2004 in Review

It is customary to report on the state of *Optical Engineering* each February. In the past this has taken the form of comparisons between the performance of the past year to the previous year. And while such statistics will be presented, there are other aspects of this journal that deserve more than a brief mention.

Anyone who has submitted a paper since the first of May should be aware of a major change in the way in which we are handling his or her submission. With the aid of the American Institute of Physics (AIP), papers are now submitted, assigned, reviewed, and a decision rendered using Peer X-Press at http://oe.peerx-press.org/. The most important aspect of this new service is that the entire enterprise is web-based. This means that access to the manuscript review process is available from anywhere that one can summon up a web browser. In addition to the online submission, the SPIE journals staff can track all papers and the Associate Editors can handle the peer-reviews through a web browser also. Once a paper is approved the papers are transferred to the AIP for composition and digitization. All of this is hosted on a secure server. Additional information on Peer X-Press can be found at http://www.aip.org/publishing/peerxpress/index.html.

Another new aspect of this journal that was planned last year and went into effect last month is e-First or real-time publishing. If you didn't happen to read the December editorial, you may not be aware that the pages of this journal are no longer numbered sequentially. Now, each paper is assigned a unique document number derived from the issue month, its subject category, and a sequence number, which allows the online version of the paper to be cited before the issue is completed. Because this has just changed, its consequences will not be evident until next year's report. But for those of you who have opted to receive your subscription electronically, you are able to read individual papers as soon as they are published online. I encourage those members who are interested in this new feature of the journal to consider an online subscription.

Between the new developments in paper submission and publication, there is the review process that filters the input to produce an output. Two years ago I proposed a theory that the number of papers published in this journal oscillated with some yet to be determined period. Based on the current data, it would appear that the period is 4 years. Based on the publication figures in Table 1 it would appear that there are nodes in 2000, 2002, and last year with a minimum in 2001 and maximum in 2003. However, there is a tendency to find a pattern in any set of data, no matter how small. Despite this seeming regularity, the activity of this past year differs considerably from earlier years, as we shall see.

To understand the past year it is first necessary to sort out those papers that are part of special section papers from regular submissions. This is because special section papers are, in many cases, solicited through a call for papers and by individual invitations to contribute by the section editors. Because the dynamic of special sections is different and the number of papers is dependent on how many sections are published, the statistics depend strongly on the number and persuasiveness of the editors.

Compared with previous years there was a larger ratio of special section papers compared with regular papers in 2004 (Table 2). Previously the special section papers accounted for 15% or less of our published papers. Last year they accounted for a quarter of the papers. In 2004, 318 regular papers were published, compared to 448 in 2003. Yet, if you examine the number of regular papers that were received during the past four years, their number is increasing! Granted, there is a time delay between receipt

Table 1 Major statistics for 2000–2004 and percentage changes from 2003.

	2000	2001	2002	2003	2004	2004 vs 2003
Number of journal pages	3360	2924	3360	3672	3164	−13.8%
Number of technical pages	3220	2776	3210	3514	3023	−14.0%
Number of papers published	412	385	420	487	422	−13.4%

Table 2 Regular vs special section papers for 2001–2004 and percentage changes from 2003 (including OE Letters).

	2001	2002	2003	2004	2004 ratio	2004 vs 2003
Regular papers published	319	359	448	318	75.4%	−29.0%
Special papers published	66	61	39	104	24.6%	+166.7%
Regular papers received	549	643	781	912		+16.8%
Special papers received	73	44	68	121		+77.9%

Table 3 Outcomes of papers acted on in 2002–2004 (regular papers only; OE Letters not included).

	2002		2003		2004	
Accepted	445	65.35%	332	57.05%	317	48.32%
Declined/ Closed/ Transferred	232	34.07%	248	42.61%	331	50.46%
Withdrawn	4	0.58%	2	0.34%	8	1.22%
Total	681	100%	582	100%	656	100%

and publication, it is still significant that the number of regular papers published this past year is 30% less than in 2003.

The reason for the drop in the number of regular papers published in the face of rising submissions is that our acceptance rate had dropped significantly over the past three years (Table 3). From a high of 65% in 2002, the reviewers and Associate Editors declined to publish half of the papers that were reviewed this past year. This trend started last year with an 8% drop in acceptances and was continued this past year with a drop of 7%.

What is happening here? I do not, as a rule, read the reviewers' evaluations of papers unless there is an unusual issue such as plagiarism. I trust my Associate Editors, who are experienced in their field, to make the right decisions. So I have no evidence based upon the actual paper reviews. However, at the beginning of the assignment process, when I pick the appropriate Associate Editor for a newly submitted paper, I have to scan each paper to determine if it is readable and to identify the appropriate field. Based on these scans, my impression is that the drop in the acceptance rate is due to an increase in the number of poor quality submissions. While some papers are poorly written, quite a few are trivial, describing experiments with results that range from modest to inconsequential. So this significant decrease in our acceptance ratio for the past two years is an indication that the Board of Editors is maintaining its standards for publication. In support of these standards, we are in the process of creating tools to evaluate papers more carefully and to identify weak submissions.

In contrast to the regular submissions, the acceptance rate for OE Letters has remained steady for the past four years in the neighborhood of 35% (Table 4). Part of this might be attributed to the additional requirement for submission. Authors must provide an explanation as to why rapid publication is necessary. This may cause potential authors to think twice before submitting an OE Letter. Perhaps we ought to ask our regular authors: ''Please explain why the publication of this paper is important to your colleagues in optical engineering. (Do not reproduce your abstract.)'' I would note also that, in contrast to the regular papers, there has been no dramatic increase in the number of Letters received.

Table 4 OE Letters statistics for 2001–2004.

	2001	2002	2003	2004	%
Letters received	61	80	124	118	
Letters published	20	27	36	39	
Accepted	25	26	39	41	37.3%
Declined	50	48	77	69	62.7%

Table 5 Number of papers published by region of first author in 1999–2004.

Region	1999	2000	2001	2002	2003	2004
Africa	0	3	2	1	0	2
Asia	77	119	145	154	211	172
Australia	8	7	2	8	8	3
Eastern Europe	13	19	14	17	7	13
Middle East	10	18	14	14	15	14
North America	108	163	121	139	161	142
South/Central America	6	4	8	7	3	4
Western Europe	51	79	79	80	82	72

To see where our papers come from, I have included the data for the past six years in Table 5, which gives the distribution of first authors by region. During the past six years the fraction of papers from Asia has increased each year. And for the fourth year there are more papers from Asia than any other region. The relative contributions from other regions have changed little.

Two years ago I predicted, ''within two years nearly all papers will be submitted electronically.'' Last year the percentage of electronically submitted papers was 98.1% of more than a thousand submissions. In effect, the transition to electronic submission begun in 1999 with 20% of authors participating is now complete.

The journal staff at SPIE provides the support and drive that keeps this entire enterprise up and running. Manuscripts are checked for formatting and completeness and then mounted on the PXP server. The inevitable glitches are sorted out and the reviewing process is kept on track with courteous nudges from the staff. They have contributed mightily to shaping the PXP process to improve the interface for the authors, reviewers, and editors. I thank them for their efforts and good humor.

Table 6 provides an overview of the activity within the journals office for *Optical Engineering*. As has been true for years, there were major increases in every aspect of the journal: reviewers, reviews, and revisions. But one measure of journal performance, the average review time,

Table 6 Activity of the editorial office in 2004 (regular papers only, including OE Letters).

	Number	% change vs 2003
Reviewers selected	3390	+22.07
Reviews received	1434	+24.16
Revised manuscripts received	440	+9.45
Papers returned to authors for revision	565	+28.41
Communication papers received	5	+66.67
OE Letters received	118	−4.84

did suffer somewhat. This was due, almost certainly, to the introduction of PXP. With 8 months of experience under our belts, this should be reduced. We will take a look at our current procedures and at PXP to see what steps need to be taken to improve our performance.

Without the reviews that we received over the past year this journal could not be published. It is the good will and expertise of our reviewers that establish the standard for the quality of work that is published. One measure of the maintenance of quality is the increased fraction of papers that were declined this past year. Even those papers that are published in *Optical Engineering* benefit greatly from the incisive criticism that our reviewers provide. I am always amazed and pleased at the quality of the reviews and the suggestions provided to assist authors in improving their work.

I want to thank the members of the Board of Editors for their contributions toward maintaining these standards. Their names and affiliations are also listed on the masthead. I want to thank Jim Bilbro, who stepped down at the end of last year when he assumed the presidency of the Society. In his stead Daniel Malacara has taken over in optical testing and design. Jannick Rolland decided to take a sabbatical and turned over papers in optical instruments to Barry Johnson. Because of the large number of papers in image processing and the breadth of the field, Giordano Beretta and Michael Bove have taken over for Mihaela van der Schaar. I thank all of the retiring Associate Editors for their service and the new members of the Board for agreeing to serve. As I have stated in earlier annual review editorials, I feel lucky to be able to work with such a great group of people. Thank you all.

Donald C. O'Shea
Editor