IAS Manuscript Workflow

Introduction

One of the action items coming out of a meeting of the IAS ScholarOne User Group at the 2009 Annual Meeting was a request for more information on manuscript workflow.

Prior to introduction of ScholarOne Manuscripts (Manuscript Central) as a tool to manage the peer review process, those involved in processing technical papers either had a thorough understanding of what they were expected to do, or else quickly learned from their technical committee colleagues how that process was supposed to flow. Peer review process was delegated to the technical committees. And as a result, the processes used by the 18 committees could be different, but because the committees functioned autonomously, the differences were generally not apparent to anyone.

ScholarOne Manuscripts was intended to be a single system that would be used by all eighteen technical committees in IAS. To achieve that objective, it was designed to have a workflow that could accommodate all of the processes that were understood to exist in the traditions of those technical committees. One of the stated objectives was that while S1M would improve **HOW** the individual committees did their reviews, it would not change **WHAT** they did in their reviews.

But that means that the implementation in S1M includes options that would not be used with every manuscript. Users inevitably look at the workflow through the filter of their personal experience, and most users have experience in only one committee. S1M exposed the difference between committees, and provisions that were included to support practices in some committee may appear strange to users in other committees.

IAS has a policy of 'presentation first'. Papers must have been presented at a technical conference before a the decision can be made to publish them in *IEEE Transactions on Industry Applications*. This policy has also been applied to *IEEE Industry Applications Magazine* papers. The heritage of this policy can be traced back to the formation of the Royal Society in the UK, but IAS is today the only IEEE society to retain this tradition.

IAS Process Traditions

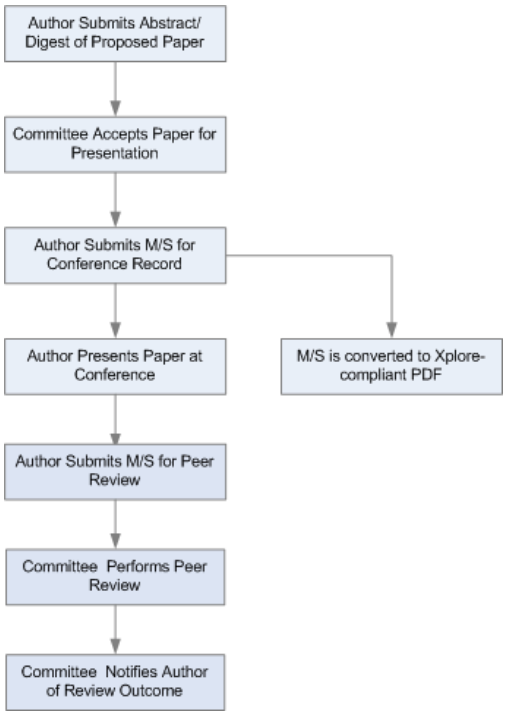
There are fundamentally two major traditions followed by the 18 technical committees of IAS. These traditions differ with respect to how three issues are addressed:

1. What is the basis for making the decision to accept a paper for presentation at a future conference?
2. Does the committee review every paper presented at IAS-sponsored conferences, or does the Committee allow the author to choose whether his paper will be reviewed for publication?
3. When does the committee commence the peer review process to determine if a paper will be published?

For the sake of clarity, these traditions will be illustrated on the next page with flow charts. There are other, less critical differences in the traditions of the committees, typically having more to do with the details of how papers are accepted for conference presentation.

It is important to clearly state that no one tradition is 'better' than any other – they are simply different. And there is certainly no intention to force any committee to adopt a process that is different from its preferred traditions.

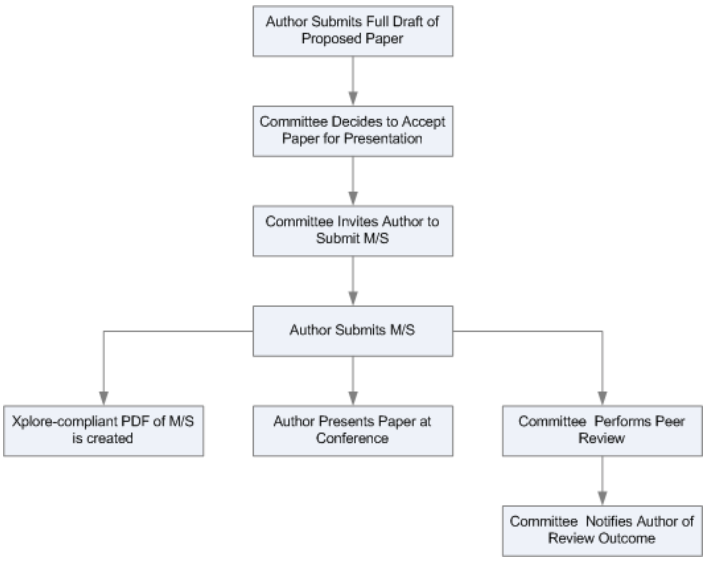
For the sake of clarity, it should be understood that the term "peer review" means only the review to determine if the paper will be published in Transactions or the Magazine. "Peer review" in this context is separate from the review to determine if a proposed paper will be accepted for presentation at a conference.



This tradition might be called the **"Post-Presentation Tradition"** because the peer review takes place after the conference. Key elements of the tradition include:

- The decision to accept a paper for conference presentation is based on an evaluation of a draft or abstract.
- The author has the opportunity to revise the manuscript after the presentation
- The author has the option to decline peer review

<u>Committees using post-presentation submission</u>
Electrostatic Processes Committee
Industrial Automation and Control Committee
Industrial Lighting and Display Committee
Electric Machines Committee
Industrial Drives Committee
Industrial Power Converter Committee
Power Electronics Devices & Components Committee
Metals Industry Committee
Appliance Industry Committee



This tradition might be called the **"Pre-Presentation Tradition"** because the peer review often commences before the conference takes place. Key elements of the tradition include:

- The decision to accept a paper for conference presentation is based on an evaluation of a complete draft of the paper; the author may be required to revise that draft before it is accepted for presentation.
- The peer review for publication takes place in the weeks leading up to the conference presentation. The manuscript that is reviewed is the manuscript that appears in the conference record.
- The author does not have the opportunity to decline peer review, but the author still retains the right to decline an invitation to publish the paper.

<u>Committees using pre-presentation submission</u>
Pulp & Paper Committee
Petroleum & Chemical Committee
Cement Industry Committee
Mining Industry Committee
Rural Electric Power Committee
Power Systems Engineering Committee
Power Systems Protection Committee
Energy Systems Committee
Codes & Standards Committee

Both processes include a step in which the manuscript is converted to an "Xplore-compliant" pdf. This requirement must be satisfied by the conference organizers so that the conference record can be archived in IEEE Xplore. In many instances in the traditional workflow, this conversion was performed by volunteers using a tool provided by IEEE (pdf-Xpress). For the Annual Meeting and for the Cement Industry Conference, IEEE Conference Services has traditionally been hired to create the conference record and performed this conversion as one of their contract services.

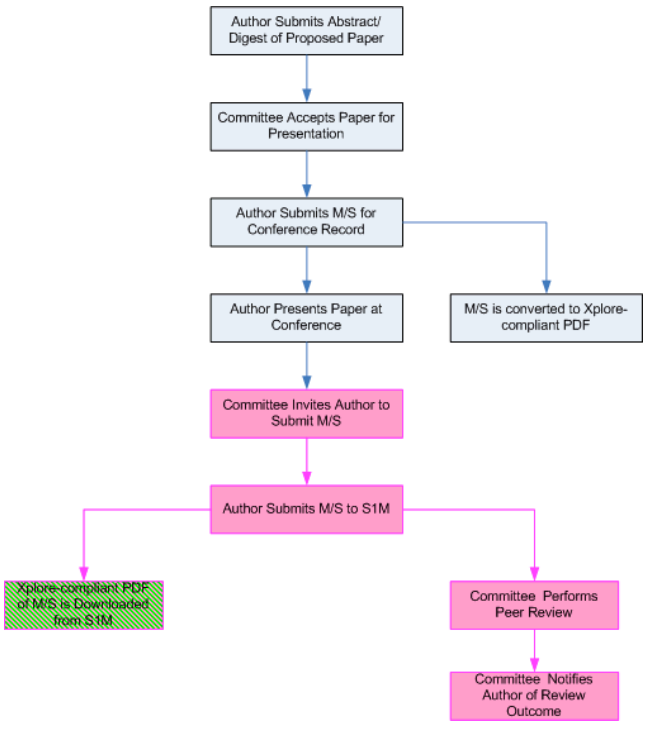
ScholarOne Manuscripts Workflow

ScholarOne Manuscripts is a widely-used commercial tool that was designed to include a variety of functional options. None of the standard S1M configurations matched the IAS workflow exactly, but it was found that changing the names of some of the roles in a S1M workflow made it possible to seamlessly map the IAS traditions to one of the standard workflow options in the product. The downside of that process is that language of some of the standard S1M literature doesn't appear to apply to IAS. To address that problem, detailed instructions were prepared and included on each of the web pages that users see, and key IAS users have received periodic FAQ e-mails that have substituted for an actual 'user manual'.

ScholarOne Manuscripts has one purpose only – to manage the process of peer review leading to the decision of whether a paper would be published in Transactions or the Magazine. There is no provision for using S1M to support any of the process steps leading to the decision of whether a proposed paper would be presented at a future technical conference. That is a critically important point because it defines the portion of the overall process workflow that can be automated in S1M.

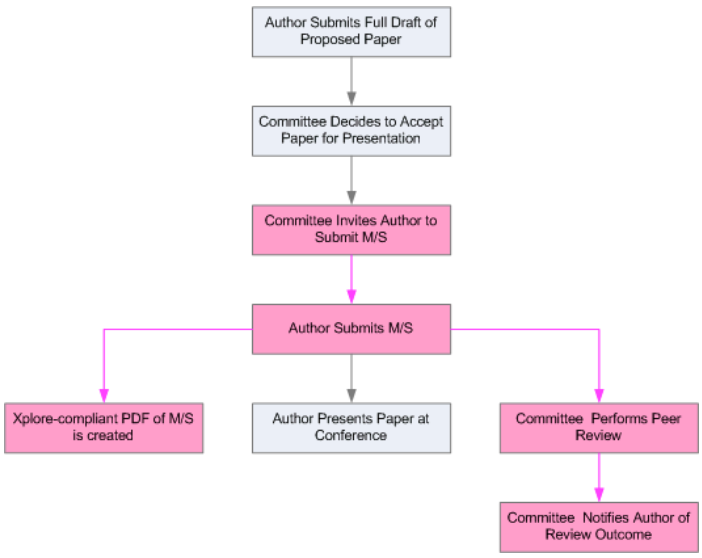
The flowcharts below depict the two IAS processes with the implementation of ScholarOne Manuscripts. The portion of the process that is automated using S1M is shown in magenta. Note that the S1M process is the same in both traditions, but one of the outputs from the S1M process (shaded in green) is not utilized with Post-Presentation submissions.

Post-Presentation Submission using S1M



S1M Starting point – the point <u>after the conference</u> presentation where the author indicates a desire to have his paper reviewed for possible publication.

Pre-Presentation Submission using S1M



S1M Starting point – the point <u>prior to the conference</u> when the author is instructed to submit the final, conference-ready manuscript for the conference record.

While there is a distinction between "post presentation" and "pre-presentation" submissions, there is actually only one workflow in S1M. That workflow has an optional output (the "Xplore-compliant" pdf) that is not utilized in the 'post-presentation' sequence.

The IAS implementation of S1M employs an 'invitation' workflow. This workflow accomplishes two important things:

- The person who creates the submission invitation must identify the committee that will be responsible for reviewing the paper. This step allows for a preliminary assessment that the paper is within the scope of the reviewing committee. It also assigns responsibility for review of the paper to one committee, and therefore also assigns Paper Review Chair responsibility to one person (the designated TCPRC for the chosen committee).
- Authors are not allowed to submit papers 'over the transom'. Someone in IAS must look at the paper to verify that it is within the scope of the Society and the sponsoring technical committee. This step also reinforces the 'presentation first' policy by eliminating many instances in which the author has no intention of actually presenting the paper at a conference.

Cosponsored Conferences

One of the objections to the IAS 'presentation first' tradition is that most IAS-sponsored conference take place in North America. IEEE, and IAS, are global organizations, and forcing authors to actually present their papers at a conference in North America has the practical effect of discouraging authors from outside North America. To address this concern, IAS expanded the definition of 'conference presentation' to include presentation at conferences that enter into a 'cosponsorship' agreement with our Society. Most 'cosponsored' conferences take place outside the US, so the practical effect of cosponsorship has been to create opportunities for authors outside North America to have their work published in IAS publications.

Over time, the notion of 'cosponsorship' has become more complex as variations on the basic concept have evolved to address special needs. IEEE requires that IAS sign a formal "memorandum of understanding" defining the agreements associated with each of these conferences. A full list of conferences appears on the IAS web site. In general, there are two basic categories of cosponsored conferences:

Technical Cosponsorships

- Conference organized by non-IEEE entities
- Usually, but not always, outside North America
- IAS has no financial involvement
- IAS is obligated to review only those papers selected for review by the conference organizers
- Number of papers to be reviewed is limited - usually no more than 20% of conference total
- Conference organizers forward a list of paper to the IAS Meetings Department. After confirming that the MOU terms have been met, the Meetings Department forwards the list to the Transactions EiC who then assigns responsibility for specific papers to individual committees
- Examples: IEMDC, SDEMPED, ESA, PEDS, etc.

Full Cosponsorships

- Conference organized in collaboration with other IEEE entities
- Location can be anywhere
- IAS is typically a financial partner in the conference
- IAS is obligated to review any paper presented at the conference
- No limitation on the number of papers that IAS must review
- Author usually contacts IAS technical committee directly to initiate review
- Examples: APEC, ECCE, ESW, PCIC-Europe, etc.

IAS also has a cooperation agreement with the Institution of Electrical Engineers of Japan (IEE-J) that allows for review of papers under some circumstances. Questions about specific conferences should be addressed to the IAS Meetings Department who are responsible for those MOUs.

Regardless of whether a cosponsored conference is a limited 'technical cosponsorship' or a full cosponsorship, all papers from cosponsored conferences are processed on a Post-Presentation basis in ScholarOne Manuscripts.

As a practical matter, a few committees have seen the vast majority of papers that have come to IAS for review from cosponsored conferences. Coincidentally, those committees also routinely use 'post-conference' submissions, so papers from cosponsored conferences fit more naturally into their traditions. But some committees haven't seen any papers from cosponsored conferences. Unfortunately, some of those committees traditionally follow the 'pre-conference' routine, so if a special case paper does come along, it may be confusing how to proceed.

The first ECCE took place in 2009. In his President's Column in the March 2010 issue of IAS Industry Applications Magazine, Tom Nondahl reports that the organizers of ECCE have taken a retrospective look at their first experience, and one of the issues they identified for future improvement was the process for dealing with papers. Papers submitted to ECCE 2009 were evaluated by committees formed specifically to organize the technical program at this conference. While this approach resulted in a good technical program, there was no linkage between papers and any of the existing technical committees of IAS (or PELS); as a consequence, authors were left with an undefined process for initiating peer review of their papers. ECCE organizers intend to involve the technical committees in the process of organizing the technical sessions for future conferences specifically to address this concern.

Stub Creation

The process of creating an invitation to an author to submit a manuscript is called "stub creation". In the jargon of database software, a 'stub' is an incomplete database record. Creating a stub is nothing more than creating a data base record for the manuscript that contains information that the author is unlikely to be able to correctly supply. Getting past the issue of stub creation should address many of the concerns about workflow in S1M.

To an experienced user, the time required to create a stub (create an invitation) should be about two minutes or less. The stub creation process involves two steps (on two web pages) – creation of the basic database record, and issuing an invitation to the author – and there are detailed instructions at the top of both web pages to lead the Admin through this process. The key to efficiently creating stubs is to have the following information available on each paper prior to starting the process:

1. The title of the paper to be invited.
2. The name and e-mail address of the corresponding author
3. The identity of the IAS committee that will be responsible for reviewing the paper.
4. The date (the year only) of the conference at which it was (or will be) presented.
5. The name of the conference at which it was (or will be) presented.
6. The deadline by which the author is expected to complete the submission in S1M.
7. A clear understanding of whether the invitation is to be on a post-presentation or pre-presentation basis. Items 3, 4 and 5 on this list usually are good indicators of whether the invitation is pre- or post-presentation.

It is necessary to identify the conference as part of stub creation. Papers invited on a 'pre-presentation' basis are invited to conferences that are organized and sponsored by IAS, and the ISBN code that IEEE has assigned to the respective conference record must be embedded in the footer in the manuscript pdf so that it can subsequently be archived in IEEE Xplore. Therefore, when the invitations for these papers are created, the Admin is required to select three items from pull-down menus:

- The year of the conference
- The name of the IAS-sponsored conference
- The 13-digit conference record ISBN code

These menus are updated annually so that it is not necessary for the Admin to actually know the ISBN code – the selection is made based on the name and location of the IAS-sponsored conference.

For papers that are invited on a post-conference basis, the Admin is required to submit only one piece of information – the year and name of the conference. This information must be keyed into a blank in the submission form. Note that it is important that this field be completed even though the information is not actually used in the process – the editors of Transactions and the Magazine cannot accept recommendations for publication that do not identify the conference at which the paper was presented.

The submission deadline has a clear meaning for papers invited on a pre-presentation basis – it is the deadline established by the organizers of the future IAS-sponsored conference for submission of manuscripts for the conference record. That deadline is not as clearly defined for post-presentation submission and can be any date that is convenient to the Admin and committee hosting the paper. However, it is critically important that a deadline be stated for every post-presentation submission – omission of a deadline can create problems further into the process.

Review Workflow

The review workflow in S1M is fundamentally no difference from the legacy review workflow historically used by each of the IAS committees – the manuscript is assigned to reviewers who read the paper, record their opinions of the paper using a multiple-choice questionnaire, and then make a specific recommendation for disposition of the paper. However, with S1M, everything is done on-line and much of the correspondence is automated.

There are a couple of points that should be clarified. First, the workflow in S1M involves two distinct roles – the Technical Committee Papers Review Chair (TCPRC) and an Associate Editor (AE). The TCPRC is normally the person designated in the organizational structure of the Committee as responsible for reviewing technical papers – this person may be called the Papers Review Chair, or perhaps the Vice-Chair, and is the person who routinely reports to the Committee on the status of paper reviews. The AE is the person who interfaces directly with reviewers and manages the details of the review.

Some IAS technical committees have a heavy papers workload – more than 100 papers per year – while others may see only 15-20 papers per cycle. Committees that process many papers find it helpful to have multiple AEs, and for them, it is necessary that the process be shared between the TCPRC and multiple AEs. Other committees can get by with the same person acting as both TCPRC and AE.

Some committees traditionally require that more than two reviewers examine each paper. Some IAS committees have a tradition of having a standing review committee that examines all papers. All of these minor variations in process are accommodated in S1M.

In either case, IEEE requires that there be a minimum of two (2) independent reviewers for each paper, and specifically forbids the AE who recommends disposition of the paper from being one of those two reviewers

The first step required of the TCPRC is to complete a checklist. The checklist a formality to assure that the TCPRC has looked over the author's submission to verify that it is complete – there is no actual logic associated with this checklist.

One of the items in the checklist is that the author has completed the mandatory IEEE copyright transfer. There are currently issues in the handshaking between S1M and IEEE's electronic copyright application; we have a temporary 'workaround' to address this problem. Papers should not be approved for publication absent the copyright transfer, but the lack of a copyright transfer notation in the manuscript record should not delay the start of review.

There are four decision options available to reviewers, AEs and TCPRCs:

- Accept for publication in Transactions
- Accept for publication in the Magazine
- Revise and resubmit the manuscript
- Reject the manuscript

Prior to introduction of S1M in IAS, the practice was that the committee forwarded its recommendations to the Operating Department Vice-Chair, Papers who communicated with the author (although some committees chose to handle their own author communication, bypassing the Department Vice-Chair). That practice has now been abandoned, and the Committee Papers Review Chair makes the final decision on each paper. The role of the Department Vice-Chair has been redefined to focus on quality control of the review processes in the committees of their respective departments.

Comments entered into the review form by the reviewers will automatically be captured and appended to the decision letter. If any of the reviewers submit a document in addition to the review form, the TCPRC must manually attach that document to the decision letter; there is a block in the lower left corner of the popup e-mail window to select attachments.

There is no process for an author to 'appeal' a rejection decision. The TCPRC should take care to provide enough rationale for the decision that the author understands that his paper was given due consideration.

Authors receiving a revise and resubmit decision have 30 days to submit a revision. When the revision is submitted, it will retain the same tracking ID as the original submission but with a revision suffix (eg, R1), and S1M will reassign the same review staff (AE and reviewers). However, the TCPRC may make an 'immediate decision' on the paper if he believes that the revised manuscript meets the stated expectations of the reviewers, thereby bypassing the AE and reviewers.

Even though a 'revise and resubmit' decision does not promise that the manuscript will be published if the author makes the suggested changes, authors tend to read that interpretation into the decision.

Authors of accepted papers will receive instructions to submit the 'final files' required to actually publish the paper to S1M. The Editors of Transactions and the Magazine periodically initiate a batch transfer of those materials to the IEEE publications operation. It is no longer necessary for the author to send any files or hard copy to the Editor – everything is now handled electronically.