Chairman’s Message

CHANGES
Johnny Suthers, CAD Chairman

I have been reflecting on the changes that are occurring in our lives. In preparation of our SPE CAD Summer Board agenda, I was reminded of the changes that would occur at the meeting. After our election and the close of ANTEC, we now have a 27 member Board of Directors plus officers and chair holders. There will now also be a Financial Chair, ANTEC General Chair and RETEC General Chair. I see these as positive changes as per the results and participation at our summer meeting. I am particularly looking forward to the RETEC in Toronto and the high caliber of technical papers scheduled for presentation. I am anticipating the times of fellowship and networking that we will enjoy at the various social functions, table tops, breaks and hospitality suites. The RETEC team has put a lot of time and effort into this event and I encourage your attendance.

Each of us also experience changes daily in our personal and business lives. Our children go off to college, a love one dies, we change jobs, or we retire. We have to undergo a balancing act to juggle priorities in our lives. How we cope or manage these changes affects our lives in the future. One of the better books I have read on this subject is *Who Moved My Cheese* by Spencer Johnson. Johnson uses Cheese as the symbol of what one would desire in life (a good job, money, health, a loving relationship or spiritual peace of mind). He gives thought provoking insight into handling the stress of change. I encourage each of you to obtain a copy of this book, read it and pass it onto another. Remember, one of the best investments you will ever make is in time for yourself. I’ll see you on that golden shore.

Johnny Suthers
Johnny Suthers
CAD Chairman
EDITOR'S COLUMN

I am saddened to report to you all that Peter Lewis, Director, Communications & Regulatory Affairs for Sun Chemical Corporation, Colors Group and an excellent contributor to this newsletter has passed away. Peter wrote the series on organic pigments that I presented to you in our recent past issues.

Dr. Lewis was an Associate of the Royal Institute of Chemistry/London, England and held a Ph.D. in Physical Chemistry awarded by the University of Bristol/Avon, England. He began his professional career with ICI, in the Dyestuffs Division where he worked with both reactive and disperse dyes and their intermediates.

In 1979, Dr. Lewis joined Sun Chemical Corporation, Cincinnati, Ohio where he held such positions as Technical Service Manager, Quinacridone Product Manager, Dry Color Business Manager, Marketing Manager and Coatings Industry Manager. His final job with Sun was Director of Communications & Regulatory Affairs. He was the editor of the Pigment Handbook, Second Edition as published by John Wiley & Sons and the author of the FSCT Monograph, Organic Pigments, now in its third edition. He was a significant contributor to our industry, and will be sorely missed.

Elsewhere in this issue is an article on Titanium Dioxide Pigments, authored by Richard Towne of TeknorColor Company that gives an excellent overview of these pigments (the single most widely used pigment for the coloring of plastics, and in doggone nearly every formula I ever produced as a color matcher). We are also lucky enough to have an article by Roger Reinicker of Ciba Geigy that delves deeply into the crystal structure and nature of organic pigments.

Bob Franklein

WEB SITE

If you have seen the SPE web site at www.4spe.org recently, you can see we have made some improvements. If you haven’t seen it, take a moment -- I think you will be very pleased and find it very informative.

Each Section and Division is welcome to contribute information on their activities, board of directors meetings, upcoming events, industry updates, etc., on their pages. Check out your pages at www.4spe.org, select the Section/Division menu option to find your Section or Division.

Please feel free to contact me with any questions.

Jenny J. Okamoto, Field Services Manager
Society of Plastics Engineers
14 Fairfield Drive, Brookfield, CT 06804
Phone (203) 740-5431
www.4spe.org
WHO CAN HELP YOU

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CALL FOR PAPERS

ISCC Conference on Industrial Color Solutions March 9-11, 2003, Philadelphia University

The organizers of the 2003 ISCC Williamsburg type conference are looking for papers to be presented at the conference. The theme for this year's meeting is Industrial Color Solutions. Papers will be solicited from all major industrial segments; such as, Coatings, Textiles, Plastics, Paper, and Printing. Topics of interest will include Tolerancing, Formulation Practices, Process and Product Control Issues, Color Communication and Specification. We hope to provide a valuable forum for in-depth discussion of the challenges and issues faced when linking the fundamentals of colorimetry and color science to the realities and pressures of the production environment. NO WRITTEN PAPER IS REQUIRED.

If you have specific topics or needs that you would like to have considered, please send your input to the email address below:

Ralph Stanzola - Industrial Color Technology LLC
410 Clover Court-Branchburg NJ 08853
(908) 369-8736
Rascolor@juno.com
YOUR INDUSTRY

SPI BROCHURE HIGHLIGHTS THE PLASTICS INDUSTRY'S SIGNIFICANT CONTRIBUTIONS TO THE U.S. ECONOMY -- WASHINGTON (September 3, 2002)

A recently released brochure from The Society of the Plastics Industry, Inc. (SPI) shows that the U.S. plastics industry employed more than 1.5 million workers nationwide and generated more than $330 billion in shipments in 2000. The brochure is part of the trade association's Plastics Data Source web site and reports, which provide in-depth statistics on all facets of the plastics industry.

In addition to analysis of the size and scope of the U.S. plastics industry, the brochure details the Top 10 states in respect to employment and shipments in 2000. It also provides data on U.S. international trade in plastics and information on world consumption of commodity thermoplastics in 2000.

"This free publication provides a valuable tool for companies to use in their community outreach efforts," said Bonnie Limbach, SPI chief communications officer. "It's a great way for plastics companies to spread the good news about their industry and its importance to state and national economies. We hope plastics firms will download the report and distribute copies to their employees, local newspapers, schools and business groups."

The brochure also highlights the growing importance of global business for the U.S. plastics industry, noting U.S. trade surpluses with major trading partners, the employment impact of U.S. plastics exports, and the plastics net balance of trade. "While the machinery and mold sectors of the industry have seen jobs and shipments shift overseas in recent years, overall the U.S. plastics industry contributes a significant surplus to U.S. international trade -- $7.2 billion in 2001," said Lori Anderson, SPI senior director of economic and international affairs.

The brochure is available to the industry at no cost on the Plastics Data Source Web site at:


Additional statistics on the plastics industry are available at the Plastics Data Source Web site: http://www.plasticsdatasource.org. Founded in 1937, the Society of the Plastics Industry, Inc., is the trade association representing one of the largest manufacturing industries in the United States. SPI's 1,500 members represent the entire plastics industry supply chain, including processors, machinery and equipment manufacturers and raw material suppliers.

SPE CAD RETEC - TORONTO, ONTARIO, CANADA

OCTOBER 1st AND 2nd, 2002

The RETEC will be held at the Royal York hotel in downtown Toronto this year. This is a great hotel in one of the world's great cities. If you haven't made your reservations yet, be sure to do so quickly. The RETEC registrars are Ron Fisk and Poonam Jain, and they can be reached at 905-458-6888. The full brochure is online at www.specad.org (and thanks to our webmaster, Bill Daves, for his diligent work in getting this up and running). The Hotel can be reached at 800-441-1414. Ask to register for a room under the SPE Color and Appearance meeting. Tabletops are available by calling Brian West at 865-457-6700, and corporate suites are available by calling the Royal York.

A passport is necessary when traveling outside the United States, so be sure you take yours with you. There are several special events planned, including Blue Jays baseball or a theatre production of The Lion King on Sunday the 29th, and a City Tour and/or lunch on top of the CN Tower, Toronto's 1,815 foot tall tower. You can register for these along with your RETEC registration.
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Secretary's Report
Minutes of the last meeting were approved without comment.

Treasurer's Report
Joe Cameron was waiting to hear from Sharon Ehr concerning the checks received for the Newsletter sponsorships. Sharon was not able to attend, so a motion to approve the Treasurer's Report was tabled until the summer meeting. Bruce Mulholland suggested several changes designed to balance expenditures and revenue in the proposed budget for the year. This was discussed and approved.

Elections
Johnny Suthers reported that paper ballots were still circulating; results to be revealed at the Summer Meeting.

Technical Program Committee
ANTEC 2002 - Tim Reilly and Tracy Phillips
Tim Reilly and Tracy Phillips were the co-chairs, Tracy filled in when Bob Schweitzer resigned from the BOD. Tracy and Brian Tennis were moderators for the session. Bruce Mulholland graciously gave a talk that went with the paper written by Sun Chemical's Peter Lewis, who passed away a week before the ANTEC. Several comments were given about the ANTEC. The paper sessions were a bit short at 20 minutes and the moderators reported that was too much time to fill. Perhaps 25 minute paper sessions would work better. Commercialism was mostly absent, at the very least noticeably improved. A suggestion—keep several computers powered up on a power strip on the stage, that way we avoid delays while booting the computers. The Board thanked Tim for his efforts in holding a successful ANTEC.

RETEC 2002 - Bob Trinklein
Judy Grimson from the Ontario Section visited us. We discussed the various proposals for CDs and preprints, and settled on 300 books and 500 CDs, with CAD to pay for the 200 extra CDs. Dave Johnson and Earl Balthazar voted no on this proposal and wished their votes to be recorded. We discussed currency exchanges in Toronto, and looked at the first edition of the brochure which had been printed up by the Ontario RETEC committee. Some questions on the brochure arose, as did a number of suggestions, and Bob Trinklein was to send an email to Eva Wright to discuss these with her. A speaker has been chosen for the second day. A number of sponsors have been approached and agreed to participate. No more seed money was requested. There are enough technical papers to fill the program. Bob Trinklein has a contract ready to sign for the CDs.

ANTEC 2003 - Ed Tucker
Papers submitted to SPE for the ANTEC will be accepted through email or online only from this point forward. Ed viewed the presentation concerning this system, which will be called Paper Cutter. There are new deadlines that go with this approach. Ed reports 10 intent-to-presents have been received, with 5 of those being "maybe".

RETEC 2003 - Tracy Phillips
Things seem to be proceeding very nicely with the Southern Section. They have chosen a new theme, "The Color of Plastics". They have created a very attractively designed logo. Bob Charvat will do one of his color seminars at this RETEC as well.

ANTEC 2004 - Sharon Ehr and Jim Figaniak
No report at this time.

RETEC 2004 - Sandra Davis
We will be going back to Marco Island. Sandra Davis will chair this RETEC. This will be the first RETEC that CAD does on it's own in two years.

RETEC 2005 - Earl Balthazar
Earl has continued discussions this with various hotels, with little success - BUT - Earl contacted the Visitor's Bureau, which was very interested in helping us find a spot. There remains a glimmer of hope for New Orleans, Earl asked for us to be patient once again.
Education Committee
Career Clearinghouse (as expected) remains busy right now, with many highly experienced people seeking new careers while the companies are offering entry-level positions. Bob said that he is not hearing from the industry when jobs do become available. Attendance at Terra Technical College remains high, probably due to the economy. Northampton Community College color courses have been canceled for lack of enrollment, Bob expects to have further conversations with the College to determine the long-term viability of the proposed color curriculum. The Coloring of Plastics book will actually be available in July. Bob is hard at work on Volume II.
The National Plastics Museum has a new director. Bob has contacted him to express our interest in developing a coloring exhibit. Bob reported having RETEC books back to 1962, and suggested we could make a CD of all the papers from all the RETECs. Bob also said he thought it would be useful to help the Modern Plastics Encyclopedia correct the information they currently have on colorants, some of which is questionable.

Newsletter Committee
One of the primary contributors of technical articles to the newsletter, Peter Lewis from Sun Chemical, has passed away. Sun wants to continue his series however, so Bob Trinkle will give them the opportunity. Other pigment companies have expressed interest in picking up this work as well. The newsletter currently has 33 sponsors and this generates about $13,500 in revenue. It costs just about that to put out the three issues per year.

CAD Web-Site
There is new software being used for the web link. In order to proof the software, some new links have been added. One question from Bill Dawes concerns RETEC registration. We can publish a registration form, or have a link (at very least) to the registration website. A virus which attacked us through the CAD server, has been erased.

Endowment Committee
The BOD voted to add $50,000 to the endowment fund from the RETEC proceeds. This should move us to the neighborhood of $185,000 in the fund at this time.

Awards Committee
Austin Reid was elected a Fellow of the Society. George Rangos has been elected an Honored Service Member. The CAD won a Pride Award and Outstanding Division Award. The newsletter took second place in the Division Newsletter Award category. Altogether a good year for the CAD. At RETEC, Austin and George will receive plaques from the CAD honoring their new status. Various other awards will be presented at RETEC to outgoing committee chairs, outgoing officers, outgoing TPC and BOD members; the Outstanding Achievement certificate for 2002 will also be presented.

Membership Committee
Bill Jarrett did not have an update in the membership numbers but commented on a surprising and interesting statistic. Sorting our membership by their vocation, Bill saw that over 30% of our members are in sales or marketing. The supposition was that we were primarily a technical division, so these numbers are interesting. If we can find a way to appeal to this segment of our membership in the RETEC papers and other areas, we can both increase our usefulness to this group and help ourselves with increased retention of existing members. Gary Conrad has said he would like to explore this issue further to see what might work.

International Committee
We reviewed the board meeting minutes from the Additives and Colors Europe SIG. They have their own web page (www.4spe.org/sections/divisions/sigs/sig017.htm). They are in the process of setting up a conference, and have issued a call for papers and sponsors on the website. They currently have 15 papers committed and will have a tutorial on organic and inorganic plastic additives as well.

Old Business
We discussed the commercialism document. The feedback concerned two main issues: the text itself and the way this will be enforced. Jenny Okamoto (Hodge) suggested a form be used in place of the current Intent-to-Present form. Several changes were suggested in the verbiage, Sandra Davis will re-send the form that we will use to Steve Goldstein for this RETEC. The discussion of enforcement was more extensive, with a suggestion being that we can put the anti-trust and Goldsmith statement up at the beginning of the RETEC. It was decided not to have the moderator stop the papers, however. Discussions with the presenter to occur later. We also discussed the possibility of having the presentations reviewed at the speaker's breakfast, which might involve extra CAD BOD members to help with this review. The operating rules of the CAD were amended to include the changes made at the last meeting concerning the Treasurer function and the TPC.

New Business
ISCC is having a 2-day topical conference in March 2003, covering industrial color problems and solutions. Ralph Stanziola is involved with this.
Titanium Dioxide (TiO₂) pigments are manufactured by the purification of Titanium containing ores. The ores are mined in Australia, South Africa, Brazil and many other places around the world. Depending upon the ore source, they will contain 5 - 50% impurities. These impurities include Iron, Chrome, Nickel and every other heavy metal. The impurities cause the natural ore to be black. If they are not adequately removed during manufacturing, the pigment will be gray or yellowish.

There are two processes for manufacturing TiO₂ pigments: the Sulfate process and the Chloride process. Both processes digest the ores in aggressive chemicals (Sulfuric acid or Chlorine gas) and then purify the digested product before recreating the TiO₂ particle. The Chloride process has some technical advantages over the Sulfate process in that it is easier to remove the potential contaminants, the particle size distribution can be narrower and the waste stream generated is much smaller.

Anatase vs. Rutile

There are two forms of Titanium Dioxide pigments sold commercially, the Rutile crystal and the Anatase crystal. The two crystals are chemically identical but the atoms are packed tighter in the Rutile crystal. Anatase TiO₂ pigments are primarily used in the following industries: paper, rubber shoes and tires, fiber, photographic paper and ceramic. The Sulfate process can make either Rutile or Anatase pigments, while the Chloride process can only make Rutile pigments.

The Rutile form is overwhelmingly preferred for plastic applications for two reasons. First the refractive index for the Rutile form (2.7) is higher than the Anatase (2.55). This is important because the larger the difference between the refractive indices of the pigment and the media, the higher the tinting strength and hiding power of the pigment. Theoretically, an Anatase pigment would have 82% of the tinting strength of a Rutile pigment in a polymer matrix. Although Anatase pigments tend to be a little cheaper than Rutile pigments, the cost differential does not make up for the tint strength deficit. The graph shows the relative hiding power of white pigments in a polymer with a refractive index of 1.5.
The second reason for the Rutile preference in plastic applications is that the Anatase crystal is more photo-reactive than the Rutile crystal. Both the Rutile and the Anatase crystal can act as photo-catalysts for resin degradation. However, the reactivity of the Anatase crystal is much higher than that of the Rutile crystal. Several years ago, Anatase pigments were used in plastic products that were meant to be photo-degradable. In summary, Anatase pigments are only infrequently used for plastic coloring.

**Particle Size**

During the TiO2 manufacturing process, the Titanium ore is digested to a liquid form, either TiCl4 or Ti(SO4)2 and then converted back to a TiO2 crystal after purification. During the chemical reaction that recreates the crystal, the particle size of the pigment is set. This occurs during precipitation and calcination in the Sulfate process and during oxidation in the Chloride process. The particle size distribution is easier to control in the Chloride process because it is a continuous process unlike the Sulfate process, which is a batch operation.

The particle size of the pigment determines the tint tone of the pigment and has an effect on the tinting strength. The smaller the particle size, the bluer the tint tone. Larger particles also are less efficient at scattering light and will result in lower tint strength. However, if the TiO2 particle is too small, the light will be unaffected by the pigment particle. This is how transparent TiO2 is manufactured. The optimum particle size to maximize scattering and thus to maximize opacity is approximately half the wavelength of light, or 0.27 μm.

In plastic applications, a smaller particle size is preferred. A smaller particle is more efficient at scattering blue light. The bluer tint tone helps mask some of the yellowing that certain resins exhibit. TiO2 manufacturers will target a mean particle size of ~0.23 microns for plastic applications. Of the major commercial pigments for plastics there are two groups of tint tones, the "neutral" pigments and the "blue" pigments. The difference in average particle size between the two groups is only ~0.03 microns. This small change in particle size can shift the tone by 1.5 CIE*Lab b* units.

An extreme example of the effect of particle size on tint strength is observable by examining a grade designed for ceramic/enamel applications. A ceramic grade is actually non-pigmentary rutile TiO2 with a particle size on the order of 30 microns. The tint strength observed was approximately 40% of the typical tint strength for a Rutile pigment.

Continued on page 11
Surface Treatments

Pigments designed for the plastics industry are typically surface treated with an organic chemical. Titanium Dioxide is a polar material while most polymers are non-polar. In order to facilitate the dispersion and distribution of the pigment particles in the polymer matrix, an organic surface treatment is added to act as a surfactant/dispersing aid.

A second reason for the organic surface treatment is to reduce the reactivity of the TiO2. The surface of Titanium Dioxide is fairly chemically active. TiO2 that does not have an organic surface treatment can cause or exacerbate 1) yellowing during processing, 2) lacing, or 3) pinning or yellowing of parts during their storage and use. An organic surface treatment will bind to the active sites on the surface of the pigment, preventing them from interacting with the polymer matrix.

Each chemical used as a surface treatment will have a different performance behavior. Some are better at minimizing lacing while another may be better at minimizing PE yellowing. Assuming low levels of metal contaminants, the differences in masstone observed between various pigments can be a measure of the reactivity differences in the pigments.

The surface treatment also determines the FDA status of the TiO2 pigment. Titanium Dioxide is "Generally Recognized as Safe" (GRAS) for food contact applications. Some grades of TiO2 are even added directly to foodstuffs (toothpaste, white stuff in Oreo’s®). Adding an organic surface treatment can change the FDA status of the pigment. A complete discussion of FDA regulations is too complex for this paper. Steve Goldstein and Phil Webb’s article in the last CAD News covered some of the issues involved.

Milling

The final major variable under the control of the TiO2 manufacturer is the milling or grinding of the pigment. During manufacturing, aggregates and agglomerates are formed. A milling step prior to packaging is required to prevent dispersion problems and to maximize tint strength. Plastic processing equipment can not impart enough energy on the pigment particle to breakup the aggregates. Sand mills, hammer mills or micronizers are used to perform the milling step. After packaging and during transport, agglomerates will reform. However, nor-
Color and Appearance Division brings home the bacon. L to R: George Rangos, CAD Councilor - Honored Service Member. Dr. Austin Reid, Past CAD Chairman - Fellow of the Society. Terry Brown, SPE President. Bruce Multolland, CAD Chairman - PRIDE Award and Outstanding Division Award. Bob Thunlein, CAD Newsletter Editor - 2nd place Division Newsletter Award.

Sharyl Reid, one of the photographers whose pictures grace these pages, in a diligent search for a site for the 2005 CAD RETEC in New Orleans.

John Copp and Gary Conrad man the CAD survey booth at the RETEC. Thanks to all who participated!

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We will try this activity for a time with appropriate reviews to assess the appropriateness, efficiency, and productivity of this effort and then determine if it is worthwhile to continue, modify, or terminate it.

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A TOOLBOX IS LAUNCHED

BROOKFIELD, CT May 2002 -- The Society of Plastics Engineers (SPE) is proud to launch its flagship product specifically designed for technicians - the Plastics Technicians Toolbox®.

SPE, the premier plastics training provider, introduced this invaluable product at the 60th Annual Technical Conference in San Francisco this month in the "Tools At Work" area.

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THE MODERN PLASTICS ENCYCLOPEDIA

Those sharp-eyed individuals among you may have noticed that the 2002 issue of the Modern Plastics Encyclopedia does not contain the section on Colorants that many in our industry use as a resource for making pigment choices when coloring plastics.

If you read the foreword, it talks about changes to the Encyclopedia and asks for comments and suggestions from their readers.

As a result, I contacted Iris Topel and Stephen Schwartz at Modern Plastics to ask about the decision to remove the chart. Many in our industry find the Colorants chart a very useful piece of information. They asked why I felt the chart should be included, and after that discussion they asked for a little time to talk about it themselves. Shortly after this discussion I received the news that the Colorants chart will be included in the 2003 edition of the Encyclopedia.

This is great news. The Colorant chart has always provided the basic information a colorist needs to help make decisions concerning pigment choices, and I for one (and I bet many of you as well) am glad that it will be restored. It's not easy to find information about all the different pigments so clearly laid out. I also greatly appreciate the courtesy and professionalism exhibited by Ms. Topel and Mr. Schwartz, and their willingness to listen to a reader and make changes as a result.
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I have been sitting on my verandah for a while and missed the last issue of the CAD Newsletter, which a good friend usually forwards to me for my enjoyment and critique. Don’t worry though, I’m far away enough from the smoke and flame out here in the West and am not in any personal peril. Anyway, the subject for this note. Metamerism issues that will need attention with a new light source are just beginning to appear in commerce. I thought of it when waiting for a traffic light to change and realized the red, yellow and green lights were Light Emitting Diodes (LEDs). LED lights are very efficient with literally no generated heat. That makes them very desirable for numerous applications. I decided to do a little checking and learned that much research has been going on for years trying to develop a "white LED light source." I have been red, yellow and green LEDs for some time, but not blue. Seems blue was difficult to develop. However, there is now a blue LED of sufficient technical merit available so one would think a white LED is on its way. It is coming, but beware! If fluorescent lamps caused metamerism problems, a LED white source may prove to be even more difficult to deal with when color matching.

Since a source behaves according to additive laws, a white LED source would consist of red, green and blue components. That is just for starters. LEDs are not coherent like lasers, but have distinct wavelength distributions around their major emitting wavelength. They usually follow a typical normal distribution curve of wavelength versus intensity. The distribution curve, however, is relatively narrow. The next and maybe the most difficult technical problem is the proper intensity of each of the three LEDs to obtain what appears to be a white light. This is well on its way to resolution.

The distribution curve of the LED white will most likely have a unique shape unlike any we have seen to date. Individual LED colors will also bias a distribution curve. All this suggests that the issue of metamerism will be difficult to handle and might well be quite variable from source to source. I have no data on the long-term radiation stability of LED output, but believe it should be reasonably stable over the long periods of time. It looks to me like fluorescent source metamerism issues all over again, but with added difficulty.

Finally, one more thought about the use of LEDs that comes from the automotive industry. Instrument panel lighting perceived as white by the driver may really be a combination of a blue LED and an orange fluorescing pigment or dye. How’s that for ingenuity and daring! The distribution curve of the blue LED and orange fluorescent as measured by a spectro-radiometer looks like a roller coaster track at the amusement park. Now working with that as a source would be an absolute challenge and/or disaster! Let’s hope things like this never happen.

As an old timer, I would be just as happy to stay with sources like “C,” D65, D75, A, F, and B for good measure. Put on the battle gear, fun time for the coloring of plastics and that invariant match are about to become a lot more interesting. Till next time stay cool, dry and out of the forest fires.

Roy

ROY G. BIV
COUNCILOR'S REPORT

Bruce Mulholland, Sandra Davis, and Dave Johnson attended various Councilor functions in George's stead. Sandra reports that there is a new SPE branding policy that will formally take effect on January 1, 2003. Donna Davis will facilitate the training and will forward information concerning the right to publish the new logo. Dave reported discussions of Division Best Practices, but this is not yet posted on the SPE website. Membership retention and growth are both areas we were asked as a Division to focus on. Discussions were held relating to electronic newsletter submissions, with PDF the preferred format. However, not all divisions have PDF generating software. One division sent out 800 newsletters this way, and proceeded to clog their email account for a very, very, very long time.

Sandra said that approximately $65,000 worth of scholarships were funded by the SPE Foundation under the guidance of Gail Bristol. SPE is also reporting that the worst of their financial problems are behind them. No request was ever made of CAD to tap into the potential loan that they had requested.

Bruce reported that there were two votes in the meeting he attended. The fiscal year for SPE will change to January 1st through December 31st. In addition, SPE reports that membership renewals for new members will fall on their anniversary dates as opposed to one date for all. The incoming SPE president also vowed to make better use of volunteer time, reducing the number of standing committees from 27 to 10. The work of the dissolved standing committees will be handled by ad hoc committees, which will be dissolved once their tasks are completed.

George commented on the rolling renewals for membership, saying that the new policy would help even out the revenue stream to SPE. More resources are now being devoted to new and renewal memberships. In addition, a fundraising study for the SPE Foundation is underway. They are considering focusing on a smaller number of larger contributors. SPE Headquarters also reduced staff from 45 to 38 last year. They also added several European sections, divisions, and SIGs.

George Rangos

F.I.T. COLOR COURSE

F.I.T. has instituted a non-credit certificate program in the study of Color. Please contact Joan Volpe, The Center for Professional Studies, at 212-217-7715 if you are interested.

INVITATION TO ATTEND

The Color and Appearance Division regularly holds Technical Program Committee (TPC) and Board of Director (BOD) meetings at the ANTEC and the RETEC. In addition, a Summer BOD and TPC meeting are typically held about 6 weeks prior to the RETEC, and a Winter BOD and TPC meeting are held in early January. The Summer meeting is scheduled in various locations; the Winter meeting is typically held at the site of the RETEC that is a year and a half away. Any SPE CAD members who wish to attend are welcome at these meetings. Contact the Division President (see the back cover) for information on the location and times of any of these meetings. Please join us!
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