**MAY 1-4, 1994 IN BALTIMORE**

**TAGA '94: Focus on New Technology**

**Plan to arrive at TAGA's 46th Annual Technical Conference in Baltimore on Saturday, April 30th to take full advantage of USAir's special airfares and to attend the three excellent tutorials scheduled for Sunday afternoon, May 1.**

**SUNDAY TUTORIALS**

Tutorial #1 on Waterless Printing (Panel) with facilitator Manny Roth, Polychrome Corporation, will focus on the various elements of the waterless printing systems and the significance of each. Market acceptance around the world is increasing and will be discussed in addition to the benefits of using the system. The user’s perspective will be given, as well as the providers of supplies, support, and service.

Tutorial #2 presented by John MacPhee of Baldwin Technology titled *Fundamentals of Lithography* is aimed at establishing a basic understanding of how and why the lithographic printing process works. The main elements of a typical printing press are reviewed with special emphasis being paid to the inking and dampening systems, and the actual film thicknesses as they apply to the printing plate. Three important phenomena that are key to the process are identified and explained. It will then be shown that the behavior of the majority of inker-dampener configurations can be understood in terms of how ink and water interact in the conjunctions between the form rollers and the plate cylinder.

Tutorial #3 on *Stochastic Screening* will be presented by Tony Johnson, Crosfield and Kurt Schlaepfer, EMPA UGRA. This tutorial will provide a background to the development of stochastic screening and try to review the advantages and disadvantages of it when compared to conventional techniques. A brief introduction of the algorithm used will also be given.

**TECHNICAL PROGRAM**

You will find the entire conference schedule including abstracts of most of the papers to be presented in the enclosed TAGA '94 conference brochure. Also see President's Message in this issue for technical insights on topics to be presented at TAGA '94.

**SPOUSE/GUEST PROGRAM**

A delightful program has been planned for all spouses and guests of conference participants:

On Monday, May 2, a tour of Baltimore is planned that will showcase an array of interesting attractions like Baltimore's gorgeous Inner Harbor waterfront development, the mansions of the historic district, the historic cobblestoned seaport of Fell's Point, and Oriole Park at Camden Yards. You will also enjoy a lovely lunch at Baltimore's Chart House Restaurant.

***Continued on page 7***
Interview with
TAGA Secretary-Treasurer Len Leger

Len is an Assistant Professor at the School of Printing Management and Sciences at
the Rochester Institute of Technology.

1. What does your job entail?
I teach courses in Print Management, Sales and Marketing, and Prepress Imaging. I am also
the faculty advisor for the RIT Student Craftsman's Club and for the Sales and Marketing
concentration.

2. Why did you join TAGA?
Over a 22-year career at Eastman Kodak Company, I was well aware of the signif-
ificant role played by TAGA in the Graphic Arts industry. When early
retirement presented the opportunity to serve as TAGA's first Managing
Director, I welcomed the opportunity to be part of the Association, and upon
leaving TAGA for my present position with RIT, I opted to remain affiliated as
a TAGA member to maintain all the great services that TAGA offers.

3. How does TAGA help you do your job?
The TAGA Proceedings are an invaluable resource in teaching. I use several arti-
cles from the TAGA Proceedings as required reading in my courses. Also,
Mike Bruno's article "Emerging Technologies" in the TAGA Newsletter
provides timely and insightful information which is useful in the classroom. In
fact, his recent articles on Stochastic Screening were assigned reading for my
Image Capture and Analysis class. In addition, TAGA members are an excel-


4. Other than through TAGA, how do you stay up-to-date?
My involvement with other associa-
tions, such as NAPL, PIA, and GATF, provide an ongoing source of new infor-
mation. In addition, I regularly read
industry trade journals to stay abreast of the rapidly changing technology in
our industry.

5. What do you do in your spare time?
I enjoy long distance running and cross country skiing, and I'm currently
enrolled in the doctoral program at the University of Rochester. I also enjoy read-
ing mystery novels.

6. Why did you run for the office of TAGA Secretary- Treasurer?
Since having left the TAGA staff, I have maintained close contact with the
TAGA Office and fellow members. I decided to run for the one-year term of
Secretary-Treasurer in an effort to do whatever I can to help maximize TAGA's
contribution to the industry.

7. What do you feel has been your most significant accomplishment as a TAGA Officer?
Working with TAGA Managing Director Karen Lawrence and our
Investment Counselor, we were able to create a complete Statement of
Investment Fund Goals, Objectives, Policies and Guidelines for TAGA
which the Board approved at its recent


8. Why should people join TAGA?
People should join TAGA to support the only industry association that provides
an ongoing history of the technical development and challenges that have
faced our industry for over 40 years. By participating in TAGA, members can
learn of the latest advancements in
applied graphics art research and
career part of the industry effort to
disseminate this information internationally.

9. Besides the TAGA Proceedings, what books would you recommend for everyone's library?
I would recommend the book Principles of Color Reproduction by John A. C. Yule, which is a classic, as well as The

Customer Driven Company by Richard

10. How do you envision TAGA in the future?

In the future, TAGA must stay abreast of the digital revolution that is occurring in all areas of our industry. The
digital imaging and processing of data must become an ever-increasing part of
TAGA's Technical Conference. I would like to see TAGA begin to disseminate
information electronically via Internet or TAGA's own electronic bulletin board. I also would like to see the
TAGA Proceedings offered on CD ROM in addition to the case bound volumes we currently produce.

11. How do you feel about TAGA going more international through membership and conferences?
I think it is imperative that TAGA
become more global in its outreach for
members. Digitalization has made global marketing a reality for the graphic arts
industry. Therefore, to maintain its role as the premier source of graphic arts technical information, TAGA must
be willing to address a worldwide audience. The TAGA/IAIRGAI International Conference scheduled for
Paris, France, in September 1995, is a very good start toward global outreach.

GRAPHIC ARTS BOOK TABLE AT TAGA '94

The Graphic Arts Book Table displaying the latest and greatest books on a wide range of graphic arts topics was a huge success at
TAGA '93 Minneapolis. Therefore, TAGA will again offer this added benefit to TAGA '94 conference attendees. If you are the
author of a book that you would like to offer for sale to conference participants, please contact TAGA Managing Director
Karen Lawrence at (716) 475-7470 to make arrangements for us to display your book(s) in Baltimore
on May 1-4, 1994.
Will Stochastic Screening Replace Halftones in the 90's?

Mike Bruno

Halftones have been the backbone of binary printing processes like letterpress and lithography for over one hundred years. They are responsible for the tremendous popularity and growth of the printing industries during the twentieth century. Many a computer cannot replace these processes to match the consistency of quality of halftones. There have been colotypte, which actually preceded halftones, screenless printing, the Russian RMI grain screen, and digital systems like error diffusion, blue noise mask, and others that have tried without success. During 1993 stochastic screening systems, using forms of error diffusion technology, exploded into the limelight to command considerable attention at the five shows between September 7 and November 3, 1993. It looks very much like stochastic screening has what it will take to displace halftones for many applications in the last half of the 1990's and into the 21st century.

The halftone principle is based on the optical illusion that when a normal eye views an image consisting of dots separated by about one minute of arc at a reading distance of 10-12 inches (about 1/25th of an inch), it cannot resolve the individual dots and sees the image as a coalescence of continuous tones. Halftone screens were made with systems of straight lines with widths about equal to the spaces between them and placed at right angles to each other, through which images were photographed to produce halftones with dots varying in size and with spacing between centers equal to the distance between the lines in the screen. The number of lines per inch was known as the screen ruling. Screens with the number of lines exceeding 1251/in, produced images with dots fine enough not to be resolved by the eye and appeared to have continuous tones. Ruled halftone screens have been replaced by contact screens with variable density dots which produce images similar to those made by the line screens.

While halftones are the technology that made the binary processes of letterpress, lithography, flexography and screen printing successful they are beset by some serious problems. The screens produce orthogonal patterns in multi-color printing which sometimes interfere with each other and cause undesirable moiré patterns. It was found that if the individual screen images are placed at angles of $30^\circ$ between each other they form minimum acceptable patterns called rosettes. Conventional angles are $15^\circ$, $45^\circ$, and $75^\circ$. Since the screens are orthogonal the patterns repeat every 90°. In 4-color printing yellow is usually placed between two other colors (at $0^\circ$ or $90^\circ$) and, on the subject, moiré patterns often appear in red and green colors.

Digital screening has introduced another problem which has complicated the screening of digital images. Digital screening algorithms can produce $0^\circ$ and $45^\circ$ angles with relative ease. They cannot, however, produce exact $15^\circ$ or $75^\circ$ angles. The tangents of these angles are irrational numbers which require very long computations to produce angles within $0.1^\circ$ of $15^\circ$ and $75^\circ$. Angles with errors over $0.1^\circ$ cause serious moiré patterns in three and four colors. The rational tangent angles closest to $15^\circ$ and $75^\circ$ are $18.43^\circ$ and $71.57^\circ$. The use of these angles in screening algorithms requires varying screen rulings which further complicates the digital screening functions.

Conventional halftone screens are known as amplitude modulated (AM) screens as the dots have equal spacing between centers and variable size and/or shape. Stochastic screens are frequency modulated (FM) - in Europe they are called FM screens. The dots all have the same size and they vary in spacing. This configuration of image elements is independent of orientation so it does not produce moiré patterns regardless of what screen angles are used. Subjects printed with stochastic screens are essentially continuous tone. In fact, silver halide photographs are stochastic as they consist of silver grains of almost the same size but with variable distribution. Most gravure is also partially stochastic as the individual elements (cells or wells) have equal spacing but they vary in area and depth so they transfer varying amounts or densities of ink. Thus the use of stochastic screens solves not only the problem of moiré patterns caused by screen angles, rulings, and interference with subject patterns, but it may also resolve the controversy between halftone and continuous tone proofing systems.

Stochastic screens have recording densities of 600-1800 dpi and systems for different applications have different spot or dot sizes. According to Rene Delbar (Agfa) the stochastic screens have two “Showcase” or “Architectural Digest” printing quality is 15 micron dots; commercial printing - 20 microns; newsprint and flexography - 30 microns; and screen printing - 40 microns.

In stochastic screens with equal dot size and variable spacing are called first-order screens. There are second-order screens with dots of variable size or shape and variable spacing. These are not in general use because they require tremendous memories and RIP speeds which result in long computation times.

As much as stochastic screening appears to be a panacea for all screening problems, it is not without its own problems. A 15 micron dot is slightly larger than a 1% dot in a 200 lpi screen (14.3 microns), and a 20 micron dot is slightly larger than a 1% dot on a 150 lpi screen (19.1 microns). Recording these size dots evenly on film requires very high precision in lasers and extreme care in processing. Ruling these dots on contact printing frames and automatic plate processors to make the plates is extremely critical and requires very high precision in printing frames and exposure which cannot be achieved in most printing frames and calls for the use of new printing frames like the Nuarc NuVac frame. Stochastic screening seems to be tailor-made for computer-to-plate technologies since in these systems the intermediate films and their processing are eliminated and the lasers in the platesetters expose directly onto the plates.

In my study of the five printing shows in the latter part of 1993 I identified twelve stochastic screening and three high frequency (lpi) screening systems. The stochastic screening systems are Agfa CrystalRaster, American Color Megadot, Barco Monet, Donnelley...
There is an ongoing revolution in the graphic/communication industry. Will TAGA be part of it? Traditionally, TAGA has been perceived, rightly or wrongly, as mainly oriented towards the printing press operation part of the business, some even saying mainly offset. It is of course all a matter of biased perception. TAGA has always been involved in all parts of the business, including pre-press, color, data exchange, standards, printing materials (plates, blankets, ink, paper, etc.), and all processes. The Baltimore conference program is not meant to be proof that TAGA keeps at the forefront of developing technologies. It seems that the revolution hits all fronts: digital imaging and printing, processes with waterless offset, and, as the Toray patent terminates within a year, how will multimedia affect our business? Is it part of it? Etc. While the Baltimore program will not provide all the answers, it covers the main trends in new technology and even includes new approaches for analysis. Can you afford not to attend the Sunday tutorials on waterless printing and stochastic screening? Listen to technical/scientific papers on waterless offset, including some useful comparisons with conventional offset, and technology pertaining to a "lasting" waterless plate. As a papermaker, I always wondered: Why do we need the water in the first place? It sure messes up the paper surface.

Sign of the times: On the prepress front (or should we now say prepublishing, after CONCEPTITS 1994), digital halftone imaging is heavy in the program. Random screen will be compared to both conventional and fine screen high fidelity printing, and analyzed for visual pertinence. On the new approaches front, we will also see fractals applied to plate surfaces and virtual paper formation, and virtual printing... a good tool for R&D, but please, don't apply ink to your computer screen!!! As far as long-standing questions are concerned, we might at least learn where the water really goes in conventional offset. In essence, the Baltimore conference will present a perfect program for content, usefulness, and balance. It is part of TAGA's ongoing program for quality service improvement. On this train of thought, the Board has agreed on the production of a new video on... stochastic printing. A possible sponsor to produce such a video already lurks in the background.

Some news back from CONCEPTITS 1994 where TAGA's presence was manifest. The tutorials, timely and to-the-point, were well attended, some being very interactive. I wondered what waterless printing was doing on the program of a prepublishing conference, but the attendance proved my question unfounded. At the TAGA booth, the Baltimore conference brochure was an eye-grabber... hi-fi printing in action, and a sort of thanks to the many contributors. Should TAGA increase such participation, co-sponsoring of events with other organizations/associations or should it not? The question is presently debated by the Board. Actually, broadening TAGA's core-membership for the well-being of all TAGA members and our industry is always on the mind of the Board. The key question is: "Can we afford not to?", especially when one considers how dynamic, or rapidly changing, and global today's technologies and associative environment is.

Looking forward to seeing you in Baltimore.

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TAGA/IARIGAI International Technical Conference

September 17-20, 1995

The first TAGA European conference will be held in Paris, France at the Paris Hilton Hotel in conjunction with the International Association of Research Institutes of the Graphic Arts Industry (IARIGAI) biennial conference. The two groups will meet together on the Monday morning General Session and will split into parallel paper sessions after lunch for the duration of the conference. TAGA members are invited to present papers of interest to IARIGAI and, by the same token, IARIGAI invites TAGA members to attend TAGA paper presentations of their choice. Social functions at the conference will be attended by both groups. This meeting will be unique in that it will provide the opportunity for industry people and researchers to associate more closely to exchange ideas for future useful R&D and to create synergy.

The TAGA conference proceedings and proceedings from the IARIGAI conference will be published separately by each group. The TAGA/IARIGAI International Technical Conference will be arranged and managed by TAGA. Former TAGA Board Member Henry Fournier and Christophe Barre of Sogitec in France will serve as Co-Chairs for this meeting.

This joint conference is being planned as part of TAGA's global outreach plan to offer expanded service to TAGA's European members as well as to attract more technical people from the European graphic arts community. The meeting will be held in addition to TAGA's Annual Technical Conference in Orlando, Florida, which is scheduled for April 2-5, 1995.

Don't miss this milestone in TAGA's history, which truly promises to be a world class international event. Watch for more details in the Spring TAGA Newsletter.

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(E)Merging Technologies...

with Mike Bruno

(continued from page 3)

Accutone, EMFA/UGRA VelvetScreen, LineaType-Hell Diamond FM Screening, Scangraphic, Scitex Fulltone Screening, Scitex Geometric Dot Screening, SeaColor Clear, Tegra-Varityper ESCOR-II, and TransCal Hi-line. The high frequency screening systems are Crosfield High Frequency Screen, DuPont/Crosfield HyperColor, and Scitex High Definition Screening.

Stochastic screening and high frequency screening systems have been used extensively in the Hi-Fi Project originated by Davis Inc. (Washington, DC) and described by Don Carli (Nima-Hunter, New York, NY) at TAGA '91. The publications of this project have excellent examples of these technologies. Information on the project and its publications may be obtained from Mills Davis, Davis Inc., 2704 Ontario Rd., N.W., Washington, DC 20009, Telephone (202) 667-6400.

Information on the twelve stochastic screening and three high frequency screening systems is contained in my newsletters What's New(s) in Graphic Communications Nos. 107 and 108. My next column in the TAGA Newsletter will describe these systems.
CAL POLY Cal Poly's TAGA Student Chapter is in its final preparations for the upcoming TAGA Conference in Baltimore. Through an active fund raising program, the chapter plans to have a large delegation of members attending the conference. This year, besides raising cash to support student attendance, the chapter received the donation of four round-trip airline tickets from industry supporters. The chapter has submitted several papers for this year's paper competition and is preparing its annual chapter publication of student research.

A particularly noteworthy activity of Cal Poly's TAGA Student Chapter was its recent participation in a stochastic screening and printing demonstration. Jointly sponsored by TAGA and the department's Mat Pica Pi student organization, the demonstration was supervised by Mr. Matt Miller, Regional Technical Manager for Miles/Agfa Corporation. Miles/Agfa provided the films screened at 2400 dots per inch using Miles/Agfa CristalRaster technology. Printing took place on the Graphic Communication department's four-color Heidelberg 25" MOVIP using CPC technology to control the press.

An upcoming activity of Cal Poly's TAGA Student Chapter will be its participation in the Gutenberg Festival in Long Beach, CA this spring. The chapter typically attends the conference, participates in the Graphic Communication Department exhibits, and participates in company tours during the annual event.

CENTRAL MISSOURI STATE UNIVERSITY The CMSU Student Chapter of TAGA held a joint meeting with the CMSU Student Chapter of the Craftsman's Club on December 7. At the meeting, Dave Akin, representative of Tennes Register, talked to the group on register systems used in the graphic arts industry. Problems associated with registration were discussed. Mr. Akin also elaborated on the importance of an education and encouraged the students to seek the most from their education while in school.

A Bowling Party was sponsored by CMSU/TAGA as the fall semester's social function. A good time was had by all that attended.

On March 1, CMSU/TAGA and the Craftsman's Club hosted an open presentation on internships in the Graphic Arts. Chapter members, Carl Lawrence, B.J. Thomas, Tasha Schulter, and Greg Belk shared their internship experiences with students majoring in the Graphic Arts Technology-Management Program at Central.

CLEMSON UNIVERSITY The spring semester has brought production activity back into focus for the Clemson Student TAGA Chapter. Journal design has been selected and we are now beginning to work on the format. Without a doubt, the "hands-on" work has begun. We learned a great deal reviewing the papers which were selected for publication. This year's selections were experiments designed and conducted in the Clemson GC labs.

Students participated in the recent Clemson Gravure Day events and are also active in planning for the Intern Employer Day and Screen Printing Day as well. We are looking forward to a visit from John Soutter from 3M who will be speaking on color calibration, measurement and standards issues on March 28. The spring may provide another chance to enjoy Bar-b-que, Southern style, on April 9 (put it in your calendars) for a fund raiser. The proceeds will help finance the trip to the ATC in Baltimore. We look forward to meeting everyone and participating in the conference.

RIT The RIT TAGA Student Chapter has been working vigorously on the student publication. This year's publication promises to have a completely unique design. In addition to the all-member TAGA meetings, the publication production team has been holding production meetings on a weekly basis, yielding some great results. The majority of the publication progress is being done in RIT's Integrated Electronic Prepress Laboratory (IEPL), allowing access and use of some of the newest technologies available.

While the production of the publication has taken precedence, RIT/TAGA has been able to fit in some non-publication related activities. The chapter was enlightened on the current state and future direction of the printing industry by RIT faculty members who attended Graph Expo and other recent shows. The "Review of Graph Expo" panel members included Frank Romano, Frank Cost, and Werner Rebussman. Members of the Ryerson Polytechnic Institute TAGA Student Chapter were welcomed by the RIT chapter and toured the campus in December.

Plans for the next quarter include additional tours and lectures on various topics such as stochastic screening and multimedia. Enthusiasm for the Baltimore conference continues to grow. RIT hopes to be well represented this year and looks forward to meeting students from other chapters.

UNIVERSITY OF WISCONSIN-STOUT The University of Wisconsin-Stout's TAGA Student Chapter is preparing for the upcoming conference in Baltimore. The student papers are going through their last steps before printing of the publication. The production of their student publication is underway, and their hope is to have the publication completed in the first part of April. They are continuing to raise money to send as many students to Baltimore as possible.

The chapter has also elected officers to lead them through their first year. Their constitution has been completed and has been submitted to the Stout Student Association. The chapter members are working on obtaining a guest speaker from the printing industry; whom they hope to have speak in April. This first year has been a major learning experience for all who have participated and has generated a lot of interest among Graphic Arts Management students.

Overall, they feel that this year has gone in a very positive direction and their goals are being met.

CALL FOR STUDENT CHAPTER PARTICIPATION TAPPI/CPPA 7TH INTERNATIONAL PRINTING AND GRAPHIC ARTS CONFERENCE OCTOBER 18-20, 1994

The International Printing and Graphic Arts Conference—IPGAC for short—is a biennial event co-sponsored by the TAPPI (Technical Association of the Pulp and Paper Industry, USA) and the CP/TPS (Canadian Pulp and Paper Association, Technical Section). The 7th IPGAC will be held in Halifax, Nova Scotia, Canada, from October 18-20, 1994. Due to the success of the student poster session at the last IPGAC, in Pittsburgh, PA, 1993, the conference committee has decided to reiterate. Unlike the TAPPI conference poster session, the IPGAC poster session is open to all students—under- and post-graduates. Although there is no poster competition, a fixed honorarium ($200) is provided to each student presenting a poster. There are no registration fees for students attending the conference.

TAGA Student Chapters interested in participating should contact Patrice Mongin, at PAPRICAN: TAGA poster session rules apply. Deadline for submission of a title and an abstract is April 15, 1994. Authors will be notified of acceptance by the end of April 1994. For more information, contact: Dr. Patrice J. Mongin, PapiCor, 570 St. John's Blvd., Pointe Claire, PQ, H9R 3J9, Canada, Tel: (514) 630-4100, Fax: (514) 630-4134, E-mail: Mongin@papicor.ca
1994-95 ELECTION OF TAGA OFFICERS AND DIRECTORS

Biographical material on each of the following candidates and a ballot has been forwarded to all individual and senior members. If you have not received your ballot, please call the TAGA Office immediately at (716) 475-7470.

FOR VICE PRESIDENT
TECHNICAL PAPERS
(You will vote for one)

RICHARD HOUGEN
SuperMac Technology, Inc.

JOSEPH NOCA
Rochester Institute of Technology

JEANETTE TRINCELIZIO
Sun Chemical Corp.

SAM INGRAM
Clemson University

MILES SOUTHWORTH
Rochester Institute of Technology

FOR VICE PRESIDENT
MEMBERSHIP/PUBLICITY
(You will vote for one)

FOR SECRETARY-TREASURER

FOR BOARD OF DIRECTORS
(You will vote for four)

FOR VICE PRESIDENT
MEMBERSHIP/PUBLICITY
(You will vote for one)

SEYBEE EHRAN
USDA, NCAUR

BRUCE BLOM
Mead Central Research

PATRIC CARNET
American Roller Co.

ZAFAR CHEEMA
Polaroid Graphics Imaging

SHARON BARTLES
3M Company

FOR BOARD OF DIRECTORS
(You will vote for four)

WILLIAM ORR
Stevenson Photo Color

STANLEY ROSEN
Schex America Corp.

GARY STARKWEATHER
Apple Computer, Inc.

GARY WISBY
Deluxe Corporation

FOR SECRETARY-TREASURER

MARTIN H. OUTOWORTH
Rochester Institute of Technology

SILVON BARTLES
3M Company

T AGA Newsletter • Winter 1993-94
US Graphic Arts Standards Activities Streamlined

The formal US Standards activities that directly involve the graphic arts prepress industry had their beginnings in 1987 with the accreditation of ANSI Standards Committee IT8, which most of us refer to as D5E or Digital Data Exchange Standards. This was followed in 1989 by ANSI Committee CGATS (Committee for Graphic Arts Technologies Standards). In some ways these two committees have been like the cart before the horse. The charter of CGATS is to be a broad coordinating committee representing the needs of the graphic arts industry on all fronts with responsibility to develop standards where no other standards-making body was appropriate. IT8 on the other hand was chartered for the specific task of digital exchange standards in the electronic prepress arena.

Fortunately most of the participants have been involved in both committees, and work has progressed with harmony between the two formal structures. In fact, the Executive Committees of both have been meeting together for most of 1993, and it has become clear that the additional overhead of two structures is not worthwhile. Accordingly the Executive Committees have proposed, and the membership has agreed, that the work of both IT8 and CGATS should be merged into one program. As of January 1, 1994, the work will go forward under the CGATS committee name.

As the Executive Committees reviewed the proposed structure, it was noted that current activities of both IT8 and CGATS fall into the four general categories of: materials and metrology; process control and printing; digital data exchange; and supporting activities. Although these general categories are not part of the official structure of the committee, such categorizations are useful in understanding the activities and how they fit together. The following table shows how the new subcommittees (SC) fit into these categories:

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<tr>
<th>Materials and Metrology</th>
<th>CGATS/SC1</th>
<th>Terminology</th>
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<tr>
<td>CGATS/SC2</td>
<td>Plates</td>
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<td>CGATS/SC3</td>
<td>Densitometry</td>
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<tr>
<td>Process Control and Printing</td>
<td>CGATS/SC4</td>
<td>Process Control</td>
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<td>Supporting Activities</td>
<td>CGATS/SC5</td>
<td>Materials Handling</td>
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<td>Digital Data Exchange</td>
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<td>DDAP</td>
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<td>CGATS/SC7</td>
<td>Data Exchange</td>
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<td>CGATS/SC8</td>
<td>Color Data Definition</td>
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This structure allows the current CGATS Working Groups (WG) 1 through 6 to be known as Subcommittees 1 through 6. The name of the former WG4 (Color Science) has been changed to Process Control to better reflect the current activities of the group. Former IT8 Subcommittees 1 through 3 which focused on data formats, transport media, and image assembly issues are merged into a new SC7 called Data Exchange. Former IT8 SC4 which is concerned with color definition becomes new SC8.

The organization is changed and streamlined, but the players are still the same, and there is always room for more participants. LEADERSHIP CHANGES

One of the procedures built into the CGATS standards processes was the recognition that constant renewal is the lifeblood of an organization. Accordingly the chairman of CGATS may only serve 3 successive one year terms before moving aside to allow new leadership. 1994 therefore brings to CGATS a new Chair and Vice Chair. Tom Bassore, Executive Director of the Non-Heaset Web Section of the PIA is Chair and Gerd Koehler, Vice President, Quality and Technology, Quebecor Printing Corp. is the new Vice Chair.

The additional members of the Executive Committee are Ken Cloud (Consultant), George Collins (GPO), Dick Fisch (3M), Paul Guy (Schawk), Paul Hanson (Hanson Graphics), John Long (Dupont), Dave McDowell (Kodak), Bruce Shrifrin (Screen), Robert Strum (Dupont), James Suppbin (NAPIM), and Greg Tyszkod (GAA).

These folks all welcome any input, formal or informal, and provide leadership for the graphic arts standards activities within the United States.
1993-94 BOARD MEMBERS

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Immediate Past President
Raymond J. Prince, GATF

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Karen E. Lawrence, Managing Director
Michael H. Bruno, Executive Director
Kara L. Knopf, Secretary

1994 TAGA TECHNOLOGY PATRONS
3M Company
American Printer
Sun Chemical Corp.
Raymond J. Prince

1993 TAGA CORPORATE SPONSORS
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Screen
Sun Chemical Corp.
Toray America
Western Lithotech
Weyerhaeuser Corp.

FUTURE TAGA EVENTS

TAGA '94 Baltimore
Marriott Inner Harbor Hotel
May 1-4, 1994

TAGA '95 Orlando
Sheraton Plaza Hotel
April 2-5, 1995

TAGA/IARIGAI '95
Paris, France
The Paris Hilton
Sept. 17-20, 1995

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