



Culture Clash

Perhaps the greatest obstacle to increased collaboration between SPIE and OSA is the differences in the cultures of the two societies. It would seem that persons engaged in the pursuit of knowledge in the field would have the same goals and motivations and that it would be only a matter of likeminded persons resolving recognized differences and moving on. But some members, particularly those who feel their professional ties with OSA are threatened by some future affiliation or merger, have been quite vocal in their opposition to any substantive collaboration.

As a friend of mine, who is a member of OSA, but not SPIE, put it:

Like a moth drawn to a flame, it seems that periodically OSA must flirt with the idea of merging with SPIE. What makes SPIE so attractive to a segment of our leadership? Is it the large number of working engineers who chose to pay their dues to SPIE instead of OSA? Is it the hot selling “yellow books?” Is it the international presence? Every time this subject is put on OSA’s agenda (and this must be the third time in the last 15 years) the same arguments are recycled. Those who want to do it argue that there is economic and political strength in numbers, that the two societies complement one another—OSA can provide the “product” and SPIE can deliver the “customers,” and we can accomplish more by combining our resources than we can accomplish by competing with one another. Those who are opposed argue that OSA is the “New York Times” of optical science and engineering, while SPIE is the “National Enquirer,” that joining with SPIE will destroy the quality and prestige of OSA publications, meetings, and honors, and small specialty niches of our science will be starved of society resources as the latest engineering fads gobble up the budget. Obviously, there is truth to both sides.

I certainly hope so. I am assuming that this journal is not being compared to the *National Enquirer*. Especially when I see the considerable effort that the Associate Edi-

tors and the reviewers put into evaluating submissions to this journal.

Why optics? What is it about our field that promotes this type of comparison? What makes this division and, antithetically, lack of division occur? Optical science in the U.S. was established as a separate field when the Institute of Optics was created and the Optical Society of America was incorporated. This arose around the beginning of the century when commercial optics technology, embodied in the Kodak Box Brownie, began. Since then, there has been a steady increase in the expanse of optical applications. In comparison with other fields of engineering, where the physics has been incorporated separately, in optics there is no separate engineering practice. After all, Isaac Newton made his own telescopes, why shouldn’t I? And for many years, that is what was done. But as optics has grown the engineering aspects have become more important. It’s one thing to fabricate a pair of binoculars and altogether another thing to construct the Hubble Space Telescope. A gulf opened up.

Why now? In some ways there is a parallel with the IEEE when it was formed from the Institute of Radio Engineers and the American Institute of Electrical Engineers. This occurred at a time when electrical technology was changing to electronic technology. A short history of these changes can be found on the IEEE web page. Now, in the case of optics, these rapid changes may require that the same type of actions be taken. One solution that some might find far more enticing would be to work at the establishment of optical engineering as an accepted field of practice. The problem is that those like my friend, who would advocate this, are not the optical engineers.

When an optical engineer does stick his head out of the trenches the standard response that I have heard regarding society collaboration is “Should have been done a long time ago. Why is this taking so long?”

In the exchange of messages that followed my friend’s original salvo, he clarified some of the differences without the original hyperbole:

The cultural differences between the two societies reflect the different priorities and needs of the memberships. OSA is predominantly an academic society—SPIE is predominantly an engineering so-

ciety. There may be some overlap with regard to the education missions, but I think they are fundamentally different in character and serve fundamentally different constituencies.

I believe that you, and other academic scientist/“engineers” are a rare breed that must keep a presence in both the scientific and engineering world. You are the “water bearers,” carrying new and late breaking findings from the laboratory to the marketplace. I believe that you, and many of my other OSA friends, have the responsibility of bridging the gap between science and application.

I guess I should accept that as a compliment, but it arrives as a frustration. I and my (hybrid) colleagues cannot replace the insight that someone bedeviled by a problem brings to the mass of information that our societies deliver in the form of meetings, proceedings, and journals. Optical scientists need the technologies and insights from engineering to pursue their investigations and optical engineers need the results of basic research on which to base their next breakthrough.

Some of this may be “professional tunnel vision”—looked at from a particular specialty that has little contact with optical engineering. But examined in the broad sweep of late 20th century optics, the collaboration between science and engineering is crucial. The current ef-

fort in engineering quantum well lasers is an example of the inextricable engagement of the two cultures.

The argument that the societies are so different that there is no need to do anything is incorrect. My two societies complement each other so well that their collaboration is the best thing that could happen to optics.

There is no need to mount separate efforts to advance the cause of optics, to engage the new professionals, and to provide support to science education in general and optics education in particular. Not at a time when optics technology pervades all aspects of our lives. Although some distinctions might be eliminated, the various cultures of optics will survive any collaboration. This is recognized by the Joint Task Force on OSA/SPIE Collaboration. The Task Force is publishing summaries of their work on the SPIE (www.spie.org) and OSA (www.osa.org) web pages. In the May 20, 1998, communiqué (the complete text is given below) the first item on the list “Key features and criteria for a new collaborative structure” is “Honor important cultural features of participating organizations.” With an appropriate respect for the multiple cultures within our two societies and dedication to increased communication between them, we can construct a stronger, more vigorous optical community.

Donald C. O’Shea
Editor

OSA/SPIE Collaboration Task Force Defines Objectives

(Washington, DC)—The Joint Task Force on OSA/SPIE Collaboration—chartered to explore closer collaboration or an expanded structural relationship, such as a federation or merger, between the two societies—held its second in a series of monthly meetings in San Francisco on May 2–3. The group identified a number of factors that make a new structural relationship desirable:

- Changing environment for professional societies
- High rate of growth in optics
- Optical science and optical engineering are converging
- International/global scope of optics
- Technology for information transfer is changing
- Information needs are expanding to allow customized information delivery
- Nimbleness needed to serve new areas of optics and new areas “enabled” by optics
- The societies need to produce efficiencies to free resources for new opportunities
- Desire to create opportunities to better serve future generations of optics professionals

Key features and criteria for a new collaborative structure include:

- Honor important cultural features of participating organizations
- Provide a “one door” society access for optics professional associations
- Have a strong central authority and direction
- Provide better value to the optics and photonics community
- Have easy mechanisms for expansion and reorganization

To provide full information and facilitate input from OSA and SPIE members and other interested parties, a communication plan has been developed. Each society’s web site will have links to an “OSA/SPIE Collaboration” area, with an updated Task Force status summary, e-mail links to Task Force contacts, and a forum for posting and responding to messages. Reports will also appear monthly in *Optics & Photonics News* and *OE Reports*, the societies’ news publications; press releases will be sent out periodically.

As progress warrants, there also will be “Town Meetings” at major OSA and SPIE conferences, where Task Force representatives will report and attendees may ask questions and make suggestions. Panel discussions may be a part of such gatherings.

Comments or questions on the proposed collaboration are encouraged and should be directed to the Task Force cochairs: M.J. Soileau and Paul Forman, c/o Bobbie Lively, SPIE, P.O. Box 10, Bellingham, WA 98227-0010; Phone (360) 676-3290; Fax (360) 647-1445; taskforce@spie.org.