Expected Outcomes

Go to LD4L Wiki Gateway

Archived

LD4L 2014, which was the Linked Data for Libraries original grant running from 2014-2016, has been completed. This page is part of the archive for that grant.

Over the two years of the grant, we propose three major deliverables. All outputs, including ontologies and program code, will be made widely available under Open Source licenses.

SRSIS Ontology

Because no existing ontology supports the range of entities and relationship that SRSIS will encompass, we will use the Protégé ontology editor to develop a SRSIS ontology framework that reuses appropriate parts of currently available ontologies while introducing extensions and additions where necessary. The framework will be based on and remain compatible with the existing VIVO and emerging research dataset[1] and research resource ontology work[2]. It will be sufficiently expressive to encompass traditional catalog metadata from both Cornell and Harvard, the basic linked data elements described in the Stanford Linked Data Workshop Technology Plan, and the usage and other contextual elements from StackLife. The ontology will capture a series of basic concepts and be structured as modules that draw inspiration from and reuse existing ontology classes and properties where appropriate, such as the Semantic Publishing and Referencing[3] ontologies, and that also support arbitrary system-wide refinement, including local extensions.

SRSIS Semantic editing, display, and discovery system

Built using the Vitro semantic web platform and the SRSIS ontology, each instance of the system will support the incremental ingest of semantic data from multiple information sources, including the Cornell, Harvard, and Stanford MARC-based catalogs, StackLife, LibGuides, VIVO, Harvard Profiles, CAP, and OAI-PMH metadata providers, among others. The linked data harvested or referenced by the system will generally be from authoritative sources, and provenance data for all triples will be available. SRSIS will support links to external vocabularies and authority files such as VIAF and the EAC-CPF work being done in the Social Networks and Archival Context project. The effort will include the development of specific display templates for the SRSIS ontology.

Cornell, Harvard, and Stanford will each implement a SRSIS instance supporting locally curated information about their collections and drawing on multiple sources of information to provide context for their information resources. The data in each instance will be openly accessible and will link to appropriate external vocabularies and authority files. We will also implement a demonstration SRSIS Search system that harvests Linked Open Data from all three SRSIS instances to support discovery and access across the combined collections, through electronic delivery, local physical access, and Borrow Direct /ILL delivery between the campuses.

Project Hydra compatible interface to SRSIS

We will produce an ActiveTriples software component that facilitates the easy use of SRSIS and other linked-data within Hydra-based systems. We will use ActiveTriples to create a Blacklight search interface to support discovery over data from all three SRSIS instances within the demonstration system. Difficulty working with data in triplestores has been an impediment to the uptake of linked data. The ActiveTriples component will address this impediment by enabling Hydra developers to reuse linked data through interfaces and patterns with which they are already familiar.

Broader Impacts

Our larger goal is to encourage libraries, archives, and cultural memory institutions to think much more broadly about using structured information about their scholarly information resources to make those resources more discoverable, accessible, and interconnected. We will do this by developing an ontology that captures the broad, interlinked, network of context around these resources; by implementing example Linked Open Data repositories of information about these resources at Cornell, Harvard, and Stanford; by engaging with selected members of the community to develop the ontology and the system for creating and sharing Linked Open Data; by making code and ontologies openly available; and by presenting the results of this work in publications and at conferences. This work leverages recent advances in using Linked Open Data to represent and exchange information on scholars and scholarship; in the efforts to map standard metadata to Linked Open Data; and growing library collaborations like the Hydra Partners. We believe that this project can pave the way for a major advance in how scholarly information resources in libraries, archives, and cultural memory institutions are discovered, shared, interrelated, and understood for the humanities, the arts, and indeed for all the scholarly and creative disciplines.

[1] http://www.datastarproject.org
[2] http://ctsaconnect.org
[3] http://sempublishing.svn.sourceforge.net/viewvc/sempublishing/SPAR/index.html