

Memorandum of Understanding between NSDL Core Integration and Pathways Projects

Version 1.2

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“Through its distributed digital library building strategy, the NSDL program is fostering the creation and development of a comprehensive cyberlearning infrastructure.”

- from the 2005 NSF-NSDL Solicitation

1. Introduction

The National Science Digital Library (NSDL) mission, as defined by the National Science Foundation, provides a clear focus on education and the need to encourage and sustain continual improvements in the quality of STEM education. To be a successful catalyst for education, NSDL must address two basic priorities. As a library, the first is discovering and organizing the most useful resources for STEM education. To support learning, the second is giving users a coherent learning environment and set of tools that help meet specific educational goals.

This Memorandum of Understanding (MOU) between NSDL Core Integration (CI) and the Pathways Projects seeks to clarify the administrative and development activities needed to support a successful partnership in building the 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 strategy is a key element to NSDL success through their focused efforts to organize a specific domain area and provide users the environment needed to meet their educational goals. Each Pathway project has specific community needs to meet, so CI and the Pathways must ensure that combined development outcomes are integrated to not only meet the NSDL mission, but also create a library that appears to be coherent, organized and coordinated for the broader NSDL user community.

This collaboration between the Pathways Projects and CI provides 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 continue to build the technical and administrative frameworks required to sustain an NSDL organization for the future.

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 Projects 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 Collaborative Activities

This MOU concentrates on the high-level areas of collaboration. Because the Pathways' focus on serving specific audience needs, the focus of this MOU defines collaborative areas of work, including technical infrastructure, outreach, policies, and procedures, which will be required to support a coherent, coordinated library for all NSDL users. Because the Pathways Projects are at different levels of maturity, specific development tasks and deliverables for CI and individual Pathways Projects will be outlined and tracked in a separate Pathways Work Tracker document. The following outline lists the key areas of collaboration required to sustain an operational NSDL.

3.1 Keep barriers to NSDL users as low as possible

- 3.1.1 Work towards implementing a single NSDL sign on
 - Develop an approach or policy to achieve goal
 - For those Pathways with existing logins, determine appropriate integration path consistent with policy
- 3.1.2 Share collection development policies online
 - Post collection development policies for all collections under each Pathway

- Annotate policy with appropriate definitions/descriptions of important features, such as resource quality or how resources are selected
- 3.1.3 Create and implement plans for resource persistence
 - Include clear definition of what is saved, for how long, plans for migration
- 3.1.4 Define issues surrounding modification of resources
 - Define user requirements that allow for successful modification, including rights management
 - Define granularity of resources required
- 3.1.5 Commit to usability and accessibility standards
 - Follow industry best practices
 - See AccessNSDL.org, <http://ncam.wgbh.org/accesslinks.html>, http://www.imsglobal.org/accessibility/accmdv1p0/imsaccmd_oviewv1p0.html
 - Implement usability studies, focus groups, user testing, etc

3.2 Improve the NSDL collection

- 3.2.1 Share resource centric information, such as metadata, annotations, and related content
 - Define common set of resource-centric features for Pathways
 - Submit metadata to the NSDL Data Repository (NDR)
 - Define potential issues surrounding metadata and sustainability beyond the period of NSF funding
 - Define and develop web services for expressing resource-centric information and relationships across collections and the NDR
- 3.2.2 Provide resource recommendations
 - Make recommendations where materials are out of individual collection scope, but within the broader NSDL scope
 - Participate in using the iVia expert-guided crawl

3.3 Adopt standards and policies

- 3.3.1 Adhere to the NSDL Metadata Policy
 - Online at <http://comm.nsdl.org/download.php/83/PC3Final.pdf>
- 3.3.2 Participate in defining necessary policies on IP and rights management
- 3.3.3 Post privacy policy on portal site
 - Help define minimum elements required for consistency across all sites
 - Meet COPPA guidelines, where required

3.3.4 Use and share defined vocabularies and taxonomies, such as subject classifications, audience, and grade level

- Develop agreed-upon shared vocabularies
- Post vocabularies centrally

3.3.5 Use NSDL-wide services and information, where possible

- Achievement Standards Network, for education standards

3.4 Coordinate outreach and communications activities

3.4.1 Participate in co-branding NSDL and Pathways

- Web sites, promotional materials, press coverage and other related documents

3.4.2 Coordinate workshops and other user training opportunities

3.4.3 Coordinate conference presentations and exhibits

3.4.4 Facilitate networking and partnership building between NSDL and Pathways' target audiences

3.4.5 Share original content and domain expertise

- Current events, articles, reports, and papers through On Ramp
- News feeds, blogs, and other RSS feeds

3.4.4 Contribute to NSDL reports, briefings, and other presentations

3.5 Contribute to the overall evaluation of NSDL

3.5.1 Participate in web metrics evaluation efforts

- Install Omniture tracking software, or other software as provided by CI
- Provide regular summary reports, once installed

3.5.2 Participate in the larger NSDL program evaluation effort

- Define yearly benchmarks and metrics
- Provide metrics as defined above

3.6 Support NSDL operations

3.6.1 Identify primary technical contacts and backups

- Contacts for daily operational questions, and emergency outage contact
- Contacts for user questions and support

- 3.6.2 Meet site availability targets and provide contingencies for downtimes
 - Determine targets for each site

- 3.6.3 Perform routine checks and repairs for broken links

3.7 Enable collaboration

- 3.7.1 Provide web service interfaces for broadly applicable services
 - Participate in defining core central services, such as search, NDR access, and archiving
 - Identify and provide other agreed upon Pathways-enabled services
- 3.7.2 Set and manage co-development priorities through
 - Regular meetings
 - Document and project management
 - Clear schedules, deliverables and responsibilities
 - Document the impacts of collaboration in time and resources
 - Share lessons learned

4.0 Administration

Locus of collaborative planning and decision-making will be a group of the CI PIs, CI senior staff, Pathways PIs (or PI-designates) 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 (or PI-designates) 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 (or PI-designates) will meet face-to-face twice yearly. The first meeting took place in August, 2005, and the second will be scheduled in late winter or early spring, 2006. The PIs, and staff will also meet at the NSDL Annual Meeting.

As first point of contact, Susan Jesuroga will be the CI liaison to Pathways Projects, and Karen Henry will produce and track Pathways Work Tracker. Both will coordinate development activities by working with the primary contact listed for each task in the Pathways Work Tracker. Any project management issues (missed deadlines, conflicting priorities, etc) will be brought to the CI and Pathways PIs (or PI-designates) 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. CI will be the primary liaison to these committees and will ask the Pathways projects to provide briefings from time-to-time.

Pathways and CI PIs will attend the winter 2006 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 consult with the Policy Committee about 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.nsd.org>).

This MOU replaces the 2004 agreement between the Pathways Projects and CI, dated October 18, 2004.