

Developing an Enterprise-wide Knowledge Management System

Barbara Silcox

Jo Ann Remshard

Internet Librarian 2004

November 16, 2004

Context

Organizational Structure:

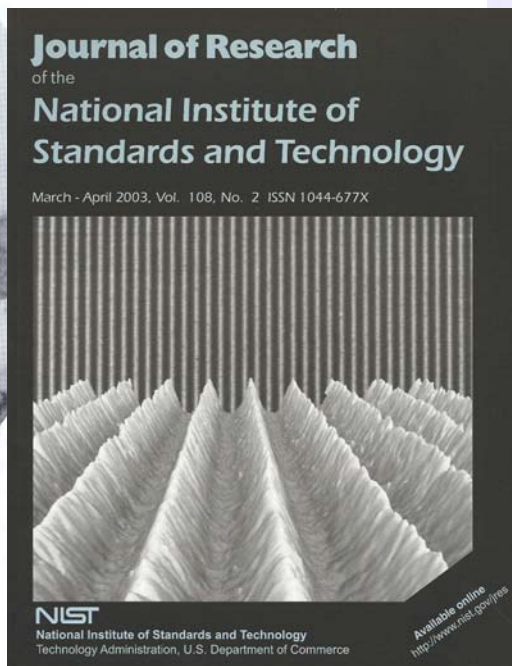
- NIST Research Library
- Electronic Information & Publications Group
- Museum and History Program

Strategic Direction (aligned with NIST):

Develop mechanisms to improve and enhance the access and exchange of NIST data & information, and improve knowledge dissemination to support research, innovation, and discovery.

Project Vision

To capture, organize, and make available
NIST's knowledge assets in the form of
documents and digital objects.



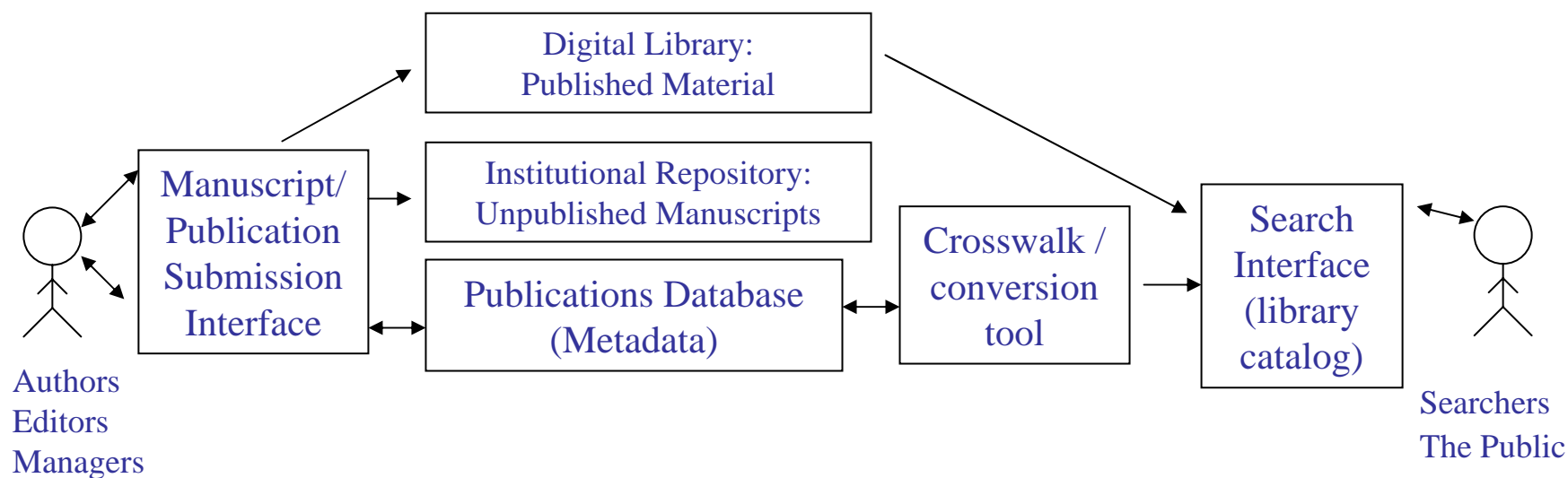
Objectives & Guiding Principles

- To develop & implement an easy-to-use system to support the editorial review process and NIST's publishing activities
- To make it easy to locate & retrieve information about NIST's knowledge output
- To make use of systems & applications already in place

Translating Vision into Action

- **Defined skill sets needed; emphasized professional growth**
- **Gathered customer requirements**
- **Examined the applications in use within some of the labs**
- **Segmented project into phases & components**
- **Wrote business requirements**

NIKE Model Overview



Submission System

- Role-based authorization by authentication
- User entry and update of metadata
- Authority control for author names and serial names
- Manuscript uploaded to file server
- Manuscript tracking
- Search and retrieval
- Generation of bibliographic and statistical reports
- Crosswalk of metadata from database to online catalog
- Published document to digital library

Submission System (con't)

- Building internally versus purchasing an Application Services Provider (ASP)

Manuscript Submission and Edit Form - NIST Integrated Knowledge EditorialNet (NIKE) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

[skip link](#)

Information Services Division
NIKE NIST Integrated Knowledge EditorialNet
NIST
 National Institute of Standards and Technology

Search ERB Control # [FAQ](#) [Contact Us](#) [User Main](#) [Logout](#) [NIKE Home](#)

Submit/(Edit) Manuscript (Record) (GBJ2004-0000)

Division Number

(This screen will display for initial submission and for editing of a saved or submitted form. System date is saved and will display on confirmation pages, review and approval, and noting forms, reports. User option "Update to Publish" will display a page asking for the additional required info not requested on this form. OR BRING UP THIS FORM WITH EDITABLE INFO AND NEW REQUIRED FIELDS. A link to the corresponding manuscript record for editing will be displayed at the top of the Update to Publish form. Also, from the Summary of Manuscript Record (summary_record.htm) there will be a link to Edit Manuscript Record.)

1. Author Point of Contact

Author point of contact (Included are all directory entries) (Begin entering last name)
 firstname.lastname@nist.gov
 Technology Services (200)
 (301) 975-0000

2. Author/Editor

☐ Check here if publication requires designation "Editor"

Author 1: (Begin entering last name)

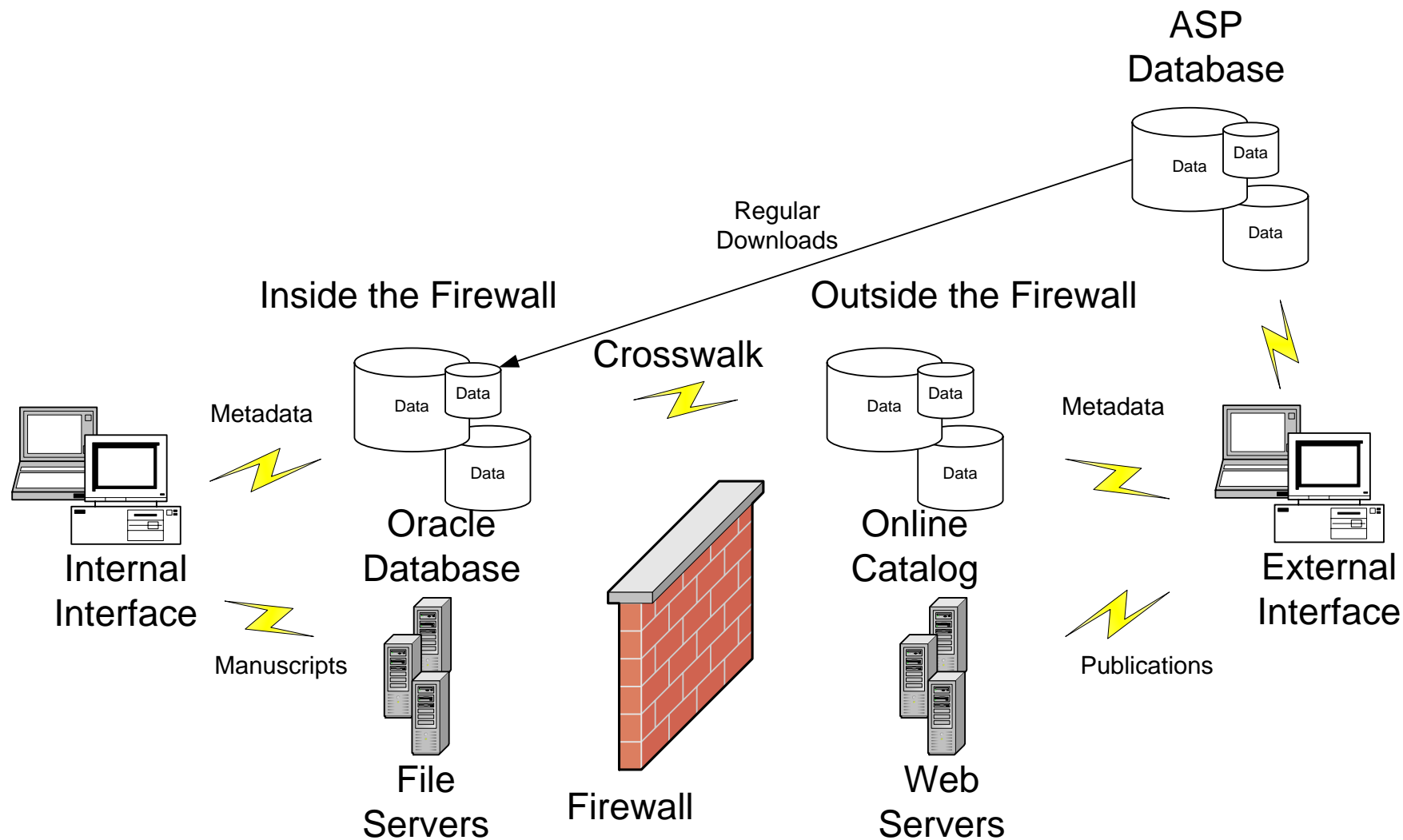
☐ **Non-NIST Author not listed**
 (When button activated, data fields, below, appear for completion)

Name: E-mail:
 Division: Phone:
 Organization:

Questions/feedback: nike@nist.gov
 Created: Aug 00, 2003
 Last modified

Local intranet

Database



User Interface



The screenshot shows a web browser window displaying the NIKE NIST Integrated Knowledge EditorialNet website. The browser's address bar shows a Google search. The website has a blue header with the NIKE logo and NIST National Institute of Standards and Technology text. The main content area is divided into three columns. The left column contains a sidebar with links for Manuscript Submission, NIST Publications, NIST Resources, NIST Digital Collections, Scientific Publishing, and Inside NIST. The middle column features a large graphic of a computer monitor with the NIKE logo, followed by the title 'FIRST STEPS TOWARDS A NEW ENTERPRISE-WIDE KNOWLEDGE MANAGEMENT SYSTEM' and sections for Manuscript Submission, Memo to WERB reader, Instructions for submitting manuscripts, NIKE Next Steps, and How do I... The right column contains a photo of Paula Deutsch and Nancy Allmang, a section titled 'ISD Presents NIKE at Library Conference', and a note about PDF documents.

Information Services Division
NIKE NIST Integrated Knowledge EditorialNet

NIST
National Institute of
Standards and Technology

Manuscript Submission

- NIST 114, Review & Approval form 
- NIST 266, Notify of Publication form 
- [NIST Publishing Guide](#)
- [WERB/BERB](#)

NIST Publications

- [Search NIST Pubs](#)
- [Journal of Research](#)
- [JPCRD](#)
- [Technicalalendar](#)

NIST Resources

- [NIST Virtual Library](#)
- [NIST Data Gateway](#)
- [Physical Measurements](#)
- [Standards & Regulations](#)
- [NIST Archives](#)
- [NIST Museum](#)

NIST Digital Collections

- [BFRL Publications](#)
- [ISD \(MEL\) Publications](#)
- [ITL Publications](#)
- [Materials Digital Library](#)
- [Math Reference Data](#)

Scientific Publishing

- [PLOS](#)

Inside NIST

- [Staff Directory](#)
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- [Information Services Division](#)

NIKE
NIST Integrated
Knowledge EditorialNet

FIRST STEPS TOWARDS A NEW ENTERPRISE-WIDE KNOWLEDGE MANAGEMENT SYSTEM

Manuscript Submission

Submit your manuscript to the Washington Editorial Review Board (WERB) electronically using the NIST 114 Manuscript Review and Approval form  
(Please note: A manuscript submitted on a Friday may not receive a response until Tuesday.)

[Memo to WERB reader](#) regarding review of manuscript

Notify WERB that your paper has been published using the NIST 266 form  

[Instructions for submitting manuscripts](#)

NIKE Next Steps

NIKE, a soon-to-be released knowledge management system, will streamline NIST's complex manuscript submission workflow. Eventually a digital library of NIST publications will be available.

-  [What is NIKE?](#)
-  [NIKE workflow and processes](#), graphical display
- Read [more about NIKE](#) in Online Magazine

How do I...

ISD Presents NIKE at Library Conference

Members of ISD's NIKE development team, Paula Deutsch and Nancy Allmang, presented the NIST Integrated Knowledge EditorialNet as a case study in developing digital collections.

The title of their talk, *Taming A Wild Workflow and Domesticating our Digital Data*, addressed the reasons for the new system and challenges and importance of delivering a better, stable, and more comprehensive system to ISD customers.

View their [NIKE PowerPoint presentation here](#).

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Map Example

245 TITLE STATEMENT (PUBLISHED TITLE)

24500\$aTitle of document : \$bsubtitle
of document /\$c[J. R. Smith, T. R.
Roosevelt. Edited by: K. P. Smith].

Must end in a period.

Indicators/ Subfields

Source

Note

Punctuation notes

IND1

constant:0

IND2

[count of the number of
non-filing characters]

See document Marc 21_Initial Articles.doc or
[http://www.loc.gov/marc/bibliographic/bdapp-
e.html](http://www.loc.gov/marc/bibliographic/bdapp-e.html). Open source software available for
this if language is known. Alternative is to
only script for English language articles), and
flag any other languages to go to cataloger.

\$a

db: Title

If followed by subfield b, must
end in space and colon; If
followed by subfield c, must
end in space /

\$b

db: subtitle (portion
following ":",")

If followed by \$c, must end in
space /

\$c

db: authors names: first
last, first last. Editor
name(s): first last, first
last.

If first name is initials, format as initial-period-
space-initial-period space-lastname

Begin with "[". End in "]."
Precede editors with "Edited
by:"

Crosswalk (con't)

Sample Record

Demonstration of a Low-Noise Near-Infrared Photon Counter with Multiphoton Discrimination / [D A Hite, S E Russek, D P Pappas]				
Fixed Fields				
Rec_Type :a	Bib_Lvl :a	Enc_Lvl :2	Desc :u	
TypeCtrl :	Entrd :040330	Dat_Tp :e	Date1 :2003	
Date2 :07	Ctry :xx	Lang :eng	Mod_Rec :	
Source :d	Illus :	Audience :	Repr :s	
Cont :	GovtPub :u	ConfPub :0	Festschr :0	
Indx :0	Fiction :0	Biog :		
TypeCode :m	Frequ :u	Regulr :	Audience :	
FileType :d	GovtPub :u			
007 c br				
035 (MdgBNI) B2004-0869				
040 MdgBNI C MDGBNI				
072 7 46 2ntissc				
099 NIKE B2004-0869				
245 00 Demonstration of a Low-Noise Near-Infrared Photon Counter with Multiphoton Discrimination / [D A Hite, S E Russek, D P Pappas].				
260 [c]July 2003.				
340 Print				
533 Electronic reproduction. bGaithersburg, Md. cNational Institute of Standards and Technology, Information Services Division, d2004. e1 Adobe Acrobat file. nNIKE Project. Sponsored by NIST Electromagnetic Technology Division.				
536 Physics. 2ntissc				
650 7 Journal article. 2local				
700 1 Hite, D. A. u(NIST. Electronics and Electrical Engineering Laboratory. Magnetic Technology Division).				
700 1 Russek, S. E. u(NIST. Electronics and Electrical Engineering Laboratory. Electromagnetic Technology Division).				
700 1 Pappas, D. P. u(NIST. Electronics and Electrical Engineering Laboratory. Electromagnetic Technology Division).				
710 2 National Institute of Standards and Technology. b Electronics and Electrical Engineering Laboratory. bElectromagnetic Technology Division, esponsoring organization ?UNAUTHORIZED				
773 0 tApplied Physics Letters. x 0003-6951 gvol. 83, no. 4 (July 2003), p. 791 q83:4<791				
856 41 uhttp://nike.nist.gov/nistpubs/nistnonseries/2003/B2004-0869.pdf				

MARC

Full View From Catalog	record 1 of 1 for search title "demonstration of a low-noise"		
	NIKE B2004-0869		
	Demonstration of a Low-Noise Near-Infrared Photon Counter with Multiphoton Discrimination / [D A Hite, S E Russek, D P Pappas]		
	Hite, D. A. (NIST. Electronics and Electrical Engineering Laboratory. Magnetic Technology Division).		
	HOLDINGS: 1 copy available at NIST in WEBSITE 1 copy total in all locations		
	Local call number NIKE B2004-0869		
	Title Demonstration of a Low-Noise Near-Infrared Photon Counter with Multiphoton Discrimination / [D A Hite, S E Russek, D P Pappas].		
	In Host Item Applied Physics Letters. Vol. 83, no. 4 (July 2003), p.791		
	Publication info July 2003.		
	Medium Print		
Reproduction note Electronic reproduction. Gaithersburg, Md. National Institute of Standards and Technology, Information Services Division, 2004. 1 Adobe Acrobat file. NIKE Project.			
Funding information Sponsored by NIST Electromagnetic Technology Division.			
Also held by NIST			
Subject Physics.			
Genre/Form Term Journal article.			
Personal author Hite, D. A. (NIST. Electronics and Electrical Engineering Laboratory. Magnetic Technology Division).			
Personal author Russek, S. E. (NIST. Electronics and Electrical Engineering Laboratory. Electromagnetic Technology Division).			
Personal author Pappas, D. P. (NIST. Electronics and Electrical Engineering Laboratory. Electromagnetic Technology Division).			
Corporate author National Institute of Standards and Technology. Electronics and Electrical Engineering Laboratory. Electromagnetic Technology Division, sponsoring organization			
Electronic access http://nike.nist.gov/nistpubs/nistnonseries/2003/B2004-0869.pdf			
NIST Research Library			
Copies Material Location			
NIKE B2004-0869 1 ELECTRONIC Website			


OPAC

Digital Library and Institutional Repository

- **Digital Library Contents:**
 - NIST Series Publications
 - Journal articles
 - Conference papers
 - Photographs
 - Artifacts
- **Institutional Repository Contents:**
 - NIST Archival Materials
 - Unpublished manuscripts

Search Component

- Online catalog - Sirsi



NIST Research Library Catalog
Your Electronic Library on the Web

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[Knowledge Portal](#)
[Library Info](#)

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[Exit](#)

Search For ☒ Keyword ☐ Browse

words or phrase [Search](#)

[Or, Switch to Power Search](#) library:

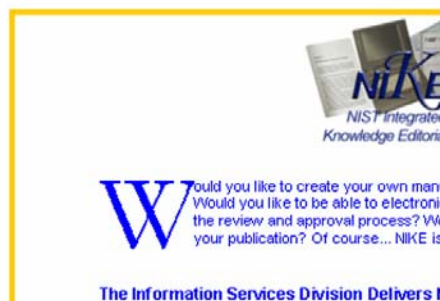


Your Electronic Library on the Web
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[I Need Material](#)
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[Library Info](#)

Dealing with Change

- Usability Testing
- Marketing
- Training




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Attention NIST Authors

Will you be writing and submitting manuscripts for publication in scholarly journals, conference proceedings, books, technical report? Are you planning on publishing in NIST Journal of Research or in a NIST technical publications series? Then, let the Information Services Division (ISD) help you.

Important

All "official" writing on results of NIST technical programs must have editorial review and approval by the NIST Washington Editorial Review Board (WERB).

Find Out

- How to submit your manuscript to WERB for review.
- How to notify ISD that your manuscript has been published.
- Learn more about the NIST Integrated Knowledge EditorialNet (NIKE)

We are happy to supply you with the information you need at a division or group meeting. Or, you can attend one of ISD's regularly scheduled sessions.

Contact ISD to get the information you need to submit a manuscript into the editorial review and approval process.

For more information, please contact Jo Ann Remshard x8054 or e-mail joann.remshard@nist.gov.

Impacts

Professional Growth:

- Talents emerged – e.g., leadership, project management, analysis
- Staff is writing, publishing, and presenting

Measures:

- Use
- Customer satisfaction
- Effectiveness/value

Next Steps

- **Migration of legacy data to new database.**
- **Continue exploring options for building digital library.**
- **Continue to acquire needed skill sets through training and recruitment.**
- **Expand digital library to include museum objects.**
- **Assessment**

Listening

- **Knowledge speaks, but wisdom listens.**
--Jimi Hendrix