

MyLibrary: A Digital library framework and toolbox

MyLibrary is a framework and toolbox for creating digital library services and collections. This presentation elaborates on this idea.

More than ten years ago, MyLibrary was a monolithic, turn-key application for creating customizable Web interfaces akin to My Netscape, My Yahoo, and My DejaNew. Now it is a set of object-oriented Perl modules providing I/O services against a database with a specific schema.

More importantly MyLibrary is intended to provide a framework for creating relationships between information resources and people. Most of the time these information resources are the traditional things of libraries such as books and journals, indexes and catalogs, manuscripts and photographs, etc. The people of MyLibrary are patrons and librarians. Relationships can be drawn between information resources and people through the use of facet/term combinations -- a locally-defined and institution-specific controlled vocabulary.

Facets & terms

Intended to be used as the framework for a controlled vocabulary, the facet/term combinations of MyLibrary give the librarian and developer an opportunity to describe and relate the primary components of libraries -- information resources and people. Through these facet/term combinations conceptual links can be created between information resources and users, between users and librarians, and between librarians and resources. After creating a set of facet/term combinations the librarian and developer can address increasingly popular desires such as but not limited to:

- As a librarian, this is the set of resources I curate...
- Because you are in this class, you might want to use...
- Here is a list of patrons who use the resources I curate...
- Here is a list of articles on...

- These special collections can be used for this class...
- Other people in this class have also used...
- Other people like you have used...
- The subject-specific librarian is...

At the University of Notre Dame we have created facet/term combinations such as the following:

- Subjects/Engineering, Mechanical
- Subjects/Language and Literature
- Subjects/Philosophy

- Research tools/Catalogs
- Research tools/Guides and finding aids
- Research tools/Standards and codes

- Formats/Electronic journals
- Formats/Printed books
- Formats/Software

We then use Dublin Core metadata elements in combination with one or more facet/term combinations to classify information resources. We use these same facet/term combinations plus a subset of FOAF (Friend Of A Friend) metadata elements to describe librarians and patrons. Finally, we can use MyLibrary to "join" information resources, librarians, and users to address the things outlined above.

Example implementations

Using this framework we have created a number of digital library applications. Some of them are demonstration applications. Some of them are production services

Alex Catalogue of Electronic Text

The Catalogue is a collection of just less than 14,000 public domain documents from American literature, English literature, and Western philosophy. Much of the content comes from Project Gutenberg, but it also includes content from the defunct Eris Project of Virginia Tech and the Internet Wiretap Archive. The description attribute of each MyLibrary resource

includes not an abstract of the electronic text, but a RDF/XML version of the original text.

Article Index

The Directory of Open Access Journal includes and OAI interface to its journal titles as well as some of its articles. The Article Index system harvested the article metadata and saved it to a MyLibrary instance. Along the way journal titles and publishers were saved to underlying facet/term combinations and linked to each article.

Catholic Research Resources Alliance (CRRA)

The CRRA is a "portal" intended to highlight rare and unique materials of interest to Catholic scholars. Much of this content exists in archives. Archives use an XML format called EAD to described their holdings. The CRRA provides a mechanism for ingesting these EAD files, parsing out controlled vocabularies, populating facet/term combinations accordingly, full-text indexing the EAD, and supporting a searchable/browsable interface to the entire content via SRU.

Facebook

A Facebook application has been written against the MyLibrary data of the University Libraries of Notre Dame database-driven website. After the Facebook user loads the application into their profile, they are presented with a set of default recommended resources.

IRIS FAQ

Our reference department – IRIS – implemented a FAQ using MyLibrary. Each question/answer combination is represents as an information resource. The question is the resource's title. The answer is the resource's note. A set of facet/term combinations was created to organize the FAQ. Facets include things like Circulation, and terms include things like Interlibrary Loan, Borrowing, and Renewal Policies.

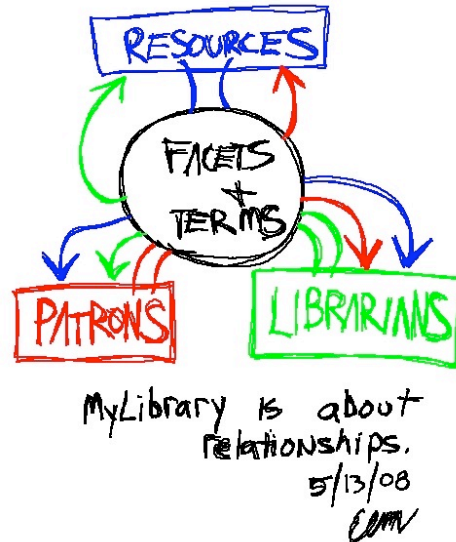
Reading List

This demonstration application it intended to provide the functionality found in the older journal reading rooms. It first uses OAI to harvest the journal title metadata from the Directory of Open Access Journals. Using the DOAJ's classification scheme, MyLibrary facet/term combinations are created on-the-fly and each title is "cataloged" accordingly. A simple browsable interface was then created allowing users to peruse the collection and

hyperlink to the remote journal. Once a person creates an account for themselves, they can use the "Add" link associated with each journal to create a "my" page. This results is a list of journal titles -- "their" journals -- that they can visit on a regular basis for browsing.

University Libraries of Notre Dame database-driven website

This is probably the most extensive MyLibrary application in existence, and its primary purpose is to support the majority of the Libraries' website. The system begins with the integrated library system where much (but not all) of the library's website content has been cataloged using traditional methods. Each item in the catalog destined for the website has been flagged with a local note denoting such. Each item's description has also been enhanced with facet/term combinations. On a nightly basis all of the items destined for the website are exported from the catalog as MARC records. On a nightly basis another script reads these records and updates a MyLibrary instance.



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