committees, such as 25P may also have usable samples). A FORTRAN program for the JPC79 modification will be written by Roland Connelly for use in this experiment.

A series of samples (light green) obtained from Ralph Kuehni have been (instrumentally) measured and will be included in this study.

Through these efforts, we can expect to add to the body of data already collected and potentially arrive at reasonable conclusions regarding the state of the art of color difference problems.

REPORT OF PROJECT COMMITTEE 35
COLOR OF LIVING TISSUE
STEPHEN F. BERGEN, CHAIRMAN

Subcommittee 35 met at the 1983 Annual Session of the ISCC, Tuesday April 12th, 1983 in Louisville, Kentucky. The following items were discussed on the agenda:

1. A study was published by Dr. R.P. van Oort entitled Skin Color and Facial Prostheti – a colormetric study –. Univ. of Gronongen, The Netherlands 1982.

This text was reviewed by the Committee Chairman and reported. It is, in summary, an excellent study with ample literature review. The unitiated, as well as the informed, will benefit from the material in this text. Dr. van Oort used a Lovibond Tintometer to evaluate several states of skin color for the purpose of matching silicones for prosthetic replacement after surgery. He compared data to a spectrophotometer. His discussions were well documented with his literature review.

2. Stability of dental restorative materials as to color fastness was discussed. The hope that future ISCC meetings will address this problem was raised.

3. The concept of psychological testing through the use of color was reviewed. Those interested in further information were referred to Max Luscher's works on The Color Test and The Four Color Person.

4. A spectrophotometer combined with a computer to analyze tooth color and skin is on the drawing boards for an affordable price. Hopefully by next years meeting, a working unit will be available for evaluation.

The committee has not been active this year other than compiling information on color science as related to human tissues.

REPORT OF PROJECT COMMITTEE 36
EXAMPLES OF INDUSTRIAL COLOR DIFFERENCE ACCEPTABILITY
ANTHONY J. PENTZ AND W. RICK MATHEW, CO-CHAIRMEN

No report has been received.

PROJECT COMMITTEE 37
ARTISTS' MATERIALS
MARK GOTTSEGEN

The Artists' Materials Problem Committee met on Monday, April 11th, 1983, during the Annual Meeting of the ISCC. An advance announcement of the agenda was sent to the membership, active and inactive, with an RSVP coupon attached for return. With only a 6% rate of return, it was difficult to predict attendance and cut down on the photocopy waste. The coupon will be used again next year, with the hope that more people will RSVP.

Report

Approval of 1982 minutes. Approved unanimously without comment.

TG7, Finances: Ed Flax. Mr. Flax reported contributions during 1982 of $740.00 to the committee's operations fund.

The fund is on deposit with the ISCC Treasurer, and will be used to pay for committee expenses. These average about $100.00 per year, and are limited to expenses directly related to the Annual Meeting. We thank you all for your most generous support.

TG1, Pigment Identification: Treva Pamer. Dr. Pamer presented a draft report on pigment analysis, including a computer print-out of the results of the analysis of over 600 artists' paints in oil and acrylic emulsion vehicles. Comments from the manufacturers of the paints were solicited. This report will eventually be presented to the Society as a Committee Report.

TG2, Lightfastness of Pigments: Henry Levison. This work is now being submitted for balloting in ASTM, and was discussed during the ASTM caucus Sunday evening. No further report was made.

TG3, ASTM Status: Joy Turner Luke. The Standard Specification for Artists' Oil and Acrylic Emulsion Paints (ASTM Dxxxx), the Standard Practice for Labelling Art Materials for Chronic Adverse Health Hazards (ASTM D4236), and Standard Test Methods for the Determination of Relative Lightfastness of Pigments Used in Artists' Paints (ASTM Dxxxx) are all in the ASTM balloting process. Draft 12 of D4236 has passed and draft 13 – with minor editorial revisions – expected to pass without delay.

TG4, Tinting Strength: Irving Shack. No report on the development of a tinting strength method was given, but Ruth Johnston-Feller has sent new material to Joy Luke and Irving Shack for evaluation.

Treva Pamer reported that she and Evelyn Stephens are working on a comparison of the three suggested methods: volume/volume (Grumbacher); K/S, or %weight (Johnston-Feller); and K/S vs. standard tint, or 50%R (ASTM). They hope to present a report on this evaluation at the June ASTM D.01.57 meeting in Nashville, TN.

TG5, Definitions' Tom Vonderbrink. A newly revised list of 46 terms and suggested definitions was presented. Corrections, suggested additions, and other comments should be sent to Mark Gottsegen, who will forward them to Tom. The definitions comprise terms being used in the proposed paint standard and terms used by artists in a non-standard way. The information will be used in the Handbook on the Paint Standard.

TG6, Publications: Mark Gottsegen. There was discussion of ways to publicize the work of the ISCC/ASTM Committees. It was agreed that we should defer publicizing the standard until it officially passes the ASTM balloting, but that it is appropriate to publicize the passage of the practice on labelling for chronic hazards. There has been so much bad press about this issue that some good news might be welcome. In any event, it is important that artists be made aware that there is now a voluntary labelling standard that obviates the need for any possibly damaging and costly legislation.

Ed Flax reported that American Artist magazine, or their Business Letter, will shortly be publishing an article on the subject of hazards in the fine arts and what is being done about them. He also agreed to draft another article – to be co-edited with Zora Pinney – for submission to various general-interest art magazines; other suggested vehicles include nationally-circulated newspapers and news magazines.

Joy Luke, in an *ad hoc* discussion, agreed to compile a digest of her AEA reports and testimony before state legislatures. Mark Gottsegen agreed to help edit the digest for submission to publications.

A long discussion of the revised draft 2 of the outline for the Handbook ensued. The section on the Introduction will stand, with the addition of a statement on the purpose of the Handbook. The rest of the outline was extensively revised, but the meeting had to be adjourned before the revisions were completed.

Assignments for specific sections of the Handbook were given as follows: Zora Pinney will write a section on "reading a label," with references to the ASTM standard, Munsell notations, etc.; Mark Gottsegen will write about lightfastness tests and ratings, categories of lightfastness, how the tests are done, and how the results can affect the materials artists buy; Henry Levison will write about how samples for lightfastness testing are prepared and how they are evaluated; Treva Pamer will write about tinting strength; Evelyn Stephens will write about scientific color theory; and Joy Luke will write about color systems. All of the language in these sections will be non-technical, as far as possible, since the audience will be artists rather than scientists. Other assignments will be given as the need arises – there is still much territory to cover – but we consider this an excellent start.

TG8, Yellowing: Henry Levison. A draft of a proposed test method has been presented to the ASTM committee and was not discussed.

TG9, Adhesion, Flexibility, and Distensibility of Dried Films: Henry Levison. No report; there is still controversy over the usefulness of establishing standard test or evaluation methods. Anyone interested in working on this Task Group is asked to contact Henry Levison, Mark Gottsegen, or Zora Pinney.

TG10, Teaching Aids: Joy Luke. There was discussion of this project in relation to both the Handbook and ISCC 40, Color Education Resources and Materials. Some of the work from ISCC 40 can be integrated into the project, but they may not be addressing issues specific to artists. Work relative to the Handbook will be done by Mrs. Luke and Dr. Stephens; suggestions from the general membership about various teaching problems should be sent to Mrs. Luke or Mark Gottsegen.

Summary Report on Artist-Conducted Lightfastness Testing: Mark Gottsegen. A round-robin test of a method developed by Joy Luke, with the assistance of Hilton Brown, Mark Gottsegen, and Zora Pinney, and the advice of Dr. Robert Feller and Mr. Max Saltzman, was conducted during 1982 by Brown, Gottsegen, and Luke. Several hundred colorants not being addressed by the ASTM standard – including watercolors, gouaches, oil and chalk pastels, opaque inks, colored pencils, etc. – were tested in 3 different geographic locations in order to evaluate the method and check the correlation among a number of observers.

Ten problems with the method were identified by the participants: (1) Composition of the substrate; (2) Composition of the cover strips; (3) Sample preparation; (4) Conditions of temperature and humidity; (5) Anomalies in the changes of the alizarin control; (6) The number of lightfastness categories (7) The composition of the backing board; (8) Properties of

the glass behind which the samples are exposed; (9) Colorant rating anomalies; and (10) Nomenclature, reporting order, and the order in which the colorants were placed on the exposure panels. Many of the problems are inter-related and are a question of form, rather than content or purpose. In general the correlation among observers was within industrial tolerances as suggested by Mr. Saltzman: most ratings were within 1.5 or 2 units of each other.

General conclusions about the test which can be drawn at this time are: (1) As a general simple test which individual artists can perform, the method is very good; and (2) As a round-robin test, the method is satisfactory. Further work on the method will be done to resolve, as best as possible, the problems identified above. Another round of testing will be scheduled during the coming year in an attempt to reduce the rating anomalies, and a further report will be made at the next meeting.

The meeting adjourned at 4:30 p.m. as several participants dashed from the room to meet their planes. Thank you one and all for coming – we are doing a lot of work and making substantial progress towards meeting our objectives. Volunteer organizations like the ISCC can function effectively only with the cooperation and effort of many individuals; your work and devotion are greatly appreciated.

Next year's ISCC Annual Meeting will be held in the Detroit, MI, area. See you there!

PROJECT COMMITTEE 38
PHILATELIC COLOR DESIGNATION
DONALD L. MacPEEK, CHAIRMAN

Since our last report, the following items are offered for the information of the Council:

Roster Changes

James T. DeVoss has retired as the Executive Director of the American Philatelic Society. Keith A. Wagner has replaced Col. DeVoss in this position which, as indicated above, is now known as that of the Executive Director. Because of his participation in affairs and his knowledge of them, we desire that he remain a member of the Committee. Note also the new address of the American Philatelic Society, with the relocation of the national offices to new quarters, to Post Office Box Number 8000, in State College, Pa. 16801. The address of K.L. Kelly is correctly shown in the membership manual as he also began retirement. Lastly, the Committee Chairman (MacPeek) has also retired from professional responsibilities. With this development, the listed telephone number should be changed to (304) 768-6365. There does not need to be any change in voting responsibilities.

Committee Activities

The second important article from the activities of the Committee, written by Fred W. Billmeyer, entitled "Universal Color Language Designations for Some Philatelic Color Aids," was published in the June, 1982 issue of the "American Philatelist," the journal of the American Philatelic Society. This article gave the results of the Committee's critical evaluation of the philatelic utility and accuracy of collections of color samples which have been recognized as useful and available to philatelists. The article serves to compile for collector use a large number of Munsell notations which, with the samples in the color aids reviewed, provide a basis for color comparisons without requiring that ownership of "The Munsell Book of Color" is necessary for work in this area of philately.

Work on the third important article has continued with the work focussing on the stamps of Venezuela as the reference collection for which the first application of the techniques outlined in our two previous articles will be described. For historical reasons, it was recognized that the color listings from the first specialized catalogue of Venezuelan stamps should be included. A world wide search led to the acquisition by the Chairman of a copy of this obscure work, published in Caracas in 1915, from a bookseller in England. The stamps from 1859 to 1880 will be covered in this work. All of the color notations have been rechecked and the summary charts redrawn to avoid possible infringement of the International Copyright Law. The final draft will not only demonstrate the use of the procedures described in our earlier articles but also show that the methods can be extended beyond the scope of the general catalogue listing as tools for use by the specialist. From this work, enlistment of others to do the same for other nations would be another objective of this publication. This remains as the task of highest priority for the Chairman who will submit the resulting Draft, after acceptance by the Committee to the Council Board for its consideration. Approval by the Board will result in publication of this work in the "American Philatelist."

REPORT OF PROJECT COMMITTEE 39
COLOR OF GEMS
THERESA F. ZOOK, CHAIRMAN

The Committee held its first organization session in April 1982 at the time of the annual ISCC meeting in Charlotte, N.C., the same day its formation was announced. The meeting was attended by ISCC members in Charlotte at the time who had a direct or peripheral interest in this problem. Theresa F. Zook, Fellow of the Gemmological Association of Great Britain, was designated as chairman for the first year. Nick Hale has since consented to serve as Vice Chairman. The accomplishments of the Committee for the year April 1982 - April 1983 follow.

At the Committee's organizing meeting the members agreed that the problem must be defined more explicitly. They also endorsed the idea of a survey of present practices used to ascertain and express colors found in gemstones. The Committee specifically excluded from its studies so called "colorless" diamonds because of the trade acceptance in this country of the diamond grading system of the Gemological Institute of America.

Accordingly, the chairman drafted a statement of the proposed "Scope" of the Committee's work, which the members accepted. The ISCC Board of Directors subsequently approved this Scope at its October meeting. The Scope approved states the following:

"This committee will study the designation, assessment, and

measurement of color in gems. In order for its work to be as useful as possible, the committee will consider the full array of gem materials, whether natural stones, synthetically produced equivalents,* or gem materials developed by man. The scope of work will include colors which are induced, enhanced, or altered by man as well as color occurring naturally. The committee will evaluate the color resources now available for jewelers, designers, wholesale gem dealers, retail merchants, advertisers, gemologists, and lapidarists to the extent feasible, and will recommend means to achieve a common language for the designation of color in gems. Its work may also extend to, but not be limited to, the recommendation of techniques and development of parameters for systems which may be useful in assessing, measuring and communication on the color in gems. In conducting its studies the committee will bear in mind the necessity of addressing its recommendations to the practical realities of the jewelry industry and the gemological profession so that the techniques recommended may be reasonably accessible to as many of those needing this assistance as possible, with the recognition that practitioners in these inter-related fields may have different levels of requirements and resources to adapt the work of the committee to their specific needs.

*"In the trade, a "synthetic" gem is a manufactured material which is chemically, optically, physically, and crystallographically the same as the equivalent gem as it occurs in nature. These are distinct from another category of man-made materials such as cubic zirconia which have no actual counterpart in nature but which are used in jewelry in the same way as gem stones from naturally produced crystals or synthetically produced crystals."

In order to determine the current "state of the art" a questionnaire was drafted and circulated among a selected group of qualified gemologists in the United States and abroad. Responses were received from a good proportion of those whose reactions were solicited, including gemstone experts in 20 different states and 7 different countries outside of the U.S.A. A detailed analysis of these responses would be too lengthy for inclusion here. However, several significant conclusions may be highlighted:

1. There is no consensus among practicing gemologists as to the best way to measure and define the colors of gemstones.

2. A large proportion of experienced gemologists rely on subjective impressions in assessing the color of an actual stone.

3. A few of the respondents rely on their own "master sets" of stones to measure against, but they recognize the difficulty of communicating these values to others working in the field.

4. There is a prevalent scepticism over the use of instruments or systems to measure gemstone colors. Most would agree that "wouldn't it be wonderful" if a simple machine could be obtained to "read out" a universally accepted color identification, but none yet exists. Relatively few now use instruments for this purpose, and even fewer expressed complete satisfaction with the results they obtained. No instrument has thus far established itself as the clear choice of either the gemstone dealer or the professional investigator. Similarly, there has emerged no system of color comparisons which has swept the field to become a part of every gemologist's basic kit of tools.

5. There has been no standardization of light sources to be used when examining gemstone colors. Many gemologists are aware of the importance of this factor. They recognize that significant changes may occur in the apparent color of a gem depending on the light source employed.

6. Few gemologists were aware of the existance of some of the basic color resources available (Munsell, *Optical Society of America Uniform Color Scales, ISCC-Bureau of Standards Centroid Color Charts Standard Sample No. 2106,* etc.). At the request of some of the gemologists concerned and as a by-product of the survey a *Directory of Selected Color Resources* useful in gemological studies was prepared and made available to those who wished to purchase it in order to pursue the subject further.

In addition to the factors summarized above from the Committee's survey, several other basic points have been identified as problems:

1. Too little attention has been paid to the inherent instability of many of the components of gem-color measuring procedures. These would include such factors as the color change through the years of the color pigments used in printed color chips against which a gem color might be compared, or the subtle deterioration of quality of a light source as its hours of usage increase, or the instability of color pigments in either color slides or color photographs which might be used as reference points in color assessments of gemstones, and the difficulty of securing an accurate color photograph of some gemstone colors, particularly those found in emeralds, with existing photographic emulsions now on the market.

2. Recognizing the hazards of relying primiarily on subjective "eye ball" color comparisons, some observers see the ultimate answer as being an instrument which, to the extent possible, substitutes objective physical measurements for the less repeatable human observation. But here, too, other problems arise. The tests and color evaluations must be non-destructive. The sizes of gemstones vary both as to diameter and as to depth; there can not be a wafer thin slice or chip of the material to analyze. The cut of a gemstone can affect its color appearance and recutting to proper angles and proportions can dramatically alter the color of the same gemstone (although it will be accompanied by a weight loss and dimension changes in the stone recut). Gemstones cut from the same crystal rough may vary in color be they produced in nature or in the laboratory. The cost of assembling master stone comparison sets of precious stones is prohibitive and the possibility of matching comparison stone sets from natural or synthetic materials has not yet been solved.

There is also the question of access and cost of color assessment systems or instruments. Several people have declared that the problem can be solved if only $100,000 could be devoted to the development and testing of an appropriate instrument. However, no one has offered such a sum. And even if such a machine were perfected, is it likely it would be offered at a price which most gemologists could afford to pay and would it provide repeatable laboratory results which could be obtained by individuals newly acquiring the device? Also since gemstone color assessment is a world wide problem, could the instrument be accurately recalibrated and serviced throughout the world

without having to return it to the manufacturer?

3. There is a need to bear in mind the many phases of activity which a master color system might seek to embrace in this field. Is it feasible to envision a standard vocabulary of gemstone colors (whether expressed in words, physical constants, formulae, arbitrary index numbers, or whatever) which could be used and comprehended at all stages of the industry – from the wholesaler to the gem dealer to the jeweler, to the gemologist, and ultimately to the public?

4. Several years ago there was a serious deficiency in the amount of attention being given to the problem of assessing gemstone colors. Now, suddenly, almost the reverse is true. Rather than being virtually ignored, the problem is now the target of intensive activity on many fronts. Ever so many individuals, institutions, and associations are working feverishly, proprietarily (and almost competitively) to develop an answer. This has both potentially good and potentially bad consequences. The organization of an International Gemstone Grading Committee this past year is an encouraging development since this group has been evaluating various systems, instruments and light sources. Others who have been working on gemstone color assessment systems and instruments seem almost to resist scientific evaluation or testing as they seek to promote their own concept of a solution – perhaps foreseeing an enhancement of professional prestige or the possibility of a lucrative market if their development "catches on" as a potentially profitable commercial enterprise. If only this thrust toward commercial exploitation might have been deferred until more of the problems had been resolved! This is not to disparage the legitimate role of proprietary protection as a stimulus to innovation – just so long as the promoter does not try to inhibit open examination of alternative concepts.

5. While it may be true that many gemologists may have a lot to learn about the color sciences if this venture is to succeed, it is equally true that some color specialists need to develop a better understanding and appreciation of the special qualities of colored gem stones particularly such things as e.g. crystal structure as it affects the optics of light in a colored gemstone, problems of fluorescence in some gemstones, dispersion of light in colored gemstones and the effect of cut on the subsequent color of a gemstone. The color of a well-cut gem stone is distinctly different as it strikes the eye from the "equivalent" color of paint on canvas, or ink on paper, or the dyes on a photographic plate. Objectively a faceted gemstone may be considered as a complex system of mirrors and prisms refracting and reflecting light in and out of a translucent colored solid. But the light which comes back to the eye from a well cut translucent gem has characteristics in addition to those inherent in the crystal from which it was cut. It sparkles and many gemstones have more than one color which interplay to create the total effect (and here we are not speaking of the bicolored tourmaline or the opal). Several of the crystal systems which (along with chemical composition) determine the characteristics of the gemstone produce pleochroic gems which depending upon the orientation of the table to the optic axis or axes cannot be accurately described by a single color designation or measurement. There may be two or three distinct colors or there may be a lighter and a darker shade of the same hue, but in either case a single color designation will not be definitive.

It should also be recognized that the skill of the faceter in selecting the optimum orientation, proportions and angles for each stone may make striking differences in the apparent color of a finished gem, as contrasted with one produced from the identical rough by a less skilled cutter.

In conclusion, the problem is a world-wide one so we have also tried to acquaint leading gemologists in other countries with our efforts, while at the same time seeking their comments and suggestions. The chairman has been in correspondence with the Chairman of the International Gemstone Grading Committee, the Secretary of the Gemmological Association of Great Britain, the Education Director of the Jewellery Council of South Africa, and the Executive Director of the Asian Institute of Gemological Sciences, and also with gemologists heading colored stone laboratories, as well as with gemologists of great repute.

The problem is a real one and an important one. There is certainly a need for more sound color knowledge among the gemologists and more gem knowledge among the color scientists.

Addendum To First Year's Report

The committee held its first working session on April 10, 1983, at the ISCC Annual Meeting in Louisville, This summary of that session is presented as an addendum to the Annual Report, which was prepared prior to the meeting.

To illustrate more graphically the problems involved in the committee's work, the chairman presented a series of slides of outstanding colored gemstones assembled from a variety of sources. These demonstrated not only the inherent beauty of the materials being studied, but also some of the peculiar crystalline and optical properties such as pleochroism (more than one color emanating from a single gem), the subtle shading of colors from one gem to another, and the variations in color stemming from the orientation of the rough crystal to its optic axis or axes when it is faceted by the cutter. The slides were selected to show some of the representative colors of transparent and translucent gemstones which a gemologist or jeweler would be likely to examine in his efforts to measure and designate their colors for purposes of identification, appraisal, marketing or in giving forensic expert testimony in court cases.

The slide presentation also gave an opportunity to cover some of the terminology used in the trade to describe various color gradations in several gem stone varieties. Examples were given of a range of color (and corresponding terminology) in diamond fancies (e.g. canary, champagne, etc.), rubies (Burma, Thai, Ceylon colors, etc.), and emeralds (Old Mine, Muzo, Chivor, etc.). The perennial problem of distinguishing between rubies and pink sapphires was also identified.

A paper by committee member Dr. Louis Harris was presented *in absentia,* identifying a number of physiological and psychological factors which influence an individual's subjective assessment of color variations.

Robert Hoban described his work on spectrophotometric analysis of diamonds, both colorless and the colored fancies, as well as emeralds, sapphires, chrysoberyl (alexandrites), topaz, tourmalines, grossular garnets, etc. He used a G.E. Recording Spectrophotometer with a narrow sample beam. The instrument had been modified with a sample holder adjustable to the plane of the sphere. Hoban's main interest was in using the reflectance curves to identify not only the type of gem (e.g. emerald) but also other characteristics, such as country of origin. He illustrated his talk with copies of the curve shapes, and noted that with some stones his work showed some success, while with others there was substantial room for improvement. Hoban's interest had not been directed toward accurate color measurement, and the specimens were unfortunately not available to him sufficiently long for the replicate measurements necessary to assess instrumental repeatability.

Preliminary findings revealed identifiable curves for alexandrite, emerald, grossular garnet, malachite and sapphires but not for diamonds, topaz and tourmalines. Since the technique averages everything in the sample target it cannot detect dichroism or "flashes" of color. Brown diamonds do not form a continuous series, but rather have crossing curves which indicates metameric possibilities which would preclude the successful use of three filter colorimeters. Blue diamonds seem to be curve specific and form a continuous series. In these studies, Mr. Hoban found that beam size is very important and that specifically a beam greater than the sample dilutes the curve with white from the background ($Ba\ SO_4$) and a beam too small gets lost in the stone and results in very dark measurement with poor definition. Mr. Hoban sees the need for more work in this research effort to determine measurement variables, repeatability as samples are repositioned in the instrument, variations in stone size and cut, and correlation with visual observations.

One of the major tasks of the Committee during its first year was the chairman's survey of current practices followed by gemologists in assessing gemstone color variations. This is the first time such a comprehensive survey had been conducted on an international basis. Responses from a large number of gemologists throughout the United States and in seven foreign countries were reported in summary form at the meeting.

The gemologists participating in the survey revealed a common appreciation of the importance of the problem, a generally conscientious use of the laboratory equipment available to them, but a wide variation in actual practices employed to assess gem stone colors. There is clearly no single system or instrument which has been found acceptable. Many gemologists reported less than complete satisfaction with the instruments they were using. A great disparity in the selection of light sources revealed that no single source of illumination for gem stone color studies has won the confidence of the gemologists reporting.

Relatively few gemologists appeared to be familiar with the basic color resources available to color scientists. Instead of using systematic color standards, most rely on their accumulated experience and "educated eye" in visually examining gemstones and determining the appropriate color categories. Some use self-assembled master sets of actual stones (or of photographic slides) as bench marks in assessing color in the varieties of gems they handle most frequently, but they recognize the problem of communicating these values to others working in the field.

A sensitivity to costs was apparent in a number of responses. They recognize that an adequate array of colored stone samples in master sets covering all common gradations of the most important gem varieties would be prohibitively expensive. Similarly, some appeared apprehensive over the probable cost of a scientifically satisfactory laboratory instrument. It is clear that to be acceptable, whatever system or instrument is ultimately devised must be financially within the reach of the individual gemologist as well as the large gemological laboratory.

After hearing the report of this survey, the committee expressed its regret that the developers and sponsors of several newly-emerging systems had not accepted the Chairman's invitation to attend this meeting and explain to the Committee the basic concepts incorporated in their instruments and systems of color comparison and definition. Committee members felt that it would be useful to pursue further the effort to have instrument makers and system designers work with the committee in exploring the key elements of each system so that a valid assessment could be made.

As at the 1982 organizing meeting, the point was made that the research task to derive suitable color measurement techniques was expensive and time-consuming. Apparently this estimated research and development budget has doubled since 1982.

The meeting gave the participants a broader understanding of the problems and some information on the views of practicing gemologists. The need for an intensive, comprehensive research effort by qualified color scientists was apparent, if gem color measurement and communication is to reach a useful level.

The meeting also evoked an appreciation for the fact that this committee is addressing a new category of colorful materials, which are significantly different in many respects from those previously examined by ISCC groups. It is a field which offers intriguing challenges to the color community as well as the world of gemology. The major task now appears to be to enlist the cooperation of the principal participants, and then to persuade some reputable body to commit the necessary investment (in money, personnel, and time) to devise a satisfactory system.

REPORTS FROM MEMBER-BODY DELEGATIONS

REPORT FROM THE AMERICAN ARTISTS' PROFESSIONAL LEAGUE
ANGELO GRADY, CHAIRMAN

No report has been received.

REPORT FROM THE AMERICAN ASSOCIATION OF TEXTILE CHEMIST AND COLORIST DELEGATES
ROLAND LEE CONNELLY, SR., CHAIRMAN

The AATCC has had a very busy and fruitful year in areas concerning color, as well as the many other areas of interest that the AATCC concerns itself.

In the area of color education, the Research Committee on Color Measurement (RA-36) held another successful workshop in the principles of color measurement and procedures.

A symposium on the subject of "Practical Application of Color Quality Control" was held in Greensboro in March, 1983. The ISCC was a Co-Sponsor of this event. Speakers from all phases of textiles participated, from dye manufacturers, fabric makers, garment makers and retailers. It was a most successful event. We try to have a major symposium every two to three years. The last one was on "Colorant Formulation in the Textile Industry."

Other color related activities of AATCC this year include working with the ISO and ASTM in setting up and improving test methods. In addition, the book *Color Science in the Textile Industry* is nearing completion.

The AATCC has many other activities that span all aspects of the textile and associated industries.

REPORT FROM THE AMERICAN CERAMIC SOCIETY DELEGATES
F. JOSEPH VON TURY, CHAIRMAN

No report has been received.

REPORT FROM THE AMERICAN CHEMICAL SOCIETY DELEGATES
CHARLES MATKOVICH, CHAIRMAN

The American Chemical Society delegation to the ISCC has been relatively inactive during the past year and has no Annual Report.

REPORT FROM THE AMERICAN COLLEGE OF PROSTHODONTISTS
STEVEN F. BERGEN, CHAIRMAN

This report is combined with that of Project Committee 35 and may be found under Project Committee reports.

REPORT FROM THE AMERICAN PHILATELIC SOCIETY DELEGATES
DONALD L. MacPEEK, CHAIRMAN

This report is combined with that of Project Committee 38 and may be found under Project Committee reports.

REPORT FROM THE AMERICAN PSYCHOLOGICAL ASSOCIATION DELEGATES
EDWARD H. RINALDUCCI, CHAIRMAN

No report has been received.

REPORT FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS DELEGATES
HARRY K. HAMMOND III, CHAIRMAN

Color and appearance activity continues to be centered in the Optical Properties Subcommittees of ASTM Materials Committees, such as Paint and Plastics, and in the work of the Appearance Committee.

A new standard practice for Visual Evaluation of Metamerism, D 4086, was approved by the Paint Committee and the Society. It appears in the 1983 Annual Book of ASTM Standards, Volume 06.61, Paint – Tests for Formulated Products and Applied Coatings, containing 225 standards (1154 pages), list price $53.00, member price $47.70. Each standard can also be obtained individually at a price of $8.00.

Other new standards are being written. Look for progress reports in subsequent issues of ISCC News. Reports of progress can also be obtained from members of the ASTM Delegation. Better still, if your interest is in standards, join ASTM and help draft the standards that are needed in your field.

REPORT FROM THE AMERICAN SOCIETY OF INTERIOR DESIGNERS DELEGATES
ANNA CAMPBELL BLISS, CHAIRMAN

"Change both revolutionary and evolutionary will be the theme of the 1983 ASID national conference" July 28 - August 1 in Boston. Workshops and discussions will examine the theme as it applies to interior design.

Members of the ASID delegation to ISCC will conduct a workshop on "Color Resources for the Interior Designer" at the conference. Jack Lowery will review historical and symbolic connotations of color with applications for today's designs. Anna Campbell Bliss will analyze current color research and the conflicts between scientific methods and the merchandising of color. Drawing from her recent experience, Barbara Schirmeister will illustrate the development of a new line of fabrics, the cultural resources that influenced her color and design as well as marketing considerations.

As noted elsewhere, Mary Buckley Parriott has been meeting with interested members working on Project 33 Committee devoted to Human Response to Color and Light.

Anna Campbell Bliss was recently asked to organize and give the initial lecture for the Graham Foundation series in Chicago entitled COLOR/LIGHT/ARCHITECTURE. Emphasis was on experimental directions. Distinguished artist educator Gyorgy Kepes, founder of the Center for Advanced Visual Studies at M.I.T., participated. Dale Eldred and Michael Hayden, artists who work with color and light in the environment, were also included.

REPORT FROM THE AMERICAN SOCIETY OF PHOTOGRAMMETRY DELEGATES

No report has been received.

REPORT FROM THE ARTISTS EQUITY ASSOCIATION DELEGATES
LINDA LEWIS TAYLOR, CHAIRMAN

Artists Equity Association, Inc. (AEA), with support from the American Society for Testing and Materials (ASTM) and the Inter-Society Color Council (ISCC) initiated several studies in 1977 on artists paints which are now nearing completion. Findings by ISCC Committee No. 37 on these projects have

caused significant changes in materials used by artists and crafts people and will strongly affect the Art Material Industry in the future.

The first project of the ISCC Committee on Artists Materials under the chairmanship of AEA's Joy Turner Luke was the identification and study of pigments currently used by the paint manufacturers in artists' paints. Approximately 700 different paints were analysed and the pigments utilized in their manufacture was identified by Dr. Romesh Kumar and Dr. Treva Pamer, at Rensselaer Color Measurement Laboratory and Jersey City State College respectively.

Henry Levison conducted 4 sets of lightfastness tests on these and additional pigments to establish their suitability for use in manufacturing quality artists' paints. Paint manufacturers have always tested pigments in paint for their resistance to fading, but the various methods used resulted in some pigments being classified and placed in different lightfastness categories by different manufacturers.

ASTM Standard Specification for Artists' Paints includes a list of pigments suitable for quality artists' paints and other requirements. A second round of balloting has been completed and the standard should be approved this year.

Test methods for determination of relative lightfastness of pigments used in artists' paints, a companion ASTM Standard, is also being balloted. This standard establishes a procedure for adding new pigments to the list of suitable pigments now included in the specification. Henry Levison's 10 year commitment to the development of these and other proposed standards for artists' materials was important in his receiving the prestigious MacBeth Award in 1982.

A third ASTM Standard initiated by AEA is the practice of labeling Artists' Materials for chronic health hazards. This precedent setting standard was developed over a two year period through the cooperation of artists, art material manufacturers, and health experts. It was approved as a national consensus standard in March 1983. Health hazard labeling is scheduled to appear on artists' materials for the first time later this year.

The Art and Craft Materials Institute has been formed to certify that art materials conform to this standard. The Institute has retained Dr. Woodhall Stopford, a toxicologist, to review art material products for health labeling. Companies leading this effort to protect their customers are Binney & Smith; Graphic Chemicals and Inks; Grumbacher; Hunt Manufacturing Company; Martin Weber; and Winsor & Newton. They are being joined by eight additional major companies in this effort.

The Committee on Artists' Materials, chaired by AEA member M. D. Gottsegen, is working on preparation and publication of a pamphlet to assist consumers in interpreting information on the new labels coming out on artists' paints.

In addition to the preceding projects relating to artists' materials, AEA has been responsible for legislation being passed in three states which assures that paintings consigned by an artist to an art gallery cannot be seized and sold to satisfy debts of that gallery.

REPORT FROM THE COLOR ASSOCIATION OF THE UNITED STATES DELEGATES DOLORES WARE, CHAIRMAN

This is our 67th year.

Enumerating accomplishments during the past year, we can only say that the new streamlined and modern presentation of our twice a year Men's and Women's forecasts and the annual Interior/Environment/Contract presentation have received many complimentary comments from both members and individual subscribers. We will continue this mode of presentation for the foreseeable period ahead.

We have gone to great length and expense to insure precise and accurate rendering of the colors specified by the different Committees. We feel that the extremely high costs of dyeing and supervising the color-matching have been justified and we will continue to devote our time and effort in this most important area of our service.

In assembling the forecasts, we were greatly helped by the fabric cooperation provided by the following firms: J.P. Stevens, Milliken, Burlington, Springs Mills, Kanebo, Aerfab, Shamash & Sons, Faulkner Mills, Westwood Mills, Reeves Bros., International Line, Crompton, Ameritex, and Threadtex. We acknowledge, too, the technical assistance received in dyeing our special shades by Brooks Textile Dyeing & Finishing, as well as our swatching companies, E. Feibusch & Co., and Sample Service Corp.

Excellent progress has been made in restoring CAUS to leadership in forecasting fashion colors. The Association has gained a number of new members during 1982, of which approximately 20% were from foreign countries which included: Australia, England, Canada, France, Italy, Switzerland, South Africa, Hong Kong, Israel, Korea, Japan, Brazil, Colombia. Mexico and New Zealand.

A wide and growing variety of industries are now represented on the CAUS membership roster including Designers, Retailers, Manufacturers, Mills and Converters, Cosmetics, Autos, Shoe and Leather, Chain Stores, Dept. Stores, Sportswear, Lingerie, Home Furnishings, Accessories (Belts, Hats, Gloves), Knitgoods, Fibers and Yarns, Dyers, Dyestuffs, Buttons, Zippers, Knitwear, Women's and Men's Clothing Mfrs., Architects, Schools and Colleges, etc.

Newsletter And Other Publications

We make special mention of the enthusiastic reception given to our Newsletter which is a recent inauguration. We intend to broaden our service in this direction and your comments and items are always welcome. We would like to print more news on what our members are doing. Many firms regularly send us their color cards and we are grateful for this thoughtfulness. These cards of Companies in different fields are helpful in giving an overall view of ongoing trends, and enable us to check each season's successes and failures.

We are continuing to produce and distribute our official U.S.A. Army Cards; ditto specification of color cards for But-

tons, Ribbons, Slide Fastener Tapes, etc. along with a new printing of our Standard Color Reference Book which continues to enjoy a vigorous ongoing demand.

Our seminar programs, headed by Margaret Walch, have been growing in popularity. Watch for announcements of upcoming ones.

During the year, we made direct personal contact with Professor Francois Parra, Director of the "Centre de la Couleur," in Paris. In Japan, we had meetings with Mr. Takashi Hosono. Chairman of the board of the Japan Color Research Institute, and with Mr. Masaomi Unagami, President of the Color Planning Center in Tokyo. As color keeps growing in importance with consumers all over the world, we feel that such meetings are worthy and reciprocally beneficial. For U.S.A., Directors Dolores Ware and Margaret Walch have been carrying the Gospel of CAUS around the country, visiting and speaking at meetings in East and West.

In the marketing area related to color we have received valuable help and cooperation from our associate directors. Faber Birren, Adrian Butash and Nadine Bertin. We are grateful to them.

Strong Press Coverage

We also wish to acknowledge the 1982 press coverage of our activities and our Color forecasts. The following were some of the publications which ran articles and reports on CAUS doings including the modus operandi pertaining to our fashion and environmental counsel service:

- Interior Design
- Los Angeles Times
- Apparel Industries
- Modern Floor Coverings
- California Apparel News
- Health
- Intimate Fashion News
- Newsday
- Home Fashion Textile
- Nykeytekstili (Finland)
- Albuquerque Journal
- Fort Lauderdale News & Sun Sentinel
- Arizona Republic
- Decor
- Gift & Decorating Accessories
- Working Women

Time magazine has been interviewing us in regards to coverage of the Association's activities and influence in the fashion and environmental world. We are hopeful that by the time you read this, an issue containing a report on Color and CAUS will have made its appearance in this widely read news magazine.

Generally it has been a fruitful year of growth for our Association. As a sidelight, our consultations and the inquiries received by us from the general public have increased greatly. We are constantly called by the trade consumers and the media in relation to matters on color.

Marielle Bancou has just been appointed as Executive Director of CAUS.

REPORT FROM THE COLOR MARKETING GROUP DELEGATES
ANN DILLON, RETIRING CHAIRMAN

The Color Marketing Group has expanded tremendously over the past few years to some 700 members. During 1982, we held two most interesting and successful national meetings. The spring meeting "Market Hues," was at Pheasant Run in St. Charles, Illinois, May 2-4. Our main focus was on our Color Directions Workshops. These evaluate color information from all the different markets represented by CMG. Out of this, a CMG palette is formed for future direction in the marketing of color.

We celebrated our 20th Anniversary at our fall meeting in Williamsburg, Virginia, a spot the ISCC knows well. Here, our residential forecast palette was presented to the membership. This year, for the first time, we separated the Contract and Residential color directions. At the fall meeting, the emphasis was on Contract and much time was devoted to workshops for those working in that field.

There have also been several regional meetings throughout the year.

New officers for 1983 were elected: President: Jim Brown, Jim Brown Associates; Vice Pres.: Joyce Davenport, DeSoto, Inc.; Treasurer: Dan Cannady, Westinghouse Electric Corp.; Secretary: Sharon de Leon, Design Portfolio.

Meetings for 1983 are scheduled for May 1-4, at the Colony Square, Atlanta, Georgia, and October 9-12, at the Shoreham Hotel in Washington, D.C.

Please welcome our new chairman of the CMG Delegation, Jim Grabowsky, Glidden Coatings and Resins Div., and newly appointed members of our delegation: Ronald H. Bourque, Fitchburg Paper Co., Louis Brincat, American Hoechst Corp., and John L. Gordon, Jr., Occidental Chemical Corp.

REPORT FROM THE DRY COLOR MANUFACTURERS ASSOCIATION DELEGATES
A. M. KEAY, CHAIRMAN

No report has been received.

REPORT FROM THE ENTOMOLOGICAL SOCIETY OF AMERICA DELEGATES
J. HOWARD FRANK, CHAIRMAN

The Entomological Society of America Special Committee on Color Standards is seeking avenues for publication of the prototype color standard it has developed in collaboration with Mycological Society of America Color Standards Committee.

REPORT FROM THE FEDERATION OF SOCIETIES FOR COATINGS TECHNOLOGY DELEGATES
JACQUELINE WELKER, CHAIRMAN

No report has been received.

REPORT FROM THE FOUNDATION FOR ANALYTICAL RESEARCH IN THE ARTS, LTD., DELEGATES
ROY H. WHITE, CHAIRMAN

No report has been received.

REPORT FROM THE GEMOLOGICAL INSTITUTE OF AMERICA DELEGATES
VINCENT MANSON, CHAIRMAN

No report has been received.

REPORT FROM THE GRAPHIC ARTS TECHNICAL FOUNDATION DELEGATES
RICHARD D. WARNER, CHAIRMAN

During 1982, research activities in the GATF Color Center were mainly concentrated in the areas of high fidelity color reproduction requirements, electronic color scanning and the reproduction results from various types of transparent color originals. The results of these research activities have been published in two reports that are available, upon request, from the Graphic Arts Technical Foundation.

The first report is a Technical Service Report entitled "The Electronic Color Scanner: Color Correction and Gray Balance." This report describes the procedures and techniques necessary to set-up the electronic color scanner to produce color separations that are color corrected and gray balanced for the ink and paper used to print the color reproductions. The second report is a Research Progress Report entitled "Color Correction and Tone Reproduction as a Function of the Original Format." This report illustrates changes in apparent contrast, image detail and hue associated with the reproduction scaling ratios and suggest that the effects are due to the interaction of the color film's photographic characteristics of graininess and reciprocity failure.

The GATF Research Department was also active in the SWOP (Specifications for Web Offset Publication) Committee activities and worked with SWOP Paper Subcommittee on testing various candidate proofing stocks and with the SWOP Densitometry Subcommittee on Standard Color References Bars and associated problems in reflection densitometry.

In addition to the above color research activities, the GATF Research Departments' Techno-Economic Forecasting Division published two Techno-Economic Forecasts (TEFs) on the subject of color. TEF No. 16, entitled "Text, Color and Image Assembly," was published in May 1982. This report analyzed the impact of electronic technology on color reproduction and pagination/page make-up. TEF No. 18, "Color Standards and Color Controls," appeared in December 1982 and reviewed the methods and standards necessary on color reproduction to meet customer needs in product quality (including color proofing systems). The report also examined color reproduction methods and problems in Europe, Japan and Australia as well as in North America. The importance of color is emphasized, it is GATF's estimate that all the "real" (inflation-adjusted) growth in U.S. commercial printing between 1972 and 1982 is attributable to color.

REPORT FROM THE GRAVURE TECHNICAL ASSOCIATION DELEGATES
FRANK BENHAM, CHAIRMAN

No report has been received.

REPORT FROM THE ILLUMINATING ENGINEERING SOCIETY DELEGATES
W. A. THORNTON, CHAIRMAN

No report has been received.

REPORT FROM THE INDIVIDUAL MEMBER GROUP VOTING DELEGATES

No report has been received.

REPORT FROM THE INDUSTRIAL DESIGNERS SOCIETY OF AMERICA DELEGATES
RAYMOND SPILMAN, CHAIRMAN

No report has been received.

REPORT FROM THE MANUFACTURERS COUNCIL ON COLOR AND APPEARANCE DELEGATES
JAMES G. DAVIDSON, CHAIRMAN

The MCAA will sponsor an educational seminar on color and appearance instrumentation at the Screen Printing Association International annual technical symposium to be held in Chicago in April 1984.

A workshop will be co-sponsored by the MCAA and the Society of Plastics Engineers, SPE/MCCA RETEC. The workshop is scheduled to be held in Chicago in the fall of 1985.

REPORT FROM THE MYCOLOGICAL SOCIETY OF AMERICA DELEGATES
KENT H. McKNIGHT, CHAIRMAN

No report has been received.

REPORT FROM THE NATIONAL ASSOCIATION OF PRINTING INK MANUFACTURERS DELEGATES
ALFRED DIBERNARDO, CHAIRMAN

The NAPIM Color Book Technical Committee continues to work closely with Pantone to assist with, and monitor, subsequent printings of Edition 17 of Pantone Printer's Edition. It also encouraged the preparation by Pantone of a set of lower cost formulas for blends in the Printer's Edition based on high cost pigments. The Color Book Technical Committee is available for consultation with any manufacturer of color books for the printing industry.

The NPIRI Raw Materials Data Handbook on pigments reported in last year's report was delayed because of a variety of problems in completing sections covering toxicology and is now scheduled for publication in mid-1983. This publication should be of considerable interest and value to users of pigments.

The NAPIM Color Standards Committee continues its representation on the SWOP Industry Review Committee concerning the specifications for web offset publications.

The delegation would also like to express its pleasure at the

designation of Dr. Eugene Allen of Lehigh University as recipient of the 1983 Godlove Award. Dr. Allen has played a major role in several NAPIM/NPIRI programs in the area of color science.

REPORT FROM THE NATIONAL PAINT AND COATINGS ASSOCIATION DELEGATES EVERETT R. CALL, CHAIRMAN

No report has been received.

REPORT FROM THE OPTICAL SOCIETY OF AMERICA DELEGATES C. JAMES BARTLESON, CHAIRMAN

No report has been received.

REPORT FROM THE PHILATELIC FOUNDATION DELEGATES TIMOTHY A. HOLMES, CHAIRMAN

The Philatelic Foundation has continued its study of color definitions as carried in catalogues carrying listings of United States stamps. The project which culminated in the publication of *Color in Philately* has led to revised interpretations of color changelings in pigments used on the classic United States period (primarily 19th century).

Early this year the Foundation's Expert Committee established the forgery status of one of the major philatelic pieces from the Confederate States period through color matching of writing and postmarking inks used in disparate locations. This is part of the continual examination of material submitted for authentication which constitutes a major part of the Foundation's activities.

An upcoming handbook concerned with postal history will include color differentiation as a test for authenticating philatelic material. Several articles in the book *Opinions* (March 1983) demonstrate this as well.

The Foundation is researching new methods of color comparison, supplementing the spectrophotometric techniques, to standardize terminology in philatelic usage.

REPORT FROM THE SOCIETY OF INFORMATION DISPLAY DELEGATES IFAY F. CHANG, CHAIRMAN

The Society for Information Display held the 1982 SID International Symposium, Seminar and Exhibition in San Diego, May 10-14, 1982. This worldwide forum for display technologies provided participants an opportunity to learn about the rapid advancements occurring in all phases of the display and human factors community.

The truly global nature of the symposium was underscored with papers from eight countries including for the first time, developments achieved in China.

In addition to the traditional coverage of display technologies, speakers offered expanded documentation of progress in display systems, image processing, simulation, optical discs, human factors, hard copy and display driving electronics, affording a comprehensive evaluation of the full spectrum of related technology advancements.

The seminars provided in-depth tutorials on selected topics by specialists acknowledged as leaders in their fields. The topics were electroluminescence, plasma, vision theory and color CRT hardware.

Panelists in the three evening sessions covered health and safety issues of display terminals, relative merits of electroluminescent and plasma displays, and projection display techniques.

The multi-million-dollar global exhibit of operational display-oriented hardware, representing the recent advancements in this fast-moving technology was another highlight of SID82.

The 1982 International Display Research Conference sponsored by the IEEE Group on Electron Devices, the Society for Information Display, and the Advisory Group on Electron Devices was held in Cherry Hill, NJ, October 19-21.

The first annual international event of these three organizations began in 1981 with Eurodisplay '81 held in Munich. The third in this series will be Japan Display '83 to be held in Kobe, Japan, on October 3-5, 1983.

The Keynote Address, given by F. H. Dill, Manager of Display Technology IBM T.J. Watson Research Center, provided information on future trends and mutual impact of VLSI and display technologies.

Session III covered Color, CRT and Projection Displays. The papers included Technologies for High-Resolution Color Display, Current-Sensitive Multi-Color CRT Display, Novel Synthesis Technique for Zinc Silicate Phosphors, Electron-Beam Addressed Liquid-Crystal Light Valve and 128 x 128 Deformable Mirror Device.

Three members were named Fellows of SID. They were: Dr. Jay Jerome Brandinger, John M. Constantine and Dr. Peter D. T. Ngo. A special Recongition Award was presented to Dr. Larry F. Weber for his contributions to the optical addressing of the AC plasma display.

1982 publications of the SID include:

1982 International Symposium Digest, May 1982, San Diego. Powder electroluminescent devices, videophone and display markets, display standards and visual fatigue, thin-film transistor arrays for LCD addressing, color CRTs, ink jet printing technology.

1982 International Symposium Seminar Lecture Notes, San Diego. Volume 1, May 10, 1982: Four sessions include matrix addressed liquid-crystal displays, electroluminescent devices, AC and DC power displays and drive considerations for AC thin-film.

Volume II, May 14, 1982: Five sessions include the human visual system, display subsystem design, human factors for color CRT displays, visual parameters for color displays, weapons systems simulation.

Display Conference Proceedings

1982 International Display Research Conference, October, Cherry Hill, NJ. Papers on future trends and mutual impact of VLSI and display technologies, application of psychophysics to display evaluation, electroluminescent displays.

Quarterly Proceedings

Volume 23, 1982

No. 1 Selected papers from the 1981 SID International Symposium: Vol. 1.

No. 2 CRT Standards.

No. 3 Selected papers from the 1982 SID International Symposium: Vol. 1.

No. 4 Selected papers from the 1982 SID International Symposium: Vol. II.

REPORT FROM THE SOCIETY OF MOTION PICTURE AND TELEVISION ENGINEERS DELEGATES
ROLAND J. ZAVADA, CHAIRMAN

"Commitment to Tomorrow's Technology" was the theme of the Society's 124th Technical Conference at the New York Hilton Hotel, November 7-12, 1982. Featuring papers, tutorials, demonstrations, and film and slide presentations, the technical program covered a wide variety of topics in film and television engineering, and presented the latest research and advances in areas such as lighting, special effects, and digital time-code sound recording.

Among the 125 papers presented, color was the subject of many:

Psychophysical Relationship of Image Quality Characteristics of Motion Picture Color Films

Training of Lighting Designers (The T.O.L.D. Conference and the SMPTE)

Three Disciplines of Lighting – Their Needs and Their Future

The Answers – Current and Future From the Suppliers of Light Sources

The Answers – Current and Future From the Suppliers of Lighting Equipment

Live Demonstration of Lighting Techniques

A New Laboratory Aim Density (LAD) Control Film

Improved High Speed Eastman Color Negative Film

A New 16mm Eastman Color Negative Film

New Tools for Improved Telecine Quality

An Experimental Trinoscope for Improved Video-to-Film Recording

Video Tone Reproduction: A Sensitometric Approach to the Rank Cintel Telecine

Strobe Photography Experiences

Mobile Electric Power Sources for Location Lighting

The Film Stocks Used for Optical Special Effects – "A Range of Horses in Unusual Courses"

Computer Generated Imagery for Theatrical Film Production

Human Components of Three Dimensional Reconstruction

Performance of the 1200 Watt Brite Beam Arc Lamp

Screen Image Illumination of 35mm Film Projection

Screen Image Contrast – State-of-the-Art Plus Actual Tests and a Proposed Test Standard

Development of a Three-MOS Color Camera

An Ultra-Lightweight Color TV Camera Design

Several papers on color were presented at the Society's 16th Annual Television Conference on February 5-6, 1982 at the Opryland Hotel, Nashville, Tennessee:

Development of a Precise Registration and Level of Television Signal Measuring Equipment and Its Applications

Optimization of High Quality Color Camera for ENG/EFP Purposes

Development of Broadcast Color Camera Using a Single Pickup Tube

Color Picture Display System for High Definition Television

Society awards and honors for outstanding technical achievement were presented to several recipients:

The Agfa-Gevaert Gold Medal Award was given to C.B.B. Wood, British Broadcasting Corporation, for involvement in film telerecording, development of new electronic cameras, and early experiments in color. As developer of the scanning apparatus for the cablefilm system, he worked not only on systems but also on color cameras, film stocks, and color telecines.

In recognition of his distinguished contributions to the research and development of Fuji negative and print materials, including the high-speed Fuji color negative, the Herbert T. Kalmus Gold Medal Award was presented to Hirozo Ueda, Fuji Photo Film Company, Ltd.

Appended is a list of papers on color published in the SMPTE Journal during 1982.

Papers Published in the SMPTE Journal, Volume 91 1982

BRAINARD, R. C.; NETRAVALI, A. N. and PEARSON, D. E. Predictive coding of composite NTSC color television signals. No. 3, Mar., pp. 245-252.

WILKES, BRYAN. Lighting the royal wedding. No. 3, Mar., pp. 253-259.

HUNT, C. Bradley. Considerations in the Illumination of photographic darkrooms. No. 3, Mar., pp. 266-276.

DUBOIS, E.; SABRI, M. S. and OUELLET, J. -Y. Three-dimensional spectrum and processing of digital NTSC color signals. No. 4, Apr., pp. 372-378.

SPICER, CHARLES E. NTSC color-field identification. No. 7, July, pp. 627-633.

LOVICK, ROBERT C. A test target series and procedure to assess dynamic luminance reproduction of film by television. No. 8, Aug., pp. 694-699.

FUTERS, STEVE. Recent developments in studio lighting suspension systems. No 8, Aug., pp. 730-732.

BEISER, JACK S. and PAULL, HERBERT. Drive-in theater screen luminance. No. 8, Aug., p. 733.

CARL, K. J.; ERWIN, J. W.; POWELL, S. J.; REINKING, F. R.; SEHLIN, R. C.; SPAKOWSKY, S. W.; SZAFRANSKI, W. A. and WIEN, R. W. Eastman color print film 5384. No. 12, Dec., pp. 1161-1170.

REPORT FROM THE SOCIETY OF PHOTOGRAPHIC SCIENTISTS AND ENGINEERS DELEGATES
RUSSELL H. GRAY, CHAIRMAN

No report has been received.

REPORT FROM THE SOCIETY OF PLASTICS ENGINEERS, COLOR AND APPEARANCE DIVISION DELEGATES
ANTHONY J. PENTZ, CHAIRMAN

No report has been received.

REPORT FROM THE TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY DELEGATES
S. J. POPSON, CHAIRMAN

The TAPPI Optical Methods Committee is primarily involved in the development of test methods which will eventually be adopted by TAPPI as official methods. Among the test methods currently under consideration the following may be of interest to ISCC members:

Color of Paper and Paperboard in CIE Y, x, y, or Y, Dominant Wavelength and Excitation Purity

Illuminants for the Visual Grading and Color Matching of Paper

Calibration of Reflectance Standards for Hemispherical Geometry

The Determination of Instrumental Color Differences

Diffuse Blue Reflectance Factor of Pulp, Paper, and Paperboard

The TAPPI Optical Methods Committee will be sponsoring a Mini Seminar on "Standardization and Calibration of Optical Instruments for the Paper Industry" to be held during the TAPPI Testing Conference, October 16-19, 1983, at the Holiday Inn, Pointe Claire (Montreal) Quebec, Canada. The next regular meeting of the Optical Methods Committee will also be held at this conference.

ANNA CAMPBELL BLISS AWARDED ROME PRIZE FELLOWSHIP

The American Academy in Rome has awarded five Advanced Fellowships in the Design Arts for 1983/84. The recipients of the National Endowment of the Arts Fellowships went to Anna Campbell Bliss of Salt Lake City, Utah, Anthony Maughan Ames of Atlanta, Georgia, Adele Chatfield-Taylor of New York City, and Turner Brooks of Starksboro, Vermont. George Hinds of Chicago, Illinois will receive the Graham Foundation Advanced Fellowship in Architecture. Calvin G. Rand, President of the American Academy in Rome, announced today that the Academy's Advanced Design Arts Jury, which consisted this year of Robert Venturi, Myron Goldsmith, Spero Daltas, Anthony Lumsden, and Michael Pittas, have awarded these design artists and architects six months of independent study at the Academy in Rome.

Anna Campbell Bliss is a partner of Bliss and Campbell, Architects, in Salt Lake City, Utah, and specializes in the uses of color in architecture and interior and graphic design. Ms. Bliss received her Master's in Architecture from Harvard University's Graduate School of Design, and studied at M.I.T., Wellesley College, the University of Minnesota, the Minneapolis School of Art and the University of Utah. She has written and lectured widely on the uses of color in architecture and the arts, and exhibited her own paintings and prints, including solo exhibitions at the San Diego Museum of Art, Ohio State University Gallery and the Utah Museum of Fine Arts. The many awards given her work include a Graham Foundation grant and a presidential citation from the American Society of Interior Designers. In Rome Ms. Bliss will continue work on a book on color for architects, designers and artists, and will execute large scale experimental works at the print studio of Galleriea 2 RC.

The American Academy in Rome, founded in 1894 and chartered by Congress in 1905, is the only national cultural institution of its kind outside the United States. Founded by Charles F. McKim, of the New York firm of McKim, Mead and White, the Academy each year awards thirty Rome Prize Fellowships in twelve different fields of the arts and humanities enabling American artists and scholars to live and work at the Academy's center in Rome, Italy. Upon their return they will join the more than four generations of Rome Prize winners who have helped to shape this country's intellectual life.

NOTICE

Proposed Amendment to the Inter-Society Color Council By-Laws

The ISCC Board of Directors approved an amendment to the By-Laws at the last Board meeting, April 9, 1983. The proposed amendment, Article XI, Suspension of Rules, would allow the Board of Directors to suspend a by-law or standing rule for a stated purpose and for a specific time, but only when two-thirds of the entire Board so approve. The amendment, as proposed, will go to the Delegates for vote later this year.

ISCC 1984 WILLIAMSBURG CONFERENCE ON COLOR AND IMAGING

Another in the series of popular and successful ISCC Williamsburg Conferences, with the title *Color and Imaging,* will be held February 12-15, 1984, at the Williamsburg Lodge, Williamsburg, Virginia, under the sponsorship of the Inter-Society Color Council. The Conference Chairman will be Richard D. Ingalls.

The 1984 Williamsburg Conference on *Color and Imaging* will cover the most up-to-date technology in a wide variety of applications of color imaging. After an opening talk by W. David Wright, Imperial College (retired), on the history of color imaging to supply a frame of reference, the program will include but not be limited to the following presentations: Mr. Edward Giorgianni, Eastman Kodak, speaking on video simulation and photography; Dr. Annette Jaffe, IBM, on ink-jet printing; Prof. Milton Pearson, RIT, on image-reproduction colorimetry; Mr. Justin J. Rennilson, Retro-Tech, on retroreflective imaging; Mr. Richard Ingalls and Mrs. Marjorie Ingalls, Armstrong World Industries, on colorimetric graphics; Richard E. Warner, GATF, on color proofing systems; Dr. J. John

Caufield, Aerodyne Research, on holography; Prof. Franc Grum, RIT, on education in color imaging; and Mr. Thomas S. Buzak, Tektronics, on video color imaging.

Speakers are being encouraged to bring examples of their technology for display. A panel discussion reviewing the presentations and their relationship to color and the viewing experience will close the meeting. Because of the anticipated popularity of the program, prospective attendees should note that the capacity of the meeting is approximately 100 participants.

Anyone associated with applications of color imaging, desiring to present a short (10-minute) paper, should send an abstract before October 15 to the Conference Chairman, Mr. Richard D. Ingalls, Technical Center, Armstrong World Industries, PO Box 3517, Lancaster, Pennsylvania 17604. For further information and a descriptive brochure with application form for attendance, contact the ISCC Publicity Chairman, Dr. Fred W. Billmeyer, Jr., Department of Chemistry, Rensselaer Polytechnic Institute, Troy, New York 12181.

DETROIT COLOUR COUNCIL

Members of the Detroit Colour Council are looking forward to the April, 1984 ISCC annual meeting in Detroit. DCC will be a co-host for this conference.

The first two 1983 DCC functions were highly successful and both programs drew impressive numbers of non-members as well as the usual member attendance. Henning Bunge of Mobay Chemical made a presentation in March on possible cost-saving features of certain organic pigment blends for plastics, as compared to formulations based on heavy-metal inorganics. Featured in May was Victoria Mournean, color and fashion consultant to Toyota and to Ford Motor Vinyl Operations. Ms. Mournean gave a fascinating view of Japanese fashion and illustrated the impact of architecture on fashions.

DCC programming resumes September 22 in Dearborn with a blue ribbon panel discussing automotive exterior finishes. This will include color match of mating steel and plastic parts with a variety of coatings.

SYMPOSIUM ON REVIEW AND EVALUATION OF APPEARANCE: METHODS AND TECHNIQUES

A call for papers is issued for a Symposium on Review and Evaluation of Appearance: Methods and Techniques, to be held on 23 May 1984 in Montreal, Canada. The symposium is sponsored by ASTM Committee E-12 on Appearance of Materials.

The purpose of the symposium is to provide a forum for researchers, quality control personnel, buyers, sellers and standards writers to present recent developments in how to measure or specify the appearance attributes of materials.

Appropriate topics for contributed papers include the following:

- The psychophysical attributes of appearance, distinctions between the physical attributes, and the most recent work by the CIE in these areas
- Effort toward standardizing the conditions of observation and measurement
- Methodology in choosing standards for appearance specification, i.e. chromatic or geometric attributes or materials classification
- Research in color, color difference, gloss, image clarity, haze, turbity, opacity (hiding power), reflectance, retroflectance, conspicuity, transmittance, transparency, yellowness, whiteness, spectrophotometry and goniophotometry
- Applications involving opaque, light-transmitting, metallic, fluorescent, retroflecting and other materials
- Other related subjects

Papers are expected to emphasize either new research or practical applications in the field of appearance measurement.

The program will consist of an invited keynote speaker and sessions relating to the above topics.

Prospective authors are requested to submit a title, a 300-500 word abstract with the ASTM Paper Submittal Form below by 1 August 1983 to Kathy Green, Manager, Acquisition & Review, ASTM, 1916 Race Street, Philadelphia, Pennsylvania 19103, 215/299-5414. Additional Paper Submittal Forms are available from Greene.

Additional questions may be directed to the Symposium Chairman, J. Rennilson, Retro-Tech, P.O. Box 3101, La Mesa, California 92041, 714/698-1263. Accepted abstracts may be printed and distributed at the Symposium with the approval of the chairman.

QUICKENING COLOR TEMPOS IN INTERIOR PRODUCTS

More and more companies are concerned with timing, says Barbara Schirmeister, a director of the ISCC, whose work as a color consultant runs the gamut from bathtubs in elegant fifties grey (American Standard) to fabric collections (Lee Jofa designs). Timing is, of course, critical. To be either too early or too late is equally unacceptable. A good color consultant must anticipate consumer color receptivity to a given shade for a given product's market, so that the manufacturer will have at least two years' lead time to plan for the projected market.

Today's quickened color tempos and range of color references are two good reasons to bring in an outside color consultant, someone whose detachment can be invaluable. Such an individual says Mrs. Schirmeister, can evaluate a product's current color line not only in light of contemporary color taste but also with regard to concurrent economic, sociological, fashion, and regional influences. 'Old' colors can then be removed and 'new' ones added by weighing-in various influences according to the product's end use. If the product is a luxury one, the practicalities of economics tend to diminish while international fashion influences tend to rise. On the other hand, color selection for a utilitarian product, a luncheon napkin, for example, will be governed by a stricter adherence to economic and regional considerations.

Climate and lifestyles are always important color influences.

A bright yellow car, for example, in a Seattle rain will be perceived quite differently from the same auto in a Hawaiian sun. Regional entities, observed, Mrs. Schirmeister, whether within national borders like the American Southwest or crossing international lines like Southeast Asia need to be constantly kept in mind because human beings invariably experience color within contexts of differing light.

If fashion is no longer the great leveller it was in the seventies when the young crowd was universally dressed in worn jeans and sweatshirts and older women wore pantsuits and designer sweaters and it was difficult to tell anyone's national origin at an international airport, it is, nevertheless, exerting a greater influence on the environmental field. Mrs. Schirmeister noted that color influences from apparel fashions, which just a decade ago took years to be seen in the interior design field, are now having a more immediate impact. This, she said, is undoubtedly a part of the merging of color taste in all visual fields. Certainly, one thing is clear. Amidst the complexities of a post-industrial, information economy in fast flux, color specialists, like lawyers and accountants, will have lots to do.

CALENDAR

ASTM
Symposium on Review and Evaluation of Appearance,
May 23, 1984 – Montreal, Canada

CIE
20th Session, August 31 - September 8, 1983 –
Amsterdam, Netherlands

Federation of Societies for Coatings Technology
Annual Meeting, October 12-14, 1983 – Montreal, Canada

ISCC 1984 Annual Meeting
April 8-10 – Michigan Inn, Southfield, Michigan

Williamsburg Conference
Color and Imaging, February 12-15, 1984

Optical Society of America
Annual Meeting, October 17-21, 1983 – New Orleans, LA

1. Any person interested in color and desirous of participating in the activities of the Council for the furtherance of its aims and purposes . . . . shall be eligible for individual membership (By-Laws, Article I, Section 2). Application forms for individual membership may be obtained from the Secretary (address given above).

2. The Council reaffirms its community of interest and cooperation with the Munsell Color Foundation, an independent private foundation devoted solely to the advancement of color knowledge in science, art, and industry. It serves as Foundation Associate of the Inter-Society Color Council. The Council recommends and encourages contributions for the advancement of these purposes of the Munsell Color Foundation. For information, write to S. L. Davidson, 42 Kemp Avenue, Fair Haven, NJ 07701.

3. The Council promotes color education by its association with the Cooper-Hewitt Museum. It recommends that intended gifts of historical significance, past or present, related to the artistic or scientific usage of color be brought to the attention of Christian Rohlfing, Cooper-Hewitt Museum, 9 East 90th Street, New York 10028.

Deadlines for submitting items to be included in the Newsletter are: February 15, April 15, June 15, August 15, October 15, and December 15; in other words, the fifteenth of the even-numbered months.

Send newsletter items to:
Ms. Mary Ellen Zuyus
Hunter Associates Laboratory, Inc.
11495 Sunset Hills Road
Reston, VA 22090

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