# Memorandum of Understanding between NSDL Core Integration and Pathways Projects
*10/18/2004*

> "The success of the NSDL program will depend, to a large extent, on the development of a collective sense of identity and common cause by all projects"
>
> *- from the 2004 NSF-NSDL Solicitation*

## 1.       Introduction

This Memorandum of Understanding (MOU) between NSDL Core Integration (CI) and the FY04 Pathways Projects seeks to clarify the administrative and development activities needed to support a successful partnership in building the National Science Digital Library (NSDL). The CI group has been charged by NSF to work with new and existing projects to develop technical standards, infrastructure, and organizational processes for integrating collections and services into NSDL. Pathways Projects have been charged to provide a stewardship role for the educational content and services needed by a broad community of learners. The Pathways concept is a critical and central strategy to help build NSDL in a way that is useful for defined communities of users.

In order to move from a group of collected projects to a coherent NSDL organization, this collaboration between the Pathways Projects and CI will provide a leadership role in building a more comprehensive, recognized and trusted on-line science, technology, engineering and mathematics (STEM) library to serve learners at all levels of education. Through this collaboration, NSDL and NSF will gain a better understanding of technical and administrative frameworks required to sustain a long term NSDL organization, and learn what it takes to support additional Pathways Projects in future years.

## 2.0       General Responsibilities

CI staff is responsible for coordinating and managing the core library, main library portal at NSDL.org and underlying technical infrastructure.  This includes the metadata repository architecture and metadata services, search, authentication services, archiving, AskNSDL, and the main portal. CI also adopts and support standard protocols and technologies in response to CI and community needs. In addition to technical responsibilities, CI coordinates and engages the NSDL community, which includes library developers, educators, and users of the library, through an overall NSDL Outreach and Communications Plan. CI staff also support the NSDL governance process and run the NSDL Annual Meeting.

As laid out in the NSDL Solicitation, the Pathways Projects are responsible for maintaining criteria and mechanisms to identify, select, annotate, and generate metadata for high-quality and relevant digital content as it continues to become available; providing all item-level metadata to the NSDL core metadata repository; sustaining the currency of the project resources, either by acquiring/linking, or deaccessioning; active

archiving that preserves the usability of digital content as the underlying information technology systems evolve; and anticipating and providing value-added services that may be specific to the targeted learning community.

The CI and the Pathway Project Partners will make all good faith efforts to fulfill the conditions of this MOU within their time resources and budgetary constraints. The Pathway Projects are being funded with NSF support and their primary obligation is to deliver the products to which they are committed by the terms of their project descriptions.


## 3.0 Specific Collaborative Activities in Year One

Following an initial meeting in Boulder on August 18-19, 2004, Pathways and CI staff discussed the initial list of priorities and tasks to commence Year One work. The tasks listed below are of equal priority: major areas of work can run concurrently, although specific tasks within each area may require phased activities. A brief description of each collaborative task, the primary contact (first name listed in Contacts), and staff are listed for each task. Where specific staff names are not identified, the type of staff needed is indicated and marked TBD. Due dates are broadly listed as fiscal year quarters (e.g. Q1 starting October 1, 2004 and ending December 31, 2004), with the understanding that milestones may changed by agreement of the PIs as the work commences.

## 3.1 Technical

### 3.1.1 Identity Management

The goal is to support single sign on and central management of common NSDL identity attributes.

| Task | Contact(s) | Due |
|---|---|---|
| IM-1 Determine attributes required across projects, that can be managed centrally | Karen Henry, Pathways technical staff (TBD) | Q1 |
| IM-2 Define each attribute | David Millman, Diane Hillmann, Kim Lightle, Joe Brandt, Dave Joiner, Ed Almasy | Q2 |
| IM-3 Discuss login options with Math Gateway's CMS developer Lucidea Corporation –report back to PIs | David Millman, Math Gateway staff | Q1 |
| IM-4 Collect and post current/required vocabularies (role, education level, etc) related to user registration from each Pathway – share results with Content SC | Kim Lightle, with help from Pathways staff | Q2 |
| IM-5 Assemble and analyze current Privacy Policies | Susan Jesuroga, with help from Pathways staff | Q1-2 |
| IM-6 Create ground rules to verify identity | David Millman, Ed Almasy | Q2 |

| Task | Contact(s) | Due |
|---|---|---|
| and level of confidence | | |
| IM-7 Background work: Improve Shibboleth software packaging; Identify alternative identity systems; Confirm "cookies" restrictions; Detail common approaches and services | David Millman | Q2 |
| IM-8 Decision Point: When to roll out NSDL login across portals | CI and Pathways PIs, on advice of technical team | Q3 |
| IM-9 Begin implementation of NSDL login on portals | Pathways technical staff, with help from CI | TBD in IM-8 |

### 3.1.2    Data Management

The goal is to understand each Pathways metadata and resource sharing strategies to ensure the FEDORA repository can meet Pathways' needs.

| Task | Contact(s) | Due |
|---|---|---|
| DM-1 Gather Pathways requirements for metadata representation in FEDORA system<br>- What is the context by which your users find resources?<br>- What is the granularity of those resources?<br>- What do we mean by "resource"?<br>- How do we deal with vocabulary differences? | Dean Krafft, Pathways technical staff (TBD) | Q1 |
| DM-2 Decision Point: Priorities for FEDORA implementation beyond March 2005 release | CI and Pathways PIs, on advice of the technical team | Q2 |
| DM-3 Collect/post vocabularies from Pathways, especially those used to enable discovery (education level, type) | Susan Jesuroga | Q1 |
| DM-4 Research other possible vocabularies | Blythe Bennett | Q2 |
| DM-5 Provide regular status to Pathways about CI work, including FEDORA conversion | Karen Henry | Monthly to PIs |
| DM-6 Supply metadata and vocabulary information to NSDL repository | Pathways technical staff, when available. | When available |
| DM-7 Set up K-12 standards sub-group<br>- Share results of Plato meeting<br>- Review JES&Co NSDL project<br>- Make recommendations for future work, including if work is to be done by CI, Pathways and/or or by engaging the community | Karen Cariani, Susan Van Gundy, Mike Luby, Kim Lightle | Q2 |

| Task | Contact(s) | Due |
|---|---|---|
| DM-8 Discuss resource reusability, in context of Robby Robson's work<br>- Make recommendations for future work, including if work is to be done by CI, Pathways and/or or by engaging the community | CI and Pathways technical leads (TBD) | Q3 |

### 3.1.3   Other Technical Work

| Task | Contact(s) | Due |
|---|---|---|
| OW-1 Provide DNS resolution services for the Pathways URL using XXX.NSDL.org | Dean Krafft | Q2 |
| OW-2 Discuss each groups' MyLibrary work at Annual Meeting to determine points of collaboration/need<br>- Make recommendations for future work, including if work is to be done by CI, Pathways and/or or by engaging the community | CI and Pathways technical leads (TBD) | Q1 |
| OW-3 Provide improved archiving documentation | Dean Krafft | Q2 |
| OW-4 Create minimum Pathways/CI accessibility guidelines | Rachael Bower, Ed Almasy, Casey Jones, other Pathways UI representatives (TBD) | Q3 |
| OW-5 Participate in Webmetrics Pilot | Casey Jones, Peter Pinch, Pathways technical staff (TBD) | Q2-3 |

## 3.2    Outreach and Communications

Goals include coordinated outreach and communications efforts, and development of co-branding strategies. Specific goals include naming strategies for NSDL.org domains, project titles, and tags to ensure consistency in communications from project-to-project, and key NSDL messages to be conveyed by Pathways and CI when talking about individual and combined efforts.

| Task | Contact(s) | Due |
|---|---|---|
| OC-1 Joint press release announcing Pathways | Carol Minton Morris, Deb Burns, Bob Panoff, Rachael Bower, Lang Moore, Len Simutis | Q1 |
| OC-2 Determine XXX.NSDL.org names for each Pathways Portal | Susan Van Gundy, Carol Minton Morris, Deb Burns, Bob Panoff, Rachael Bower, Lang Moore, Len Simutis | Q1 |
| OC-3 Determine appropriate level of co- | CI OutComm group, working | Q1 |

| Task | Contact(s) | Due |
|---|---|---|
| branding for web and print material<br>- lightweight NSDL brand for web sites<br>- templates and standard descriptions for promotional materials | with Pathways design staff (TBD) | |
| OC-4 Create and start implementing combined Outreach & Communication plan | Susan Van Gundy, Carol Minton Morris, Deb Burns, Bob Panoff, Rachael Bower, Lang Moore, Len Simutis | Q2 |
| OC-5 Pursue AskNSDL as outreach mechanism, including figuring out how to work with established help services like Ask Dr. Math | Susan Van Gundy, Carol Minton Morris, Deb Burns, Bob Panoff, Rachael Bower, Lang Moore, Len Simutis | Q2-4 |
| OC-6 Develop statement of quality as it relates to branding across CI/Pathways | John Saylor, Ed Almasy | Q2 |
| OC-7 Combined access to marketing lists/identify marketing group | Sarah Giersch | Q2 |
| OC-8 Form advocacy subcommittee | Kaye Howe, Pathways PIs | Q2 |

### 3.3 Community

The goal is to engage and work with the NSDL community.

| Task | Contact(s) | Due |
|---|---|---|
| C-1 Participate in the Pathways Panel presentation at Annual Meeting: Review of ENC work, overview of each Pathways work, and how they will engage the community. | Susan Jesuroga, Rachael Bower, Lang Moore, Bob Panoff, Ted Sicker, Len Simutis | Q1 |
| C-2 Submit posters explaining project for Annual Meeting | Pathways staff (TBD) | Q1 |
| C-3 Develop Pathways FAQ to answer NSDL community questions about the projects' goals and plans | Outreach working group | Q2 |
| C-4 WBR article about Pathways | Carol Minton Morris | Q1 |
| C-5 Join NSDL standing committees | Pathways staff (TBD) | As needed |

### 3.4 Strategic Planning

The goal is to track and prioritize future needs not represented in Year One work.

| Task | Contact(s) | Due |
|---|---|---|
| SP-1 Create quarterly goals and work assignments | Karen Henry, CI and Pathways teams | Quarterly |
| SP-2 Determine Year Two priorities | CI and Pathways PIs | Q3-4 |

| SP-3 Rights management | CI and Pathways PIs | Q3 |
|---|---|---|
| SP-4 Evaluation of collaborative process and resulting products | CI and Pathways PIs | Q4 |
| SP-5 Sustainability | CI and Pathways PIs | Q3-4 |

## 4.0    Administration

Locus of collaborative planning and decision-making will be a group of the CI PIs, CI Team Leads, Pathways PIs and designated principals. Implementation of those plans will be detailed to work groups of CI and Pathways staff as required by the nature of the work. CI and Pathways PIs will meet via monthly conference calls to discuss work progress and make decisions with regards to priorities, and agendas will be prepared by CI staff at UCAR. CI and Pathways PIs will meet face-to-face twice yearly. The first meeting took place in August, 2004, and the second will be scheduled in late winter or early spring, 2005. The PIs, team leads, and principals will also meet at the NSDL Annual Meeting.

Susan Jesuroga will be the CI liaison to Pathways Projects, and Karen Henry will produce and track CI-Pathways priorities through a managed work tracker system. Both will coordinate the above tasks by working through the primary contact listed for each task. Any project management issues (missed deadlines, conflicting priorities, etc) will be brought to the CI and Pathways PIs for resolution. CI will maintain a private workspace to manage email lists, the work tracker, common documents and other communications required by this group. Work groups will establish their own processes, workspaces, and meeting schedules according to need.

## 5.0    Relationship to NSDL Governance

There are two governance bodies of importance to the CI-Pathways collaboration. The National Visiting Committee is appointed by the National Science Foundation to provide high-level strategic advice to CI, and continuing evaluation of the project to NSF. The committee also serves as an advocate of the library to the larger public. The Policy Committee advises the CI team, other NSDL grantees, and NSF on operational strategies, policies and implementation priorities for NSDL.

Pathways and CI PIs will attend the winter 2005 NVC meeting and participate in conference calls as needed to brief NVC members on issues of priority and matters requiring strategic advice. (CI will work to make the PI face-to-face and NVC meetings coincide – the meeting will most likely to be held in Washington D.C. or New York City.) Pathways and CI staff will advise the Policy Committee of policy and standards issues coming out of this joint work, such as Privacy Policy changes necessitated by the identity management work. All groups will be expected to participate in Standing Committee meetings as necessary.

**6.0      MOU Updates and Revisions**

Updates and revisions to the MOU may be proposed by any of the CI-Pathways partners and must be agreed to by a consensus of that group. Records of the updates and revisions will be kept by the CI staff at UCAR and posted to the Pathways workspace (http://pathways.comm.nsdl.org).