Collaborating with the Scientific Community
Improving the Knowledge Continuum at NIST

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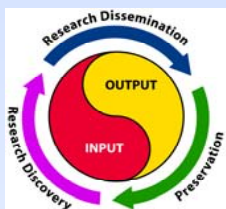
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Background

As part of the National Institute of Standards and Technology (NIST), the Information Services Division (ISD) is responsible for creating, maintaining, organizing and disseminating information to support the scientific and technical mission of NIST.

ISD provides professional scientific and technical research assistance to NIST staff throughout their research and publishing cycles through the Research Library, the Electronic Information and Publications Group (EIPG), and the Museum and History Program.

EIPG provides knowledge management and publishing services to NIST, including technical production and publishing of the *Journal of Research of NIST* and technical and administrative support to the agency editorial review board in Gaithersburg, MD.

The Knowledge Continuum illustrates the various stages and elements involved in the research and publishing cycle. It provides the overarching philosophy that drives ISD's products and services.

This poster presents two projects EIPG is working on to enhance collaborations with NIST researchers in support of their scientific publishing activities.

Publishing at NIST

Reporting on the results of the NIST laboratory research activities has been an important part of the agency's mission since its founding in 1901. NIST researchers produce approximately 2,200 manuscripts each year, targeted for commercial and society publishers of journals and technical books; scientific/technical conference proceedings; and agency publications.

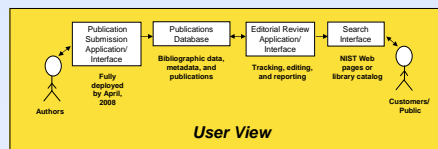## Technological Infrastructure to Support Internal Editorial Review Process

NIST policy requires editorial review and approval of all technical manuscripts and "official writing" prior to submission for publication. The policy applies to manuscripts slated for an agency publication or for an external publication.

This requirement includes review and approval within the originating operating unit or laboratory as well as review by the agency editorial review boards.[1]

In partnership with other units within NIST, EIPG has been helping build the technological infrastructure that supports the internal editorial review process and access to information about NIST-authored publications. Activities include:

- working closely with the system developers to ensure that the editorial review process and workflow are implemented properly
- coordinating the development of authority files for controlling journal titles, conference proceeding names, and author affiliation
- training content contributors and system users to submit, edit, and track manuscript submissions, as well as understand the workflow and specialized tasks based on user roles

The following diagram shows how the author and searcher use the system.

User View

The author submits the manuscript details, including assigning taxonomy keywords. The customer/public searches for NIST publications through the NIST Web pages, NIST Research Library online catalog, or Google.

[1] The Washington Editorial Review Board (WERB) in Gaithersburg and the Boulder Editorial Review Board (BERB) in Boulder are official NIST standing administrative committees responsible to the NIST Director. There are 24 members of WERB and 8 members of BERB, representing the NIST laboratories at each location.
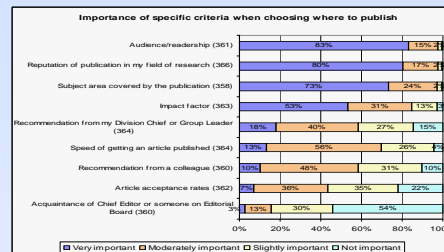
Publishing Survey

EIPG conducted a survey to assess needs related to scholarly communication, the dissemination of NIST research results, and measuring the impact of NIST-authored publications. The results of the survey will allow EIPG to improve its collaborative efforts with NIST authors.
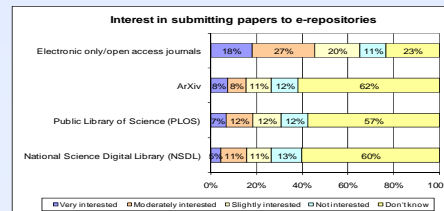
The survey questions were designed to gauge:

- criteria for choosing where to publish
- barriers experienced in the process of publishing
- interest in open access and e-only journals for publications
- awareness of ISD publishing and analysis services

What determines where scientists publish their research results? Top criteria for choosing where to publish are: potential impact on readership, reputation of the publishing venue, and subject areas covered by a publication.

Are NIST researchers interested in submitting papers to e-repositories? Survey respondents had little awareness of e-repositories, but 65% expressed interest in submitting papers to new venues.

Next Steps

The following two charts list the key activities planned for continued collaboration with the NIST scientific community.

Technological Infrastructure

- Develop plan for system enhancements to further streamline editorial review workflow processes
- Develop plan for long-term content/data maintenance
- Collaborate with the editorial review boards to educate NIST scientists on the requirements and value of the internal review process
- Collaborate on development and use of taxonomy to tag publications and Web pages
- Use ISD newsletter blog to discuss system improvements
- Develop FAQs for users
- Continue to train users and help them use the system

Publishing Survey

- Analyze results by correlating responses to demographic questions with responses to the six content questions
- Review and synthesize numerous comments received in open-ended questions
- Share observations and results with key customer groups, including *Journal of Research* and NIST editorial review boards
- Update NIST Publishing Guide
- Conduct focus group sessions to follow up on specific issues and concerns revealed by survey
- Use ISD newsletter blog to initiate discussions about publishing in open access or e-only journals
- Collaborate with NIST scientists to help them learn more about publishing trends and ways EIPG can assist them with their publishing needs