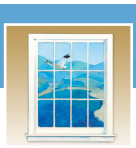
My View



by Bogdan M. (Dan) Wilamowski

Major Challenges of *IEEE Transactions on Industrial Electronics*

We are observing a significant increase of interest in the area of industrial electronics. The number of submitted manuscripts to IES conferences is doubling every two years. In 2004 we received less than 2,000 papers and in 2006 we received 4,096. During the last couple of years we created two new publications, *IEEE Transactions on Industrial Informatics and IEEE Industrial Electronics Magazine*, but this is not reducing pressure on *IEEE Transactions on Industrial Electronics (TIE)*. In 2006 we received 1,286 new manuscripts. By the middle of April 2007 we had already received 520 new manuscripts, and we expect to have about 1,600 by the end of the year. Assuming a 25% acceptance rate, these 1,600 manuscripts will result in 400 accepted papers. In 2006 we published exactly 200 papers in 1,974 pages. On 1 January 2007 we had a backlog of 330 accepted papers that were not yet published. This means that in 2007 we may need room for 730 papers (or about 6,500 pages), but our approved IEEE budget has only 2,000 pages for 2007. There is no good solution, but in order to resolve the issue a number of decisions have been made.

- IES AdCom during its November 2006 meeting allocated an additional US$170,000 to increase the limit of printed pages in 2007 to 3,500.
- IES AdCom during its March 2007 meeting approved 4,500 pages for 2008.
- We negotiated with IEEE to be able to publish our papers on IEEE *Xplore* several months ahead of the printing schedule. The drawback of this approach will be that papers in the issue will be published in random order because page numbers will be assigned as soon as IEEE receives the final manuscripts.
- The following priorities were established to eliminate backlog:
  - the highest printing priority is given to the up-to-date manuscripts with references to recently published work
  - shorter papers will receive higher priority so that more papers can be published
  - higher priority will be given to manuscripts within the main scope of *TIE*.

THE SCOPE OF *TIE* IS PRINTED ON THE JOURNAL COVER AND ON THE JOURNAL WEB PAGE.

The scope of *TIE* is printed on the journal cover and on the journal Web page (http://tie.ieee-ies.org/tie/). This description is not detailed enough and many subjects overlap with other journals. However, sometimes it is not easy to define the scope of the manuscript. One way to objectively evaluate the scope of the manuscript is to check if its references include previously published papers in *TIE*.

The "scope issue" also has another dimension. The Society is being accused of accepting manuscripts for *TIE* that were already rejected elsewhere. This is not a fair statement because *TIE* is similar to other IEEE transactions. Most of the journals are rejecting about 70% of submitted manuscripts, and this pile of already-rejected papers is growing. Some of these rejected manuscripts are being resubmitted to other journals. This is a headache not only for *TIE* but also for other journals. We have already considered sharing our database with other transactions such as *IEEE Transactions on Industry Applications or IEEE Transactions on Power Electronics*, but unfortunately we cannot do that without jeopardizing authors' rights to confidentiality. Therefore, we have to rely on the following indicators typical for these manuscripts:

- the subject is on the borderline of the *TIE* scope
- there are not enough citations to work previously published in *TIE*
- there are no recent references (within 18 months)
- the manuscript is not formatted correctly
- there are no citations to IES conferences
- authors are not members of the Industrial Electronics Society.

The indicators listed above can only be used as warning signs and, of course, they do not by themselves warrant rejection of a manuscript.

The current review criteria are as discussed in the following paragraphs.

What are the chances of the manuscript to be cited in the future? Does the manuscript clearly describe the accomplishments? How significant is the contribution, and is the described

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Digital Object Identifier 10.1109/MIE.2007.901479

1932-4529/07/$25.00©2007IEEE

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subject of current interest to the scientific community? Is the article exciting? Does the content flow well from one section to another? Is the manuscript clear and well written? (English is only part of the issue). Is the manuscript technically correct? Most of the reviewers concentrate on verifying technical correctness of the manuscript. A technically correct manuscript itself is not a good enough reason for its acceptance.

Estimate the interest of readers. Is the title adequate and is the abstract correctly written? In the age of electronic publications the IEEE Industrial Electronics Society alone receives over 5,000 conference and journal papers per year and it is not easy to be noticed. Authors have to do everything possible so their paper will be noticed and read. Therefore, very careful wording should be used in the title and in the abstract. Without a proper title and abstract a great paper will never be downloaded from IEEE *Xplore* and read. Often manuscripts receive negative reviews because reviewers are not able to understand the manuscript. This is the authors' (not reviewers') fault. If reviewers have these difficulties, then other readers will face the same problems and there will be no reason to publish the manuscript. Is the length of the manuscript adequate? The manuscript should be written on the proper level. It should be easy to understand by well-qualified professionals working in the industry. Describing well known facts should be avoided (use proper references instead).

Is the manuscript up to date and within the scope of *TIE*? Is the contribution original? Did the authors demonstrate a good recognition of the state-of-the-art in the subject area and is this visible in the introduction? Does the manuscript have references to recently published papers? We will usually expect a minimum of 20 references, primarily to journal papers. Citations of textbooks and Web pages should be used very rarely. Are there references to recently published papers in *TIE* (last 18 months)? If there is doubt about the scope of the manuscript, it is always safe to recommend resubmission of the manuscript to the journals for which the manuscript has the most references.

We are also encouraging authors and reviewers to follow the checklists posted on http://tie.ieee-ies.org/tie/.

We are now asking authors to submit manuscripts in IEEE double column format. A manuscript is easier to read if figures are included in the text in a format that is similar to the final layout. Using a proper format allows authors and reviewers to better evaluate the actual length of the manuscript. If somebody (reviewers or assistant editors) wants to work with hard copies, then only about eight pages have to be printed instead of about 30.

In order to secure an unbiased review process we are asking authors *not* to identify themselves inside of the manuscript (do not attach a bio or signed copyright form). We hope that this way the manuscript will be reviewed more objectively (see http://tie.ieee-ies.org/tie/inital_sub.html for details). The current version of Manuscript Central is not well suited for this double blind review process because it encourages authors to submit other documents as well. For an initial submission only the manuscript in IEEE double-column format with the authors' names deleted is needed. In the case of revised manuscripts we need only the manuscript and the authors' responses to reviewers' comments. All Manuscript Central demands for other documents (such as a bio or a copyright form) should be ignored. We will try to work with ScholarOne to make Manuscript Central less confusing, but we have to proceed with caution. The system is very complex and by correcting one item we can make a couple of other things worse. The *TIE* Web page (http://tie.ieee-ies.org/tie/) may be used to get additional information.

I would also like to take this opportunity to introduce a new Web page with information about all of the papers published in *TIE*: http://tie.ieee-ies.org/tie/abs/index.htm. We will try to keep this Web page as current as possible so that it can be used to search *TIE* papers by topics or by authors' names. Full papers can be also downloaded from this page if you are working from the domain with an IEEE *Xplore* subscription.

In conclusion, our main problem now is a large backlog. It will take time to reduce this backlog, but with the proposed steps we will have a chance to reduce next year's printing delay from a couple of years to a couple of months.