

VitroLib: From an Ontology and Instance Editor to a Linked Data Cataloging Editor

Presentation

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Abstract

The Mellon Foundation-funded Linked Data For Libraries Labs (LD4L Labs) and Linked Data For Libraries Production (LD4P) projects are exploring how to support library systems transition to the use of linked open data. As part of this work, we are developing a linked data cataloging editor called VitroLib. VitroLib extends Vitro, the open source ontology and instance editor that provides the ontology-agnostic semantic application underpinning VIVO, the researcher profiling system. VitroLib generates content display and content editing interfaces based on BIBFRAME, Bibliotek-o which extends BIBFRAME, and related ontologies. In this presentation, we will provide an overview of the design and implementation of VitroLib, results of usability testing exploring how catalogers can use VitroLib to catalog bibliographic metadata, and how VitroLib development has used application profiles.

We are utilizing a user-centered design approach to examine the needs of catalogers who are the target end-users for this application. VitroLib development includes the following main areas: (a) prototyping and evaluating the user interface for use by catalogers, and (b) ensuring the Bibliotek-o system of ontologies is expressed in the application correctly and according to the expectations encoded within the application profiles which are being developed concurrently. To understand cataloging workflows and how catalogers currently perform their cataloging tasks, we have had discussions and conducted usability testing with catalogers. The preliminary set of results identified the importance of searching for existing information even in the context of original cataloging and highlighted the incorporation of external vocabularies as a promising area of exploring the benefits of linked data. We intend on conducting further rounds of usability testing with future versions of the application.

Ensuring VitroLib adequately and correctly translates and expresses the Bibliotek-o system of ontologies in the interface requires more than simply incorporating ontology files. The challenges in this area result from both the Vitro software's current implementation and from how an ontology may not explicitly codify all the expectations for the properties defined. Vitro, as it currently comes out of the box, displays properties automatically only if they are OWL properties with specified domains or if the application is configured to display a property within certain contexts. Application profiles can provide useful context around the intended user interactions with the content as modeled by the ontology. Application profiles can help specify which classes are expected, even if not explicitly stated within the ontology, to be used for objects or subjects of a particular property. Additionally, profiles can specify which controlled vocabularies need to be used for a particular property. Part of VitroLib development is thus exploring the questions that the application profile creators can review and then implementing the application profile within the software confines of VitroLib.