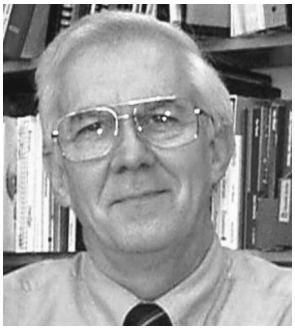

The Color of Knowledge

Your world has been changed...in a committee meeting.

Much of the work of governing SPIE takes place in committee meetings at Photonics West and the Annual Meeting. In addition, there are e-mail exchanges and telephone conferences when the need arises. It is not at all glamorous, but it is an important part of SPIE because these meetings provide direction and support for the Society's mission of educating its members and our colleagues on all aspects of optical engineering.

The meetings have a formal agenda that is concocted by the Chair and SPIE staff. The time allotted to each issue is their best guess based on past meetings. As a Chair of some committees, I can tell you that my worst nightmare was that my meeting would extend for hours beyond schedule. It has never occurred, but the concern was always there.

Most committee meetings tend to progress in a rather amiable manner with a few stops and starts for more controversial decisions. Members wander from their seats to get some fresh coffee or a bottle of water. But every so often, some issue arises that results in extensive discussion and a major redirection of an SPIE operation. For me, that's what happened at the Publications Committee at the Annual Meeting in San Diego in August.

At that meeting, SPIE introduced the Digital Library, which had begun operations on July 31, a few days before the meeting. If you haven't had a chance, take the time to look at this new site on SPIE Web. It can be found at http://www.spiedl.org/.

The SPIE Digital Library is a new channel for the distribution of Proceedings papers and articles from *Optical Engineering* and our other journals. SPIE's ability to deliver 70,000 papers by download from the Internet will dramatically change the way that optical engineers can gain information for their work. There isn't a single engineer engaged in a project that hasn't wanted to read a paper at a conference, but didn't have the time or the funds to attend. Now, it will be possible to get online and download the paper to his or her computer. Of course, as with attendance at the conference itself, there is no guarantee that the paper will provide exactly the answers that one might be looking for. That's what's so nice about conferences. You can buttonhole the speaker after the session and ask him or her about the aspects of the paper that affect your current project.

Although the Digital Library contributes to this sea change in technical publication, it did not bring it about. Rather, it was what seemed to be a rather innocuous item on the agenda: ''Color Online Only.'' Bob Sprague of Gyricon, LLC, the Chair of the Publications Committee, had created a subcommittee to study this matter. At issue was the decision to announce in our journals that: ''Beginning _____, authors will have the option of publishing figures in color online and in black and white in print, without charge. Authors who wish to have figures published in color in the print journal will still be required to pay the associated costs.''

What can be so earthshaking about an announcement like that? As Karolyn Labes, the Managing Editor for this and other SPIE journals, noted in her preamble to this announcement: ''In terms of policy, 'color online only' would create differences between the print and online versions and effectively make the online journal the more complete version of record. This is an issue that should be addressed by the subcommittee.''

There's the rub. Our current technology permits essentially free color within electronic publication, whereas printing is very expensive: $1200 USD for a single color figure with $300 USD for additional pages. Yet many results in optical engineering are best presented using color. After a lengthy and thorough discussion of the implications of this alternative, the Publications Committee voted to go forward with this initiative. The consequences of this decision will be far-reaching.

Most important, as Ms. Labes noted in her comment, the online version becomes the journal of record. This is because the electronic version is ''more complete'' than the print version. This means that to fully understand the author's results, the reader may have to download the electronic version of the paper. Now, the ''e-version'' of a paper is no longer an insubstantial copy of the original, but instead becomes more useful than the print version. To take advantage of this opportunity, authors must follow strict requirements for preparing and submitting electronic

color images. These will be provided in a future revision of our submission guidelines.

It might be thought that this decision was timed to the introduction of the Digital Library. That by changing the rules of publication of color figures this would give a boost to this new delivery system. But I will tell you that the timing of the introduction and the proposal for online color were simply the consequences of rapid technological change in publication. The effort to establish SPIE's Digital Library was begun several years ago. The same was true for academic publishing's embrace of online color, but SPIE had not done so.

So what's the big deal? With this decision, if you really want to see what's happening, you may have to subscribe to the online rather than the print version. Beyond this, there is another question: if the electronic version becomes the version of record, will there ever be another print journal established? The Publications Committee has been surveying a number of areas that might be well served by a new journal. But with this decision, what would cause SPIE to crank up a print version of a new journal?

Now that we have online color, we have entered a brave new world. And with the introduction of the Digital Library, there's more to come. I'll tell you about that next month.

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Editor