

The Spectrum



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ATR- WHERE IT CAME FROM, WHERE ITS GOING

**Paul Wilks
WilksEnterprise, Inc.
140 Water Street
Norwalk, CT 06854**

It was at the 1960 Eastern Analytical Symposium that I first heard about a new sampling technique that enabled the user to obtain infrared spectra on materials opaque in even the thinnest of transmission cells. At that time, the Symposium was held in the Fall at the Hotel New Yorker in New York City. In those early days it attracted mostly infrared spectrometer manufacturers – mid infra-red, that is!

Among the exhibitors was Connecticut Instrument Corporation (CIC), a four-year-old company founded by Charles W. Warren and the author which had begun to build a product line of infrared sampling accessories. It had introduced “cavity cells” – transmission cells ultrasonically machined from a single block of rock salt and the demountable precision fixed thickness cell that is still the basic design of many of the transmission cells in use today.

During that 1960 EAS meeting, Don Johnson, an infrared specialist from DuPont, came into our booth and described to me a method of obtaining infrared spectra on a variety of materials not previously amenable to IR analysis without extensive sample preparation. Don told me that spectroscopists at the Experimental Station were very excited about the new procedure because it greatly expanded the usefulness of infrared spectroscopy. It was called “Attenuated Total Reflection” and had been conceived of by Jacques Fahrenfort of the Shell Laboratories in Amsterdam. Don suggested that we explore the technique. Later in the meeting I gave Abe Savitzky a ride back to Connecticut and he described the new technique in detail to me indicating that Perkin Elmer had become quite interested in it.

Fahrenfort had made use of a phenomenon that was well known to optical physicists, the fact that when radiation is totally internally reflected within a transmitting medium, an electric field coupled to the radiation is set up at each reflection point. He found that if a substance was placed in contact with the reflecting surface, energy would be absorbed from the electric field and hence from the radiation it was coupled to at wavelengths where that particular substance absorbed. Thus the radiation beam was “attenuated” at these wavelengths. To us pragmatic spectroscopists, it appeared that the beam actually penetrated slightly beyond the reflecting surface, in the neighborhood of a micron or so – the actual depth depending on a number of factors (angle of incidence, relative refractive indices, number of reflections, etc.). The net result was that here was a method that would produce the very short effective path length through a material required to record its infrared spectrum no matter what the actual thickness of the sample was.

The ATR effect turned out to be proportional to wavelength, i.e., the longer the wavelength the greater the beam penetration. Hence the relative absorption of ATR spectra to transmission spectra increases with wavelength. For this reason, ATR works better in the mid-IR than the NIR – but this is where the best resolved and separated fundamental absorption bands occur anyway.

This was all very exciting to us at CIC, for it appeared to be an opportunity to create a whole new

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A REMINISCENCE: ATR

It is a pleasure to have in this issue an article by Paul Wilks on the early history of ATR sampling. It continues the series, begun by Mike Epstein, of memories of historic events in spectroscopy, told by participants in the events. These are not exhaustively researched histories, and a suitable name for them may be Reminiscences.

Prof. Eric von Hippel, of the Sloan School of Management at MIT, has studied the origin of innovations in a variety of fields, and he summarized his work in *The Sources of Innovation**. A section on scientific instruments (pp. 11-19), reported the findings on the origins of the original invention and improvements to gas chromatographs, NMR spectrometers, UV spectrophotometers, and transmission electron microscopes. Each of these important laboratory instruments was originally devised by a user for his own needs. Of the major improvements, 36 of 44 were by users and only 8 by manufacturers. Of the minor improvements, 32 were by users, 14 by manufacturers, and the source of 17 was not found.

These findings do not mean that instrument companies are of lesser importance. Few instrument users are prepared to build their own apparatus, so the use of a new instruments is limited until instrument companies convert the prototype into products. The products are not as a rule merely copies of the inventor's prototype, but are designed with factors in mind such as cost, ease of use, and maintenance.

Wilks' article gives an interesting insight into the first commercialization of ATR sampling for infrared spectroscopy, and then into making improvements. As is often the case, the first commercial models came from a small, young company that could move quickly on the judgment of a key individual, unburdened by the delays in making decisions that are common in larger organizations.

The Spectrum is seeking more stories of this kind. If you want to write one, or you can suggest someone who will, contact me at my postal or e-mail address on this page,

Marvin Margoshes

* *The Sources of Innovation*, E. von Hippel, Oxford University Press, 1988.

(Continued from page 1)

line of IR sampling accessories. With advice and council from workers at DuPont and Shell Development Company in Emeryville, CA we were able to design and introduce a single-reflection, variable-angle attachment for IR spectrometers by mid-1961. We used mostly silver chloride and KRS-5 as prism materials because they were the only high index IR transmitting crystals then generally available. In the case of silver chloride, we found that we could impress rows of angled ridges on the back of a two millimeter thick sheet that would cause radiation hitting that side to be transmitted to the smooth front surface, from whence it would reflect back out of the sheet. This gave us an inexpensive disposable ATR sample holder.

For reasons that are not important to this article, CIC was acquired about this time by Barnes Engineering. I stayed with the Barnes organization for a year, then decided to strike out on my own again and formed Wilks Scientific Corporation. The CIC product line was later spun off from Barnes and became the nucleus of Spectra Tech.

I had become aware of the work of the other key figure in the field of total internal reflection, N. James Harrick then of Philips Laboratories in Tarrytown, NY. Jim's interest in internal reflection was based in his studies of surface chemistry and, instead of a prism he was using relatively thin plates with beveled ends and causing radiation to be reflected back and forth from surface to surface, thus multiplying the absorption between the radiation beam and the coating on the surface.

I realized that this added a whole new dimension to ATR spectroscopy, and introduced a multiple internal reflection attachment through Wilks Scientific in 1963, the basic design of which is still in use today. Because I had a no-compete restriction with Barnes, we called our device a "Frustrated Multiple Internal Reflection" (FMIR) attachment after Jim Harrick's terminology in order to convince the legal profession that ATR and FMIR were not the same. We were successful, although we did stir up a certain amount of controversy in the infrared field as to which was the correct terminology.

Jim and I had several conversations about joining forces but he wanted a 50% interest in Wilks Scientific and I was willing to give him 20%. He finally went off and formed Harrick Scientific, which was probably the best for both of us and the world in general because Harrick Scientific has made and continues to make many significant contributions to our field. Jim and I in the same small organization would probably not have been compatible anyway!

The early ATR and FMIR attachments had vertical sampling surfaces, which are compatible with dispersive spectrometers with their

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rectangular slits. Horizontal sampling surfaces are more convenient however because the sample rests naturally on them. Tony Gibbey, Wilks Scientific's Chief Engineer, designed a horizontal (HATR) unit with a complex optical system that rotated the beam 90° and lined up the spectrometer beam with the entrance face of the MIR plate. This soon became unnecessary with the advent of FTIR instruments because, with their circular beams, entrance face orientation beam orientation makes no difference. Not all of the circular FTIR beam gets into the rectangular face of the MIR plate however, but this is rectified with the use of circular internal reflection (CIR) optical elements.

In a CIR system, radiation is focused on the cone-shaped end of a cylinder and is then reflected down the cylinder to the other cone-shaped end, where it exits and is collected and refocused onto detectors. Jim Harrick, in a letter to Applied Spectroscopy, demonstrated mathematically that CIR wouldn't work. Pragmatically, however, CIR does work as demonstrated by close to 2000 beverage monitors made by General Analysis Corporation that continually monitor sugar and carbonation levels in soft drinks on beverage lines with a CIR sensor. And both Spectra Tech and Axxiom have introduced CIR sampling attachments.

I recall a most delightful event concerning ATR that happened totally by chance. I was in Amsterdam on business and had a free day, so I called Jacques Fahrenfort at Shell and asked if I could pay him a visit. He was most cordial and said my timing was propitious because Jim Harrick was also to visit that afternoon. Needless to say, we had much to talk about as our discussions continued well into the night after having dinner at Jacques suburban Amsterdam home.

And what is the status of ATR today? It's safe to say that at least 50% of the mid-IR measurements made in the laboratory on liquid and solid samples utilize ATR in some form. Many of the mid-IR microscope attachments use single- or multi-reflection diamond crystals as ATR elements. And with the increasing interest in using the mid-IR for process monitoring and control, ATR probes are preferred over transmission because of their short effective pathlength and freedom from fouling – a problem with transmission process cells. Furthermore, there is a whole new family of mid-IR sensors on the horizon using trapezoidal and hemispherical optical elements that produce the ATR effect. These sensors will plug into the process stream wherever needed discussion to monitor concentrations of one or several components in the stream. Mid-IR has the distinct advantage over single valued sensors such as conductivity or pH indicators and density and refractive index meters, in that mid-IR sensors are multi-valued. They can determine concentrations of individual components in a multi-component stream, while the others cannot indicate which component in a mixture causes change in, for example, conductivity or refractive index.

Thus, the infrared measuring technology introduced forty years ago by Fahrenfort and Harrick will see increasingly broad utilization in the future in such unrelated locations as food and household product processing, vehicle lubrication and hydraulic fluid monitoring, the manufacture of chemicals and pharmaceuticals and certainly in medical diagnostic applications. ATR might even find its way into the household bar to measure the alcoholic content of my ladies' drink! Fahrenfort and Harrick have made a valuable and lasting contribution to the field of materials analysis.



**Society for Applied Spectroscopy
(SAS):**

The History and The Future

**Rina K. Dukor
President**

Capping off a busy and productive year as President of SAS, Rina Dukor spoke at the December meeting of her home section in Chicago about the history and future of our society. Her conclusion about the future of SAS: "I do think it is BRIGHT."

We can't bring the whole talk to you, but everyone can see the slides at the SAS Web site. Point your browser to <http://www.s-a-s.org>. Click on the Newsletter button in

the menu on the left, then scroll down to the link to Rina's talk, where you can download the PowerPoint file. If you don't have PowerPoint software, and your computer runs with Windows 95, 98, 2000, NT or ME, you can download a PowerPoint reader at <http://office.microsoft.com/2000/downloadaddetails/Ppview97.htm>.

FIRST MEETING OF THE RECONSTITUTED GOVERNING BOARD



From the beginnings of SAS, the Governing Board consisted of Delegates chosen by the Local Sections. As the Society evolved, an increasing proportion of the membership was outside the geographic area of any Section, and some other members chose to take no part in Local Section activities. Those members were not being represented by the Governing Board. In addition, some Local Sections failed to send Delegates to all Governing Board meetings, so it was difficult at times to have a quorum at meetings of the Board.

The membership approved changes to the Constitution to form a Governing Board of ten members elected at large by SAS membership and five elected by the Local Sections; Local Sections may continue to send voting delegates. The elections took place in 2000, and the first meeting of the new Governing Board was in Nashville, Tennessee on September 26, 2000. This photograph was taken at that meeting. Those in the group include members of the Governing Board and Executive Committee, Delegates sent by Local Sections, and others who attended as observers.

The photo can be seen in color at the Newsletter part of the SAS Web site, <http://www.s-a-s.org>. Those who are in the photo should, in particular, visit that site, where they can send an e-mail to the Newsletter Editor to identify their positions in the picture.

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**MINUTES OF THE
SAS GOVERNING BOARD MEETING
TUESDAY, SEPTEMBER 26, 2000 8:00 p.m.
OPRYLAND HOTEL - NASHVILLE, TENNESSEE
LINCOLN C ROOM**

I. Call To Order

President Rina Dukor called the meeting to order at 8:05

II. Roll Call

Alexander Scheeline

President	Rina Dukor
President-elect	Vassilis Gregoriou
Past-president	Robin Garrell
Secretary	Alexander Scheeline
Treasurer	Mary Widmark Carrabba
Journal editor	Joel Harris
Web editor	Pete Poston (absent)
Member education	Chris Hassell (absent)
Newsletter editor	Marvin Margoshes
Parliamentarian	Augustus W. Fountain III
Executive Director	Bonnie Saylor

Elected Delegates: Steven M. Barnett, Brian T. Buckley, John M. Chalmers, Clara Craver, Wolfgang Kiefer, Kathryn A. Lee, Cynthia Mahan, David S. Moore, Don Pivonka, Rock Vitale
Local Section Delegates: Steven Bialkowski, Peter Griffiths, Eileen McClendon, Doug Shrader, Truman Waugh
Local Section Representatives: Arizona: Michelle Nahorniak, Indiana: Andrew Szumlas, Mid-Michigan Gary Kozerski, Minnesota: Rebecca Dittmar, New England, Sue Evans Norris, Pittsburgh: John Jackovitz, Rio Grande: Gary Rayson, Southern California: Jerald Kacsir. The New York Section will be represented by M. Margoshes.

III. Introductions

Rina Dukor

President Dukor introduced Way Fountain, Parliamentarian, Rachael Barbour, President-elect Elect, Jon Carnahan, Secretary Elect, and John Hellgeth, President of the Coblentz Society.

IV. Meeting Rules of Order

Way Fountain

As usual, the meeting is being governed by Roberts' Rules of Order.

V. Approval of Minutes from October 26, 1999 Governing Board Meeting

A motion to approve was made by Steve Bialkowski and seconded. Two name spellings of delegates need to be corrected: Nahorniak, Rachael Barbour. The minutes were approved as corrected.

VI. Reports**A. President**

Report Attached

The President's report emphasized internationalization and the need to grow membership. Discussion of Technical sections was deferred to Old Business.

B. Secretary

Report (Minutes) Attached

C. Treasurer

Report Attached

D. Executive Administrator

Report Attached

Membership is our biggest concern; this year we're down 9% from the same time last year. When Bonnie Saylor drafted her report (late August), we had 2420 members, of which 12% were international. Of greatest concern, student numbers are down. As of the date of the Governing Board meeting, 15 students, 17 new members, and 8 renewals had been obtained at the SAS booth in the FACSS exhibit. We already have 863 renewals for 2001. PCG Communications has been contracted to help grow the Journal subscriber base. Corporate sponsorship: numbers are constant, but the funding so obtained has increased due to the new multi-tier structure of sponsorship levels and prerequisites. Our web page is active, and a secure server is in place so we can do more business on the Web.

E. Journal Editor

Report Attached

Current publication time from acceptance is now about 3.5 months. Our renegotiated Allen Press contract saves us about \$20,000 this year. Applied Spectroscopy is the number 2 instrumentation journal in ISI impact factor. We are working to get Applied Spectroscopy indexed by Medline. Upcoming will be a series of 3-4 papers on careers (based on the symposium on the same topic at FACSS in 1999). We will be improving our emailed Table of Contents service by providing hot links to content.

F. Newsletter Editor

Report Attached

Editor Margoshes solicited news of spectroscopists. Such news can be submitted via the SAS website. The previous Newsletter Editor, Mike Epstein, started reprinting old issues of Arcs and Sparks. We have now identified the copyright holder, have obtained reprint permission, and so are continuing this legally. Myron Block will write an article on the earliest commercial FTIR. Margoshes solicited ideas for more historically interesting articles. Numerous Governing Board members requested that reports be available in Microsoft Word format rather than PDF format.

G. Membership Education

No Report

Rina Dukor summarized the report given to the Executive Committee. On the road courses are going well. We will be collaborating more closely with FACSS next year in scheduling and operating short courses. She reported on the substantial participation in the courses offered at FACSS 2000.

Reports have been filed with secretary.

VII. National SAS Committee Reports**A. Awards**

no report

B. Constitution and Bylaws

Report Attached

Presentation and discussion were deferred until the discussion of Technical Sections.

C. Local Section Affairs

Report Attached

D. Membership

No Report

E. Nominating

Report Attached

F. Publications

No Report

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G. Publicity	No Report
H. Tour Speaker	Report Attached
I. Meggers Award	Report Attached
J. Strock Award	Report Attached
K. Lippincott Award	No Report
L. Tellers	Report Attached

VIII. Delegate Reports

A. FACSS Report Attached

Spelling corrections: this year's general chair is Arlene Garrison. The Secretary is Karmie Galle. A rumor that FACSS might be held in Hawaii was quashed.

B. Chemical Heritage Foundation Liaison

As a member organization, we can nominate candidates for the prestigious Othmer medal.

IX. Old Business

A. Technical Sections/Constitution and Bylaws Report

Joel Harris summarized the rationale for Technical Sections. Local sections originally formed due to nucleation of colleagues with similar interests in industrial centers. The collaboration of these local societies generated the national organization. The future of collaborative interest societies now appears to be based on electronic contact among those with similar technical interests. Issues that are addressed in the proposed Constitution and Bylaws amendments include organization and budget of such sections. Activities within the sections could include meetings, sponsorship of symposia, and granting of awards. President Dukor's report includes a list of nascent sections, but suggestions for additional inaugural sections are solicited both from the Board and the membership. The Coblenz Society has been approached to see if they would want to be the Infrared/Raman Technical Section. Initially, Technical Sections could send representatives to the Governing Board (as each Local Section now can), but provision for Technical Sections as a group to be represented as are Local Sections is not contemplated in the current draft Constitutional or By-laws text. Once Technical Sections are functioning, this issue may merit revisiting. There was lively discussion of whether Technical Sections would drain talent from Local Sections or so revitalize SAS that Local Sections would flourish. Even some apparently compact Local Sections (Margoshes gave New York as an example) are so large that members rarely attend distant local section meetings. Other local sections (Piedmont, Idaho, Intermountain) are so vast as to preclude regular Local Section activity. There may be a tie-in between Local and Technical section via the formation of Local Section technical interest subgroups. Delegate Chalmers reports that such a structure has worked in the UK.

The following editorial and substantive changes were made to the Constitution and Bylaws Committee report and constitute friendly amendments (voted on as a whole rather than as individual amendments or corrections) except as noted. A page-numbering problem was noted; pages will be sequentially numbered before submission to the membership.

Constitution: Article IV. Section 1.e., spelling of Emeritus was corrected. Article IV., Section 6, "their" was changed to "a." The requirement that a member belong to SAS for 15 years in order to qualify for emeritus membership was questioned; a future Constitution and Bylaws report should determine where the 15 year level came from and recommend whether this is still an appropriate longevity. Article VIII, Section 3. add "or Technical Section delegate" [Note: those elected to the Governing Board are members, others such as representatives of Local Sections are delegates.]

Bylaws: Article I, Section 6, change "Local" to "Local or Technical." In response to concerns about the default treatment of the 15% Section allocation of dues, Robin Garrell proposed a motion to which Governing Board members would vote for either Choice A or Choice B:

Choice A: The portion of the membership dues allocated to sections will automatically be paid to the geographically Local Section. Members may pay an additional sum to join one or more Technical Sections if they so desire.

Choice B: The portion of the membership dues allocated to sections may be allocated by each member to either a Local Section or a Technical Section. Members can then pay additional sums to join additional Local or Technical Sections as they desire.

The motion was seconded. The vote was 8 for A, 19 for B, so Choice B carried.

Katherine Lee moved to change the amount charged for joining additional Local or Technical sections to \$5. The motion was seconded, but upon voting, the motion failed.

In response to concerns expressed by several Governing Board members it was explained that any change in dues, other than by adjustment in response to changes in the Consumer Price Index, requires full Governing Board approval.

In Article VIII, Section 1, strike reference to "interim members." In the last full line of Article VIII, Section 2, replace "Local" with "Local or Technical."

Article XII, Section 6 is required due to the need to comply with IRS rules.

In Article XIII, Section 3.e, specify "US dollars" (not just "dollars"). The sense of the change was to clarify units in an International world.

Separately from all the other proposed amendments and revisions, Katherine Lee moved to approve Article XII Section 6, to bring us into compliance with IRS regulations. The motion passed unanimously.

Margoshes moved to approve all the remaining proposals as amended. A proviso on approval of the Bylaws changes is that only those changes which are consistent with the current Constitution are to go into effect immediately; the rest will take effect if the membership approves the constitutional proposals sent to the

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membership if this vote passes. The motion passed unanimously.

B. Budget Mary Carrabba
Doug Shrader moved to accept the budget. The motion passed without discussion.

C. Update on Web Activities Report Attached

X. New Business

Delegate Buckley suggested we need to more aggressively promote student membership in the Society. Joel Harris suggested we initiate a student award program in the manner of the Coblentz Society. This would consist of a student membership for 6 months (July through December), with a solicitation to the student in December to pay dues and renew the membership. This would only cost us about \$15 per winner. The consensus was to use funds from the Membership budget and proceed with such an award program forthwith. Representative Nahorniak suggested recruiting student liaisons; they would help promote membership among their colleagues and would have an additional item to add to their CV's. Delegate Barnett recommended that we develop a fee structure for members getting just the on-line journal in addition to the current structure where both on-line and hard-copy access is part of the dues. Delegate Lee recommended development of a very inexpensive no-journal option. It was noted that the moral equivalent of such a membership was to join just a Local Section or just a Technical Section without joining the national SAS. Problems with long delivery times to international members were noted by several Governing Board members; Allen Press representatives said they would work to accelerate delivery.

Some committees are not completing the work of the Society. This is in part due to lack of follow-up from officers or the Frederick office. Elected delegates were asked to volunteer to act as liaison to committees.

Robin Garrell and your faithful Secretary were thanked for their service to the Society for the past 3 years.

XI. Date and Time of Next Meeting
The next regular Governing Board meeting will be on Tuesday October 9, 2001 at 8 PM in Detroit, MI.

XII. Adjourn
President Dukor adjourned the meeting at 11:37 PM.

Respectfully submitted,

Alexander Scheeline
Secretary



**PRESIDENT'S REPORT TO THE GOVERNING BOARD
OF SAS**

**Rina Dukor
August 9, 2000**

On behalf of the Executive Committee, it is with great pleasure

that I welcome all new elected Governing Board members to their new positions, and would like to thank you all for your dedication and service to SAS. I would also like to take this opportunity to thank the nominees who did not get elected this time around and encourage all to volunteer for the Governing Board, or other activities of the Society, in the years to come.

In the beginning of the year I set up several goals to achieve in my position as President of SAS. These goals primarily were to proceed with internationalization, to set-up technical sections, and to increase membership. In this report, you will find updates on progress toward these goals.

INTERNATIONALIZATION:

This meeting begins a new chapter in the history of SAS. The change in Governance is an enormous change for the Society and will ensure representation of all members. We are slowly transitioning into a truly International Society by forming relationships with spectroscopic organizations in other countries and other international societies. We are currently in discussions with SPIE and the American Society for Mass Spectrometry. We are also holding preliminary discussions with some groups from Europe and Asia. These sister relationships with other societies will allow SAS members to attend the meetings of other societies at their registration fees and will hopefully draw the attention of their members to SAS and our journal Applied Spectroscopy. By this means, smaller spectroscopic groups around the world can effectively become 'Local Sections' of SAS. Such a relationship will provide all the benefits of SAS membership to their society members, as well as the benefits of being a Local Section, and this in turn will grow and strengthen SAS.

MEMBERSHIP

The Society's biggest asset is its membership. Unfortunately, our membership numbers are declining at an alarming rate! (see the Executive Administrator's report for the most up-to-date numbers). As I write this report, the Executive Committee is undertaking the enormous task of personally calling all the members who have not renewed. This is an extremely time consuming activity, but we are doing it to understand first hand the reasons behind this disturbing trend. We should heartily thank all EC members and others who are participating in this campaign. We will discuss more about the EC's results at the Governing Board meeting.

TECHNICAL SECTIONS

As the trend of declining membership continues from year to year, we could comfort ourselves by the thought that it happens in all Societies. But that is not true. For example, the Society for Mass Spectrometry is currently growing at a rate of over 10% per year. And the reason is simple. As mass spectrometry has grown in importance in the genomics and proteomics fields, the PRACTITIONERS of this technique are looking for a home where they can learn from the experts. We should try to keep this in mind since SAS is perceived as a Society for trained spectroscopists. But we are the Society for APPLIED Spectroscopy, and we should reach

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The Society's financial statements through August 18, 2000 are attached along with the 2001 proposed budget. Membership in the Society was down significantly in 2000 from 1999 as were Journal Subscriptions. The accompanying loss of income, however, was offset by less-than-projected Journal Publication, Journal Advertising, and Postage expenses. As a result, a net income of \$8,240 is projected for the year's end. All other 2000 budget items appear to be on track. One note, Journal Reprints has been separated from Journal Publication Sales/Advertising and made into a separate line item.

As you can see from the above numbers, we had a huge drop in the number of student members. I'm not sure what is behind this.

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PROPOSED BUDGET

	2001 Proposed Budget	2000 Budget	2000 as of August 18	Percent Used	Projections Till Year End	Total Inc/Exp Projected
REVENUES						
Membership Dues	\$185,000.00	\$220,000.00	\$181,799.70	82.64%	\$4,700.00	\$186,499.70
Jrnl Pub Sales/Adv	\$140,000.00	\$150,000.00	\$41,484.64	27.66%	\$80,000.00	\$121,484.64
Jrnl Subscriptions	\$440,000.00	\$465,000.00	\$440,295.40	94.69%	\$2,500.00	\$442,795.40
Jrn Reprints/Other Rev	\$30,000.00	\$0.00	\$21,070.00	0.00%	\$6,000.00	\$27,070.00
Membership Education	\$10,000.00	\$15,000.00	\$2,440.00	16.27%	\$500.00	\$2,940.00
Investment Revenue	\$30,000.00	\$26,500.00	\$24,758.56	93.43%	\$10,000.00	\$34,758.56
General Contributions	\$3,000.00	\$3,000.00	\$3,520.00	117.33%	\$100.00	\$3,620.00
Other Revenue	\$600.00	\$600.00	\$140.00	23.33%	\$30.00	\$170.00
Web Income	\$0.00	\$1,200.00	\$1,610.00	134.17%	\$0.00	\$1,610.00
Focal Pt Book	\$500.00	\$1,000.00	\$2,439.00	243.90%	\$200.00	\$2,639.00
Lab Guide	\$0.00	\$0.00	\$0.00	0.00%	\$0.00	\$0.00
Total Revenue	\$839,100.00	\$882,300.00	\$719,557.30	81.55%	\$104,030.00	\$823,587.30
EXPENSES						
Salaries	\$110,000.00	\$106,100.00	\$64,674.82	60.96%	\$41,400.00	\$106,074.82
Payroll Tax Exp	\$14,250.00	\$13,800.00	\$5,092.91	36.91%	\$8,700.00	\$13,792.91
Emp Health/AccVac Ben	\$3,000.00	\$3,000.00	\$1,505.14	50.17%	\$1,490.00	\$2,995.14
Awards/Reception	\$10,000.00	\$10,000.00	\$576.25	5.76%	\$10,000.00	\$10,576.25
Exec Comm Retreat	\$0.00	\$0.00	\$0.00	0.00%	\$0.00	\$0.00
Governing Board	\$3,000.00	\$1,000.00	\$605.77	60.58%	\$400.00	\$1,005.77
Membership Committee	\$200.00	\$200.00	\$0.00	0.00%	\$0.00	\$0.00
Other Committees	\$500.00	\$500.00	\$242.25	48.45%	\$250.00	\$492.25
Journal Advertising	\$80,000.00	\$100,000.00	\$35,746.88	35.75%	\$35,700.00	\$71,446.88
Journal Publication	\$270,000.00	\$289,000.00	\$125,843.92	43.54%	\$145,000.00	\$270,843.92
Journal Postage	\$30,000.00	\$41,200.00	\$20,442.22	49.62%	\$5,000.00	\$25,442.22
Journal Editorial Board	\$600.00	\$1,000.00	\$533.59	53.36%	\$0.00	\$533.59
Journal Honorarium	\$12,500.00	\$10,000.00	\$6,250.00	62.50%	\$6,250.00	\$12,500.00
Journal Furn/Equip	\$1,000.00	\$1,000.00	\$0.00	0.00%	\$500.00	\$500.00
Journal Operating	\$80,000.00	\$77,250.00	\$44,225.06	57.25%	\$33,000.00	\$77,225.06
Journal Travel	\$5,000.00	\$5,000.00	\$583.34	11.67%	\$2,000.00	\$2,583.34
Journal Misc	\$2,000.00	\$2,000.00	\$2,108.00	105.40%	\$500.00	\$2,608.00
Journal Online	\$7,000.00	\$7,000.00	\$227.40	3.25%	\$5,000.00	\$5,227.40
Journal Back Issues	\$3,600.00	\$3,600.00	\$2,253.88	62.61%	\$1,500.00	\$3,753.88
Member Services	\$40,000.00	\$40,000.00	\$16,912.78	42.28%	\$25,000.00	\$41,912.78
Memb Ed Comm	\$0.00	\$200.00	\$0.00	0.00%	\$0.00	\$0.00
Memb Ed Sht Courses	\$15,000.00	\$15,000.00	\$176.25	1.18%	\$7,000.00	\$7,176.25
Newsletter	\$6,000.00	\$8,550.00	\$2,097.11	24.53%	\$3,000.00	\$5,097.11
Web Expense	\$4,000.00	\$5,000.00	\$698.75	13.98%	\$1,500.00	\$2,198.75
Lab Guide	\$5,000.00	\$13,000.00	\$21,377.24	164.44%	\$5,600.00	\$26,977.24
Other Expense	\$10,000.00	\$3,000.00	\$0.00	0.00%	\$0.00	\$0.00
SO Acct/Legal Fees	\$8,000.00	\$8,000.00	\$6,969.26	87.12%	\$1,000.00	\$7,969.26
SO Conference Promo	\$10,000.00	\$12,000.00	\$3,899.61	32.50%	\$4,000.00	\$7,899.61
SO Employee Training	\$300.00	\$500.00	\$589.48	117.90%	\$0.00	\$589.48
SO Furniture/Equipment	\$5,000.00	\$2,000.00	\$5,071.85	253.59%	\$300.00	\$5,371.85
SO Insurance	\$900.00	\$900.00	\$568.00	63.11%	\$0.00	\$568.00
SO Postage	\$15,000.00	\$15,000.00	\$8,065.20	53.77%	\$6,000.00	\$14,065.20
SO Printing	\$9,000.00	\$9,000.00	\$4,497.46	49.97%	\$3,500.00	\$7,997.46

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EXPENSES CONTINUED

	2001 Proposed Budget	2000 Budget	2000 as of August 18	Percent Used	Projections Till Year End	Total Inc/Exp Projected
SO Supplies	\$3,000.00	\$3,000.00	\$7,016.09	233.87%	\$1,000.00	\$8,016.09
SO Temp/Bookkeeper	\$5,500.00	\$5,500.00	\$4,116.83	74.85%	\$1,300.00	\$5,416.83
SO Travel	\$12,000.00	\$12,000.00	\$6,062.73	50.52%	\$6,000.00	\$12,062.73
SO Operating	\$26,000.00	\$35,000.00	\$13,489.41	38.54%	\$12,000.00	\$25,489.41
SO Organization Dues	\$1,000.00	\$1,000.00	\$1,039.92	103.99%	\$0.00	\$1,039.92
SO Miscellaneous	\$800.00	\$800.00	\$614.17	76.77%	\$300.00	\$914.17
Officers Expenses	\$20,000.00	\$15,000.00	\$10,578.63	70.52%	\$8,000.00	\$18,578.63
Bank Charges/Int Exp	\$4,500.00	\$4,500.00	\$2,840.12	63.11%	\$1,600.00	\$4,440.12
Depreciation Expenses	\$4,000.00	\$4,000.00	\$0.00	0.00%	\$4,000.00	\$4,000.00
Rounding						
Total Expenses:	\$837,650.00	\$884,600.00	\$427,592.32	48.34%	\$387,790.00	\$815,382.32
NET INCOME	\$1,450.00	(\$2,300.00)	\$291,964.98	-12694.13%	(\$283,760.00)	\$8,204.98
INCOME TAX EXP	\$0.00	\$0.00	\$0.00	0.00%	\$0.00	\$0.00
GAIN/(LOSS) ON ASTS	\$0.00	\$0.00	\$0.00	0.00%	\$0.00	\$0.00
EXCHANGES	\$0.00	\$0.00	\$0.00	0.00%	\$0.00	\$0.00
NET AFTER TAXES	\$1,450.00	(\$2,300.00)	\$291,964.98	-12694.13%	(\$283,760.00)	\$8,204.98

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Perhaps some of our academic members can shed some light on the drop.

As for subscribers, we hired a firm called PCG Communications to contact lapsed subscribers. They completed their task and in addition to getting a few subscribers back, we received valuable information about why some subscribers have not renewed. Many were closed libraries or not enough readership of the journal. We plan to work with PCG to do marketing to new subscribers.

Marketing

We have completed several mail marketing campaigns since PITTCON including mailings to non-member authors, the FACSS 1999 registration list and the Coblenz mailing list. We are going to do a few other mailings before the end of the year including PITTCON 2000, Clinical Chemistry and authors.

Corporate Sponsors

I am pleased to tell you that although we only increased the number of our corporate sponsors by one over last year for a total of 22, we did gain a three-year platinum and a 1-year platinum sponsor. Additionally, despite the fact that we changed the corporate sponsor dues structure dramatically, we were still able to keep most of our sponsors and get them to pay at a higher level. We have taken great pains to be sure they are kept happy.

Finances

The budget has been prepared and will be presented by Mary Tungol.

Other

We have purchased membership cards and will be sending them out to renewed and new members along with other general information. We have run into a small problem with the mailing of our dues renewal notices. They are getting too big to go non-profit bulk mail. As such we had to cut down on the number of items we put in the renewal packet. For example we had to leave out the journal discount form (the RSC has also been dragging its heels on giving us pricing. To date, we still don't have the rates although they tell me they will have them for me soon). We will mail this out with the membership cards and confirmation of payment receipts.

Pete Poston and I have been working to get a secure server on our web site. We are also designing a place on the web page where members can put in data about their accomplishments.

After the meeting, the office will be sending out press releases on our award winners to the local papers in their areas.

The office was charged with putting the resume book online, however, because the resumes were not sent to us electronically, we could not do it this year. We will ask for electronic resumes next year so we can post them.

We stuffed and mailed the student recruitment posters, the student

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resume books, wine and cheese invites, election ballot material, final member and subscriber renewal notices, 2001 member and subscriber renewal notices, corporate sponsor promotion mailings, author mailings, FACSS mailing, and Coblenz mailing. A special thank you goes to Volunteer Wayne Stull, Barb's husband, for his assistance with stuffing many of these mailings (especially the posters which were not easy to get in those tubes)!

We coordinated the election of local section delegates to the Governing Board and drafted online site license agreements and constitutional changes for the addition of technical sections. We are working on setting up an online employment bureau and an officer handbook.

I have done research into possible alternative office locations. Mostly to get an idea of what the costs are out there for similar properties and have found that we have a really good deal at this point in time. Most of the properties we looked at either didn't have parking, or were too small, or had high cleaning fees, etc. None had lower rents. As such, I am negotiating with our current landlord for a new three-year lease. Our lease expires at the end of December.

Overall, the office is functioning well.

Report to SAS Governing Board
Joel M. Harris, Journal Editor
August 11, 2000

The operation of *Applied Spectroscopy* has run smoothly since our last meeting in October. During the past 12 months, the backlog of accepted articles awaiting publication has been reduced, and we are currently showing a lead time from acceptance to publication at about 4.0 months. Our acceptance rate is competitive with other high quality journals, averaging 70% last year and somewhat lower this year. By careful control over the quality of papers that we publish, we were able to accommodate a 12-article special collection on 2-D Correlation Spectroscopy in July without exceeding our printing budget. The production of the journal came in well under budget last year with aggressive management of manuscript quality, length, and color production costs. With last year's significant increase in library subscription rates, which did not cause us to lose institutional subscribers, our financial picture has been much brighter. We have launched a marketing campaign directed toward university and company libraries to regain recent lost subscriptions and are formulating a contract for marketing to new institutional subscribers that should be in place by FACSS.

The quality and impact of *Applied Spectroscopy* make it easy to market. The quality of research published in the journal is reflected in strong citation statistics for its articles. Quoting data from SCI's Journal Citation Reports for the most recent years available, *Applied Spectroscopy* received Citation Impact Factors of 1.848 and 1.917 for 1997 and 1998, respectively. This factor is the number of times that recent articles were cited during the year in question; this factor ranks us #2 in the world for journals in the

"Instruments and Instrumentation" Subject Category for both 1997 and 1998. The articles in *Applied Spectroscopy* have immediate impact as reflected in Citation Reports' Immediacy Index which averaged 0.30 for the past two years. This index indicates that 30% of the articles in the journal are cited during the same year in which they are published. Despite the strong impact on current research, papers published in this journal do not lose influence over time. The citation half life of the journal is currently 6.0 years meaning that scientists continue referring to our papers for many years following their publication.

The on-line journal service provided by Catchword is posting ongoing issues about a week before the printed version mails. Since last year, Catchword is now providing PDF formatting of the journal. Policy and prices governing licensed subnets for library electronic access were approved by the Executive Committee in their March. We are currently offering the on-line version (including access to back issues) at no additional cost to all SAS members.

There are several editorial staff changes since last October. Wolfgang Kiefer accepted the editorship of the Journal of Raman Spectroscopy and had to step down as the Associate Editor for Europe for *Applied Spectroscopy*. For more than 20 years, Wolfgang faithfully served both the Society for Applied Spectroscopy and its journal. The new Associate Editor for Europe covering molecular spectroscopy is Neil Everall. Frank Bright resigned after 2 years of very active service as a Focal Point Editor for the molecular spectroscopy area. Frank remains a member of the Editorial Board, and the new Focal Point Editor for molecular spectroscopy is Kathy Rowlen who has been doing a great job since January.

The Meggers Award balloting was completed in record time in order to allow the winner to be featured at a half-day award symposium at FACSS. This will be great promotion of the award winning paper and of the *Journal*.

Finally, Ira Levin and Mike Morris have helped draft a proposal to the National Library of Medicine to have *Applied Spectroscopy* abstracted in Medline. If we are successful with this effort, it will be a significant boost for attracting biological and clinical spectroscopy papers and readers to the journal and for promoting SAS membership and journal subscription growth.

NEWSLETTER EDITOR'S REPORT

The basics of editing the newsletter and formatting the newsletter for online and print readers have become routine, and I am slowly developing expanded contents and enhanced Web formatting. Some members have provided information on events in their lives for publication, from awards to marriage. The New York Section sent information on the year 2000 Gold Medal awardee, Jim Robinson as soon as the selection was official. I'd like to get more like that from members and from other sections. Material can be sent by e-mail to SASNews@telocity.com, or to Marvin Mar-

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goshes, 25 Maple Ave. #3B, Hastings-on-Hudson, NY 10706.

For the first time, Bonnie Saylor and I will coordinate to post the agenda and reports for the September 2000 Governing Board Meeting on the SAS Web site at the same time that they are sent to the Delegates. This way, all members will have that information before the meeting, not just when the Minutes are published. It is an experiment this time. If it works well, it may someday replace mailing of paper copies to the Delegates and Officers.

Suggestions for other enhancements to the Newsletter are welcome, especially when they can be done with little or no added expense to SAS.

Marvin Margoshes
July 21, 2000



SAS Membership Education Report
24 September 2000

The Membership Education Committee now consists of myself (recently of the Delaware Valley, relocating to New Mexico*), Anne Northcutt (Chicago) and Scott Baker (Texas Gulf Coast). This represents a good geographical coverage of the US, especially in the major centers of chemical industry, which I plan to capitalize on.

Short Courses at FACSS

We are worked more closely with FACSS this year to advertise the SAS courses. Course titles and instructors were included in the FACSS *Call for Papers* and course descriptions and registration materials were included in the FACSS *Preliminary Program*. We also instituted a "profit-sharing" program to split a portion of the net income with the instructors, as an incentive to market their individual courses-- FACSS instituted a similar program. Unfortunately, these moves did not translate into significantly increased enrollment. I believe that FACSS has also experienced an enrollment shortfall.

We need to re-evaluate the benefits of offering SAS-sponsored courses at FACSS. The energy expended in this moribund endeavor could be better used to build the "on-the-road" program, our on-line offerings, and other educational efforts. This year we jointly sponsored a course with FACSS, and the enrollment very good for that course. For 2001, I propose that we work with FACSS on more jointly sponsored courses, rather than have our own separate courses. Jim Rydzak, who organized the FACSS Educational Program this year, will again be coordinating the program for 2001, and he has expressed interest in our working together to better meet the needs of our respective members and conference registrants.

Process Analytical Chemistry: Out of the Lab and Into the Pipe (Chris Hassell and Jim Rydzak) This is a pilot program for joint SAS/FACSS sponsored courses. Jim is the FACSS Education Coordinator, so we decided to teach this course together. FACSS handled the logistics, and both organizations advertised

the course. As FACSS bore the majority of expenses for this, they will receive 60% of the net, with SAS receiving 40%.

FTIR Spectrometry (Peter Griffiths and Jim de Haseth) Enrollment for this course is good, and we once again appreciate the effort that Peter and Jim have consistently put into this course.

Capillary Electrophoresis: Rapid and Efficient Analysis of Organic and Inorganic Compounds (Vahid Majidi) Cancelled due to low enrollment. We appreciate Vahid's dedication to this by preparing for the course, but he and I agreed that cancellation was the best option. He has agreed to supply copies of his visual aids to the few registrants, who were also offered enrollment in any other SAS course.

Raman Chemical Imaging (Patrick Treado) Low enrollment; however, after consultation with Pat, we are proceeding with this course in anticipation of his garnering more late registrations. He has helped cut costs by providing his own A/V equipment.

Chemical Speciation of Environmental Samples: Techniques and Applications (Marc Lamoureux) Marc is very dedicated to SAS and this course, so we are proceeding with his course. This will be another test to see how many late and on-site registrations we might receive.

Chemometrics in Analytical Chemistry and Spectroscopy (Chuck Miller) Enrollment is very high for this course. Chuck expanded it to a full-day (Sunday) course with more of a spectroscopy focus. This will better complement the FACSS-sponsored ACS chemometrics course that has more emphasis on chromatography.

Delivering Chemistry Instruction via the Internet (George Long) Enrollment was too low to proceed with this course. George is interested in developing his material into a Web-based course, and we will be pursuing this after FACSS. I will keep the EC informed as we proceed.

Web-Based Course

Pat Treado has informed me that his web-based course on Chemical Imaging will be ready by FACSS. I will have further information on this at the time of our meeting in Nashville. As stated above, George Long's course *Delivering Chemistry Instruction via the Internet* would be an excellent candidate for our next offering.

On-the Road Courses

I have not given this area enough attention this past year, and the results are proportionate. Between less emphasis at FACSS, and more participation from the other Committee members, I hope to make this a major focus of the Member Education effort. I would like to target corporate training in centers of chemical industry (e. g., teaching the Chemometrics course at a Houston venue close to many manufacturers), in addition to teaching courses at technical symposia.

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email: Christian.Hassell@alumni.utexas.NET

Constitution and Bylaws Report

Fall 2000

Vasilis Gregoriou

SECTION 2. The Constitution and Bylaws of such Technical Sections shall be consistent and in harmony with the Objective and the Constitution and Bylaws of the Society.

Any proposed amendment to this Constitution shall be studied by the Constitution and Bylaws Committee, and then presented to the Governing Board for initial approval. The proposed amendment shall then be published in the Journal or Newsletter and referred to the Local Sections and Technical Sections for a minimum of ninety (90) days of consideration. The members eligible to vote, as stated in the Bylaws, shall then vote by letter ballot on the proposed amendment. A two-thirds (2/3) majority of the votes cast shall be required for adoption of the proposed amendment. The results of the balloting and the amendments shall be published in the Journal or Newsletter.

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BYLAWS CHANGES**ARTICLE I - MEMBERS**

SECTION 3. A REGULAR MEMBER may vote in the Society office in the Society. He/she shall be considered a member of only one Local Section at a time. Regular Members shall have an annual subscription to *Applied Spectroscopy* by reason of dues paid. A regular member may qualify for Interim Dues as designated in Article VII, Section 1 of the Bylaws for the first year after he/she no longer qualifies as a student member. Members under the Interim Dues category have all rights of a Regular Member including an annual subscription to *Applied Spectroscopy*.

SECTION 6. A STUDENT MEMBER shall not hold society office, serve as a voting delegate to the National Society Governing Board Meetings, nor vote on any matters pertaining to the Society. Student Members can serve as Local Section officers and committee members at the local and national level and as technical section officers and committee members. The extent of his/her participation in the business of a Local or Technical Section is the prerogative of that Section except for the limitations stated in the Constitution and Bylaws of the Society. Student Members shall have an annual subscription to *Applied Spectroscopy* by reason of dues paid.

ARTICLE II - QUALIFICATIONS FOR ELECTION/ APPOINTMENT

SECTION 2. Candidates for Society office shall have served at least two years in one of the following capacities or one year each in two of the following capacities: delegate to the Governing Board, Local Section officer, Technical Section officer, or chair of Society committee.

SECTION 4. Nominations for the 10 at-large Governing Board members may come from the Nominating Committee, any Local Section, any Technical Section, or in an open nomination call through the Newsletter and the Journal. The list of nominees will be submitted through the Nominating Committee. Five (5) Governing Board members are to be elected as a group by the Local Sections Officer's Representative (maximum one representative per section). The Local and Technical Section Affairs Committee will coordinate the nomination and election of these 5 members.

ARTICLE VII - DUES

SECTION 1. The current annual dues of the several types of membership shall be as follows (2000 2001 rates):

Regular U.S. Member	\$77.00
Regular Canada/Mexico Member	\$93.00
Regular International Member	\$118.00
Interim U.S. Member	\$47.00
Interim Canada/Mexico Member	\$62.00

Interim International Member	\$87.00
Student U.S. Member	\$26.00
Student Canada/Mexico Member	\$42.00
Student International Members	\$66.00
Retired Member	\$26.00
Emeritus Member	None
Distinguished Service	None
Honorary Member	None
Special Member	At local Section Option
Technical and Local Section Member	Choice of one free with SAS Membership. Additional Sections \$10 each
Non-SAS member Technical Section Member	\$20 each
Sponsoring Member:	
Contributing	\$500.00
Sustaining, Silver	\$1000.00
Sustaining, Gold	\$1500.00
Sustaining, Platinum	\$2000.00
Sustaining, Platinum for 3 years	\$5000.00

SECTION 7. SETTING OF DUES. Future dues will be set at the Governing Board Meeting Executive Committee Meeting prior to the Annual Meeting and will become effective on the first day of the fiscal year following the Annual Meeting. The dues will be automatically changed annually by a level corresponding to the previous year's inflation rate, as reflected in the Consumer Price Index or other suitable measure, rounded to the nearest dollar, or another level recommended by the Executive Committee and approved by the Governing Board.

ARTICLE VIII - ALLOCATION OF DUES

SECTION 1. The dues collected from the Regular Members, Interim Members, Student Members, Retired Members and promotional memberships shall be allocated as follows:

Account of the Society	85%
Local Section <u>or Technical</u> Section per member's choice	15%

The Local or Technical Section allocation shall be calculated by the Executive Administrator and forwarded to the Treasurer of the Local or Technical Section with which the member is affiliated upon receipt of the completed Local or Technical Section annual activity questionnaire provided by the Society Office.

SECTION 2. The dues collected from a Sponsoring Member shall be allocated as follows:

Account of the Society	65%
Local Section	35%

The Local Section allocation from Sponsoring Members shall be divided equally per capita based on SAS regular

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and student membership among the existing Local Sections and Technical Sections and forwarded to the Treasurers of these Sections upon receipt of the completed Local or Technical Section annual activity questionnaire provided by the Society Office.

SECTION 3. The dues collected from a Student Member shall be allocated as follows:

Account of the Society	80%
Local Section	20%

The Local Section allocation shall be calculated by the Executive Administrator and forwarded to the Treasurer of the Local Section with which the Student Member is affiliated upon receipt of the completed Local Section annual activity questionnaire provided by the Society Office.

ARTICLE XII - LOCAL SECTIONS

SECTION 4. NEW LOCAL SECTIONS. An organized group interested in becoming a Local Section of the Society for Applied Spectroscopy may petition the Governing Board of the Society for Local Section status. The petition should include:

- (a) A list of officers and expiration date of each officer's term.
- (b) A copy of the local Constitution and Bylaws.
- (c) A list of all the current members with indication of Society for Applied Spectroscopy membership.
- (d) The name of the city where meetings are held and meetings planned.
- (e) Projected membership.
- (f) A request for up to five hundred (500) U.S. dollars for start-up funds.

SECTION 5. INACTIVE STATUS. If either neither the Local Section chair or nor secretary fails to respond to two successive yearly requests for completed Local Section Questionnaires listing new Local Section Officers and activities of the section, then the SAS President, or his/her surrogate, shall attempt to make contact with the Section. If contact cannot be made or after contact is made, it is the SAS representative's opinion that the Section is no longer functioning and will not function within the next year, then the Executive Committee shall be so notified. The Executive Committee may, if they deem it advisable, vote to place the Section on inactive status. This action must be approved by a three-fourths (3/4) majority at the next Governing Board Meeting.

SECTION 6. SAS local sections must fall into one of two categories:

LOCAL Section Affiliate: The local section is a separate entity from SAS. It has its own 501(c)(3) letter of exemption from the IRS and its own federal identification number. It accounts for and reports its own finances to the IRS and relevant state agencies as necessary. It cannot use SAS' non-profit mailing permit from the post office. A disbursement of dues from SAS to the local section is a donation from SAS to the local section.

Local Section Chapter: The local section is not a separate entity but completely part of SAS. All of its activities and finances are ultimately the responsibility of SAS. The local section's assets, liabilities, income, and expenses belong to SAS and must be reported by SAS to the IRS and the state of Maryland. The Governing Board or Bylaws of SAS can designate portions of SAS income for use by the local section, but that designation can be reversed or changed at any time. The local section does not have any assets that are legally separate from SAS. The annual disbursement of dues "from" SAS "to" the local section is simply just an internal transfer of funds from one SAS account to another. The local section can use the SAS non-profit mailing permit from the post office.

ARTICLE XIII - TECHNICAL SECTIONS

SECTION 1. Persons elected as Technical Section officers must be members in good standing of the Society for Applied Spectroscopy. Regular Members of a technical section do not need to be members of the Society for Applied Spectroscopy, but will only be considered members of the section upon payment of the non-member technical section dues as outlined in Article VII, Section 1 of the Society for Applied Spectroscopy bylaws.

SECTION 2. Technical Sections shall be encouraged to promote such scientific meetings as may conform to the objectives of the Society as stated in Article II of the Constitution.

SECTION 3. NEW TECHNICAL SECTIONS. An organized group interested in becoming a Technical Section of the Society for Applied Spectroscopy may petition the Governing Board of the Society for Technical Section status. The petition should include:

- (a) A list of officers and expiration date of each officer's term.
- (b) A list of all the current members with indication of Society for Applied Spectroscopy membership.
- (c) A copy of the proposed section constitution and bylaws.
- (d) Projected membership.
- (e) A request for up to five hundred (500) U.S. dollars for start-up funds.

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This petition shall be considered by the Governing Board in accordance with Article V of the Constitution.

SECTION 4. INACTIVE STATUS. If neither the Technical Section chair nor secretary responds to two successive yearly requests for completed Technical Section Questionnaires listing new Technical Section Officers and activities of the section, then the SAS President, or his/her surrogate, shall attempt to make contact with the Section. If contact cannot be made or after contact is made, it is the SAS representative's opinion that the Section is no longer functioning and will not function within the next year, then the Executive Committee shall be so notified. The Executive Committee may, if they deem it advisable, vote to place the Section on inactive status. This action must be approved by a three-fourths (3/4) majority at the next Governing Board Meeting.

(a) FUNDS. An inactive Section's funds or assets, after discharging of all just debts, shall be held by the Society Treasurer for five (5) years. At the end of the five (5) year period the assets are to be returned to the Society for Applied Spectroscopy general fund.

(b) REMOVAL FROM INACTIVE STATUS. A petition of ten (10) or more SAS members, upon approval by the Local and Technical Section Affairs Committee, needs only a simple majority vote of the Governing Board to remove the Section from inactive status. If this takes place within five (5) years after being voted into inactive status, all of the Section's assets are to be returned. If a longer period of time has transpired, the Society Treasurer, on approval of the Governing Board, may grant the Technical Section ten (10) dollars per petitioning SAS member or five hundred (500) dollars, whichever is less, to provide immediate operating funds.

(c) MEMBER STATUS. If a Section becomes inactive, the membership will be transferred to the active Section of the member's choice.

SECTION 5. SAS technical sections must fall into one of two categories:

Technical Section Affiliate: The technical section is a separate entity from SAS. It has its own 501(c)(3) letter of exemption from the IRS and its own federal identification number. It accounts for and reports its own finances to the IRS and relevant state agencies as necessary. It cannot use SAS' non-profit mailing permit from the post office. A disbursement of dues from SAS to the technical section is a donation from SAS to the technical section.

Technical Section Chapter: The technical section is not a separate entity but completely part of SAS. All of its activities and finances are ultimately the responsibility of SAS. The technical section's assets, liabilities, income, and ex-

penses belong to SAS and must be reported by SAS to the IRS and the state of Maryland. The Governing Board or Bylaws of SAS can designate portions of SAS income for use by the technical section, but that designation can be reversed or changed at any time. The technical section does not have any assets that are legally separate from SAS. The annual disbursement of dues "from" SAS "to" the technical section is simply an internal transfer of funds from one SAS account to another. The technical section can use the SAS non-profit mailing permit from the post office.

RENUMBER REMAINING ARTICLES AS APPROPRIATE BASED ON ADDITION OF ARTICLE VI ABOVE.

ARTICLE XIII XIV- COMMITTEES

SECTION 1. STANDING COMMITTEES. The standing committees of the Society are: Awards, Constitution and Bylaws, Local and Technical Section Affairs, Membership, Membership Education, Nomination, Publications, Publicity, Tellers, Tour Speakers, *Applied Spectroscopy* William F. Meggers Award, Lester W. Strock Award, and Lippincott Award. Details of the Meggers Award Committee, the Lester Strock Committee, and the Lippincott Award Committee are in Article XV, Sections 3, 4, and 8 respectively, of the Bylaws.

SECTION 8. LOCAL AND TECHNICAL SECTION AFFAIRS COMMITTEE. This committee shall consist of a total of five (5) members. The chair-elect is appointed for a three (3) year term (as chair-elect, chair, and past-chair). Each year one other member is appointed for a two (2) year term. This committee shall:

(a) study and make recommendations concerning problems affecting Local and Technical Section activities.

(b) receive and review petitions for new Local and Technical Sections and shall submit its findings and recommendations first to the Executive Committee and then to the Governing Board for action.

(c) select the Local Section that has contributed the most toward accomplishing the objectives of the Society during the preceding year of the Society in accordance with Article XV, Section 2 of the Bylaws. The winning section shall receive the Poehlman Award.

(d) administer the Graduate Student Award, in accordance with Article XV, Section 6 of the Bylaws and select the awardee from candidates recommended by the Local Sections.

(e) administer the Undergraduate Award in Applied Spectroscopy in accordance with Article XV, Section 7 of the Bylaws. The undergraduate awardees are selected by the Local Sections.

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(f) Will coordinate the nomination and election of the five (5) Local Section Members to the Governing Board.

SECTION 11. NOMINATION COMMITTEE. The term of office of the Nomination Committee begins on March 1. This committee shall consist of six (6) members according to the following qualifications:

(a) The chair-elect of the committee shall be selected by the President-Elect and serve as a non-voting member for his/her first year and serve as Chair and a voting member his/her second year. The chair of the committee shall be the Second Past President of the Society.

(b) The President and Immediate Past President President-Elect shall each select two members to this committee to each serve one-year terms.

(c) Each member of this committee shall be from a separate Local Section. In the case that conflict arises over an appointment to this committee due to more than one appointee from a Local Section, the President-Elect shall prevail over the President and Immediate Past President while the President shall prevail over the Immediate Past President. The Nomination Committee shall submit the names of all nominated At-Large Governing Board members and at least two (2) nominees for each office to be filled to the Secretary not later than January 15 December 1 of each year. Additional nominations for any elective office of the Society may be made by a petition signed by at least forty (40) Regular Members and received by the Secretary not later than May 1 December 31. Nominees by petition shall meet the other qualifications of the nominees as established in the Bylaws. The only report from the Nomination Committee is to the Executive Committee at the spring meeting.

SECTION 12. PUBLICATIONS COMMITTEE. This committee shall consist of a total of five (5) members. The chair-elect is appointed for a three (3) six (6) year term (as chair-elect for two terms, chair for two terms, and past-chair for two terms). Each year one other member is appointed for a two (2) year term. This committee shall:

SECTION 14. TELLERS COMMITTEE. This committee shall consist of a total of three (3) members. The chair and other two (2) members are appointed for a one (1) year term. There shall be no chair-elect or past-chair. The members should live in close proximity to facilitate counting. This committee shall:

(a) tally the votes cast in the election of Officers, At-Large Governing Board members, and on any proposed amendment to the Constitution, or any resolution voted upon by the eligible members.

LOCAL SECTION AFFAIRS COMMITTEE REPORT Fall 2000

At this time (July 2000), the Local Section Affairs Committee has:

1. Completed selection of the recipient of the SAS Graduate Student Award. Three nominations were submitted. The awardee is Christopher Zangmeister of the University of Arizona, Tucson.
2. Completed selection of the recipient of the William J. Poehlman Award. Three nominations were submitted. The New York Section will be the awardee.
3. The National Office has helped us coordinate the selection of Local Section Delegates to the SAS Governing Board. Seven people volunteered to be on the ballot with each section voting for five. The National office has the results of this election.
4. Work has begun on a Local Section Handbook that can be used as a "how-to" idea book to help keep local sections surviving and thriving.

Becky Dittmar

NOMINATING COMMITTEE REPORT

The Nominating Committee completed its work for the past year under the Chairmanship of Dr. Richard Palmer. Our task was the development of nominee lists for the positions of President-Elect, Secretary and 10 Governing Board members newly authorized to be elected by the membership at-large.

Nominees were as follows:

President-Elect: Rachael Barbour & Ron Williams

Secretary: Jon Carnahan & Vahid Majidi

Governing Board: Steven Barnett, Jose Broekaert, Brian Buckley, Juan Castillo, John Chalmers, Clara Craver, Antony Davies, Robert Deng, Danita de Waal, Augustus Fountain III, Mark Heitz, Mitchell Johnson, Wolfgang Kiefer, James Kostelc, Kathryn Lee, Cynthia Mahan, David Moore, Don Pivonka, H. Siesler & Rock Vitale

We look forward to preparing the slate of nominees for next years election. Don't be surprised if we call you! Be prepared to say YES to your Society!

Respectfully Submitted,
Doug Shrader, Nominating Committee Chairman

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Tour Speaker Report Fall 2000

The status of the Tour Speaker Program is as follows. Over the next 2 weeks, I will be contacting the various SAS Sections to get input about their interests, meeting frequencies, and complete programs for 2000 - 2001. Once I have that information I can begin to select Tour Speakers based on interest. At present I already have a Tour Speaker for NMR.

Once I have a complete list of Tour Speakers, their disciplines, and talk titles, I will communicate this. I would hope that this initial phase can be completed by October and "coordination" of the Tour Speakers' itinerary would follow with a final list of speakers and their itineraries in early 2001 if not before.

David C. Lankin, Ph.D.
Tour Speaker Program Chair

Megger's Award Report Fall 2000

The Megger's Award Committee, for the best paper in Applied Spectroscopy during 1999, met electronically through January-March 2000 and chose a winner with broad support among the committee. The winner is:

Rohit Bhargava, Travis Ribar, and Jack L. Koenig, Department of Macromolecular Science, Case Western Reserve University, Cleveland, Ohio 44106 for "Towards Faster FT-IR Imaging by Reducing Noise" which appeared in Appl. Spectrosc. 53, 1313-1322 (1999).

There were many high quality papers and the decision was difficult. David Butcher and Tim Keiderling have arranged an award symposium at the FACSS meeting in Nashville honoring Prof. Koenig and consisting of 3 invited lectures plus the Award address all presenting new developments in FT-IR Imaging Spectroscopy.

Strock Award Report Fall 2000

We are pleased to inform you that the Lester Strock committee has chosen Professor Max Diem* as this years recipient. Prof. Diem has won this award for his outstanding work in vibrational spectroscopy, specifically his seminal work in vibrational circular dichroism and his outstanding work in the development of IR absorption spectroscopy for the determination of the impact of disease on the spectroscopy of human tissue and cells.

We could cite numerous papers from Applied Spectroscopy over the years, but have limited the citation to two of his most recent papers published in the year 2000:

Infrared Spectroscopy of Human Cells and Tissue. Part VI: A Comparative Study of Histopathology and Infrared Microspectroscopy of Normal, Cirrhotic, and Cancerous Liver Tissue
Authors: Luis Chiriboga, Herman Yee and Max Diem Applied Spectroscopy, 54, 1 (2000).

Infrared Spectroscopy of Human Cells and Tissue. Part VII: FT-IR Microspectroscopy of DNase- and RNase-Treated Normal, Cirrhotic, and Neoplastic Liver Tissue Authors: Luis Chiriboga, Herman Yee and Max Diem Applied Spectroscopy, 54, 480 (2000).

*Professor Max Diem
Department of Chemistry and Biochemistry
City University of New York
Hunter College
695 Park Ave.
NY, NY 10021

Teller's Committee Report Fall 2000

The Teller's Committee met on August 7, 2000. This committee consists of the following members:

Jim Julian - Chairperson, Bruce Hudgens, Carol Snyder

The results of the 2000 election are as follows:

President-Elect: Rachael Barbour

Secretary: Jon Carnahan

Governing Board Delegates:

Three-year Term:

Steven M. Barnett

John M. Chalmers - International Delegate

Kathryn A. Lee

Cynthia Mahan

David S. Moore

Two-year Term:

Brian T. Buckley

Clara Craver

Augustus W. Fountain

Wolfgang Kiefer

Don Pivonka

After the election was completed, Augustus W. Fountain resigned his position in order to become SAS Parliamentary. The next delegate on the list was Rock Vitale. Dr. Vitale will serve as the two-year delegate in place of Dr. Fountain.

Respectfully submitted,

James M. Julian

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FACSS Delegate Report
Prepared by Robin L. Garrell
24 August, 2000

The FACSS Governing Board met at the FACSS meeting in New Orleans at noon, March 16, 2000. *SAS representatives present: Robin Garrell (Past-President) and Rina Dukor (President).*

Closure on FACSS, Vancouver (1999). The final reports on the successful Vancouver meeting were reviewed. The exhibit encompassed 77 booths for 65 exhibitors and space for 120 posters. The exhibit space and catered events received high marks. Approximately 880 papers were presented in 115 oral sessions over 6 days, with a full complement of 120 posters on Wednesday. This represented an increase of ~100 papers over the previous year. The plenary session was well received, and will likely be continued in future years. The special graduate student seminar, "Ph.D.: Now you have it, what next?" was very successful, and should be continued. The Spectroscopy Society of Canada was pleased with the meeting and its interaction with FACSS, and has expressed interest in co-siting in the future (e.g., in an eastern Canadian city). Once again, there was considerable debate over the Gala, *not* held in Vancouver, but being re-instated in Nashville. By not having the Gala, considerable expense was spared, and scheduling conflicts avoided (allowing the SAS and Raman receptions to be held on different nights).

Miscellaneous suggestions for upcoming meetings: (1) expanding the budget for LCD data projectors (see below); (2) providing facilities for conferees to access e-mail; (3) upgrading the FACSS web site; (4) expanding the program offerings in bioanalytical chemistry.

FACSS Nashville (2000)

FACSS Nashville (2000) Program.

As of this meeting, the FACSS 200 program plan was nearly complete. Mike Carrabba was still planning to hold Friday AM sessions, despite considerable concern over potentially weak attendance. A check of the program web site on 8/20/00 showed no sessions in place, however, so the point may be moot.

Dr. Donald Kerr, Assistant Director in charge of the Laboratory Division of the FBI will present the keynote lecture on Wednesday afternoon, immediately preceding the poster session. Arrangements have been made for 310 data projectors for presenters' use. While the number needed is expected to increase, increasing competition is lowering prices, so this line item may hold steady in future years.

There was considerable discussion about how to involve and showcase young investigators. Special sessions should be planned.

Courses/workshops: The fee structure was discussed. After expenses, FACSS gets 70% of the profit, and the instructor 30%. This encourages the instructor to advertise and grow the courses. A similar strategy has been recently been adopted by the SAS.

Other: Student volunteers are being recruited from nearby schools to serve as aides and tour guides (coordinated by Wendy Clevenger). Arlene Russell (General Chair) reported on plans for

the Family Program, Workshops, Employment bureau (to be in the exhibit floor area), and overall coordination.

Long-range planning

Long-range planning 2001 Meeting in Detroit: David Coleman and Felix Schneider will be joint General Chairs of the Detroit meeting, with David Butcher serving as Program Chair and Bob Michel as Treasurer. Scott McGeorge has agreed to continue as Exhibit Coordinator, and Karmie Galle will continue as Secretary. It is expected that a much larger fraction of the conferees are likely to be 1-day attendees, so the organizers currently plan for a large decrease in the 1-day attendance fee. No increase in the full-week fee is planned. The number of exhibitor complimentary registrations will be decreased 50%, with some receiving exhibitor-only tags, rather than full conferee tags.

Program: David Butcher has proposed omitting the plenary lecture. He also proposed an opening poster session on Sunday night (the content of which was discussed at length). Wednesday may be designated "Undergraduate Day," to which analytical faculty could bring their classes at no charge to the students (1-day reg. fee for the faculty). The facility has the capacity for up to 17 concurrent sessions Monday-Thursday and 10 on Friday.

2002 Meeting in Ft. Lauderdale: Reservations were expressed about the fact that this was the only site that received serious consideration (site maps, meeting room plans, room availability, transportation information, site visit report, etc.). The site does appear suitable, but it was recommended that in the future, a slate of two or more proposed sites be prepared for the Board's review and final selection.

Budget. The organization is solvent, and the budget on track. The reserve fund is at ~\$160,000; not excessive for a meeting budget over \$400,000. This is a greatly improved financial picture compared with 1992, in which the reserves were ~\$50,000. However, RLG expressed concern that the reserve fund has grown significantly faster than expenses in the 1997-1999 period: the reserve fund from \$120K to \$160K, or 33%, vs. \$410K to \$428K, or 10% for expenses. The exhibit is an approximately break-even venture, so the growth in reserve funds has derived primarily from registration fees. RLG, with RD concurring, therefore suggested holding the line on conferee registration fees. This idea was supported by some members of the board, but the majority took a fiscally more conservative position, arguing for the greater stability a larger reserve fund would provide.



**Report of the Representative to the
Chemical Heritage Foundation**

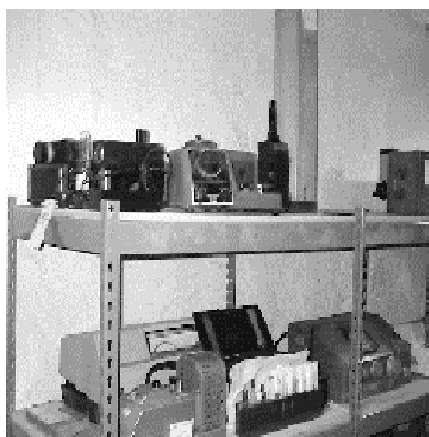
The Heritage Council, made up of representatives of each of the sponsoring organizations, met at the CHF headquarters on April 25. A highlight was a tour of the building, which was nearly ready for the official reopening after extensive renovations. The library is open, though at the time not all of the book collection was on the shelves. The catalog can be searched online at <http://www.chemheritage.org/>. There are several exhibits, including

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some instruments that members of SAS will find interesting. If you are in Philadelphia for business or vacation, consider a visit to the CHF building. It is at 315 Chestnut Street, close to Independence Hall and the Liberty Bell.

Most of the members of the Museum Committee returned the next day to sort and start cleaning the instruments in the collection. CHF has a large number of early Beckman pH meters in their handsome wooden cases, and several early spectrophotometers. The Museum Committee members who were there had worked with some of the instruments early in their careers, and they represented a diversity of technical backgrounds. We were able to identify most of the instruments and instrument parts. The photo on the left shows some of the spectrophotometers and visual and photoelectric colorimeters. There are some Beckman DU's and parts as well.



Not every artifact was identified. The next photo shows a hand-somely-made brass instrument of unknown purpose. It does not seem to be complete; there are places that seem to have been the location for attachments. Does anyone recognize it?

The Othmer Gold Medal of CHF was awarded to Carl Djerassi at a luncheon in New York on May 19th. Both Rena Dukor and I attended, which gave her a chance to speak with representatives of other organization about forming relationships with SAS. A requirement of the award is that the recipient give an address, which Djerassi did most entertainingly. At the end of his talk, he was joined at the podium by Roald Hoffman for a reading of scenes from the play, *Oxygen*, that they co-authored. Judging from the reading, the play should be worth seeing if you have the chance.

Marvin Margoshes
August 4, 2000



Society for Applied Spectroscopy 1999-2000 Web page Report submitted by Pete Poston

My first goal was to revise the overall appearance of the web page so that it looked more "polished" and professional. My second goal was to improve the navigability of the site through the use of frames and menu buttons. By making the web page easier to "surf" through, it was hoped to increase usage of the page. The guiding philosophy here is to make the website the place where busy spectroscopists would regularly go to obtain useful information.

I also made some minor changes to the Journal Page so that all journal-related links could be found in the same locality. I started an online reviewer's form, added an author's guide, and also added a page containing IUPAC spectroscopic nomenclature terms (published in every January issue of Applied Spectroscopy).

Finally, I added or updated the following miscellaneous pages and links: CRC Press Bookstore, discount publications from Springer-Vela and Blackwell Science Publications, the SAS Lab guide, the Links and Databases page, SAS Awards Page, and a Corporate Sponsors "pop-up" window. In the future I would like to incorporate the corporate links into the main body of the web page.

Secure Server Connection For Membership And Subscription Applications

The process of obtaining a secure server connection was a straight-forward one. Our site is hosted by Advanced Web Creations, Inc. (AWC), and they offer a secure connection or "digital key" with the help of Thawte Corporation, a "Certificate Authority" or CA. Application for this certificate entailed the submission of SAS documents proving that we are a legitimate corporation, as well as paying appropriate fees. Thawte Corp. issued the digital certificate necessary to satisfy internet security protocols. Every year there will be a \$50 fee to AWC to host the secure server, and \$100 to Thawte to update the digital certificate. Currently only a test secure membership application page is in place, but I am working on a full working version of both the SAS membership and journal subscription pages.

We receive an estimated 10 applications or renewals per month from the web page form. This means that there is no need for writing CGI (common gateway interface) scripts to remove formatting tags or perform other cosmetic alterations to applications transmitted from the web page. Applications will be emailed directly from the browser to Victor in the SAS office, where he will process the applications normally.

In the future, we may consider the use of these CGI scripts to allow online database access, the use of shopping carts, and writing cookies to track online use of the site. In addition, much of the





The future is here, for some of us


A couple of recent events showed me that at least some of the marvels of technology touted for the future are already here. It's just that not all of us can afford them yet.



The first event was watching a Nova program on PBS. I almost never watch TV these days. Unlike surfing the Web, watching TV is noninteractive, so it tends to put me to sleep, but the listing of this program caught my eye. The subject was astrophysicists who are improving estimates of the age of the universe. The estimates are based on the Hubble constant, for the rate of expansion of the universe. That rate is found from red shifts, and the scale is calibrated from the intrinsic brightness of certain stars; comparison of the measured and intrinsic brightnesses gives the distance of the stars. The stars usually used for this purpose are too dim to be recognized in galaxies at very large distances, and the Nova program showed how some astronomers are making measurements with brighter stars that can be seen further away. These stars can be identified from their spectra, which had to be measured and analyzed one at a time. What amazed me was just how quickly that could be done. A list of stars that might pass the test had been obtained from survey pictures. The procedure shown in the Nova program was to point the telescope to the coordinates of a star (by computer control, of course), record the spectrum of the star on an array detector, and download the data to a remote location, where the data were computer analyzed and the results were reported back to the person operating the telescope. It was mind-boggling that the process took only twenty minutes per star, most of the time needed to collect enough photons.



I've known for a long time that astronomers are often ahead of laboratory spectroscopists. They need to be because they have to extract information from dim light sources with complex properties that can't be controlled by the experimenter. It was seeing in an astronomy journal a digital photo of Venus taken during the day with a video camera that prompted me to think about using that kind of a detector in a spectrometer. Several companies now make these spectrometers, but we are still clearly lagging astronomers in using computers to extract more data from the spectra.



The second event was a sequel to the close presidential election in November. A friend told me about a talk that his son, Michael Shamos, did on methods for voting and counting votes. Michael Shamos is a true polymath, with degrees in computer science and law, plus a range of interests that includes pool and billiards (two books published), electronic commerce, advanced digital libraries, and electronic voting - where he advises many state and local governments. He gave the talk at Carnegie-Mellon University, where he is on the faculty, and a file of a videotape of the 100-minute talk (plus the slides) can be found by going to <http://www.ulib.org>, clicking on the "Lectures" button and following links to "Distinguished Lectures" in the year 2000. You'll stop there unless you have a fast connection to the Web. It took just over an hour to download the 185 Mb file on a DSL line. If you view the talk, it will tell you more than all of the news reports about the problems, advantages, and opportunities for skullduggery in various voting methods, as well as prospects for improvement - a topic we'll be hearing more about before the next major election. But that isn't the point of my essay. "Attending" a talk this way is an example of how an incremental advance in a technology can change how we do things. Think of the lecture not as about current events, but a discussion by a computer scientist about the intersection of technology and society. The talk is available at any time to other scientists and the interested public, and thanks to the technology of DSL and internet cable connection, the technology needed to view it at home is affordable. It is not so hard to think of extending this to other areas of science. How long will it be before, when you have finished reading an article in Applied Spectroscopy online, you can click to view (or to save to your computer) a video showing how the experiments were done more clearly than with words and a few drawings. Consider making that into an interactive lecture - a chat room with video. (During his term as Editor, Jim Holcombe experimented with chat room discussions of two Focal Point articles.) Think about going to FACSS or PittCon "virtually", if you can't be there in person.



Marvin Margoshes



 *The Spectrum* is meant for communication BETWEEN SAS members. Letters and even brief essays can
 

 be published. Send them to the Editor at the mail or e-mail address on the first page of this issue. The
 

 usual criteria - e.g., length and quality of writing - apply, and the topic needs to be related to spectroscopy
 

 or the affairs of SAS. We could even include humor - are there some good jokes about spectroscopy?
 




photo album

*a few scenes from facss 2000
opryland hotel convention center, nashville*



Is this really a hotel lobby? Is a GPS system actually needed to find a room?



The Executive Committee meeting lasted for hours, but the comfortable chairs helped. Too bad the hotel made us leave



Its lunch time. That's Coke in the glasses, not wine.



President Dukor convened a breakfast with SAS members from many countries. We got excellent advice on how to work internationally.



The Governing Board meets. A formal photo is on page 5

scenes from the awards presentations at the mixer



James W. Robinson is Awarded the SAS Gold Medal for the Year 2000

The Gold Medal of the New York Section of SAS was awarded on November 1 to James W. Robinson, Professor Emeritus, Louisiana State University. The medal has been awarded annually since 1952, and Robinson is the forty-ninth person so honored. The full list of awardees is in the November 2000 issue of *Applied Spectroscopy*, p. 394a.



A symposium in honor of Prof. Robinson took place at the Eastern Analytical Symposium on November 1, 2000. The speakers are shown here with the honoree: from the left, Walter Slavin, Robinson, Isaiah Warner, Bonner Denton, and Steven Soper.

The deadline for nominations for the 2001 Gold Medal will have passed before this notice is published. Persons interested in making a nomination for later years should contact the Chair of the New York Section, Kathryn A. Lee, National Starch, 16 Finderne Ave., Bridgewater, NJ 08807; phone 908-685-5008; e-mail Kathryn.lee@nstarch.com



American Chemical Society Honors SAS Members

Two SAS members have been selected for awards by the ACS Division of Analytical Chemistry. The awards are in recognition of their research on spectroscopy.

Joe Caruso – who was SAS President in 1998, and is Professor and Dean of the College of Arts & Sciences at the University of Cincinnati – will receive the Award in Spectrochemical Analysis. He is being recognized for his work on trace analysis by atomic spectroscopy.

Rick McCreery, Prof. of Chemistry at Ohio State University, has been chosen for the Award in Electrochemistry. His research has included the use of Raman spectroscopy, scanning tunneling microscopy, and x-ray photoelectron spectroscopy to study electrochemical processes.

The Division of Polymer Materials of the American Chemical Society inducted its first ten Fellows at the Fall 2000 ACS meeting. Two of them are long-term, active members of SAS: Clara D. Craver, Craver Chemical Consultants; and Jack L. Koenig, Case Western Reserve University.

Clara Craver is a Member of the SAS Governing Board. Jack Koenig and two of his students received the Meggers Award for their paper entitled "Towards Faster FT-IR Imaging by Reducing Noise", *Applied Spectroscopy* 53, 1313-1322 (1999).



Members, Sections—Share your news

Send us the news you wish to share with your friends and colleagues in SAS, so we can publish it online and in print. The easiest way is through the SAS Web site at <http://www.s-a-s.org>. Just click on the Member News button to write a message to the Editor of *The Spectrum*. Photographs can be sent as attachments to the e-mail. Messages and attachments can also be sent by e-mail to SASNews@telocity.com, and regular mail can be sent to Marvin Margoshes, Editor, *The Spectrum*, 25 Maple Avenue, #3B, Hastings on Hudson, NY 10706-1426, USA.