

Brian Côté
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PROJECT BACKGROUND

<http://www.lib.umich.edu/digital-library-production-service-dlps>

The Digital Library Production Service, DLPS, is the unit of the University of Michigan Library responsible for the creation and maintenance of their digital library. It was founded in 1996 in order “...to provide infrastructure for campus library collections, including both access systems and digitization services. (Library)” It was formed “...in response to a felt need for production level (twenty four hour a day, seven days a week) support for digital library resources. (History, 2009)” DLPS has three main functions: 1) to digitize library collections, 2) to host online collections, and 3) to provide leadership in digital library development (History, 2009). Along these lines, they have developed digital library software called DLXS, which is offered both in an open source and a fee based format. As well, a subset of DLPS, the Digital Conversion Unit, has received much press recently due to their partnership with Google. They digitize “...original materials including books, photographs, journals, rare documents and artifacts primarily for the University Library using flatbed & planetary scanners and digital photography. (Conversion, 2010)” This project is accessible under the name The Hathi Trust. Here they’ve partnered with fifteen universities, as well as Google, the Internet Archive, and Microsoft in order “...to build a comprehensive archive of published literature from around the world and develop shared strategies for managing and developing their digital and print holdings in a collaborative way. (Our)”

ORGANIZATION OF RESOURCES

As their website claims, “DLPS provides access to over 200 text, image, and finding aid collections that collectively provide access to over a million digital objects. (Library)” There are currently 242 separate collections in four categories: text, image, finding aid, and bibliographic and reference collections (View, 2010). The subjects represented in the collection include 20th Century American Poetry, Art for College Teaching, full text articles from the Center for Japanese Studies Publications, the Artistry of Astronomical Maps, and the University of Michigan Herbarium: Fungus Collection Database (MLibrary). That being said, the majority of collections focus on the humanities with other subjects suffering or not being presented at all.

There are also a number of quite noteworthy collections. Their best-known is the Hathi Trust Digital Library, which “...makes the digitized collections of some of the nation’s great research libraries available for all (Featured, 2010),” and the Advanced Papyrological Information System, which was “...created and maintained by the University of Michigan and other universities to provide online access to papyrological collections. (Featured, 2010)”

SERVICE FEATURES

DLPS’s access and use page states that: “Users are free to cite and link to digital content without asking for permission. Users are free to download, copy, and distribute works in the public domain without asking for permission. (Access, 2009)” They continue that for works still under copyright they encourage fair use.

Browsing for collections is fairly simple. A page is provided with lists of the collections sorted alphabetically, by format, access type (public or restricted to the university), subject, and others. The collections are also searchable by name or topic. Finally a second alphabetical list displays each collection with a representative graphic and short description of its contents and purpose.

The majority of the collections are open to the public. Many of those that are restricted to student use can be accessed after applying for a ‘friend’ account. (This is a quick and simple process that involves filling out a form and replying to an email.) There are, however, a few collections that can’t be accessed unless the user has student privileges. This is the case for such a collection as the American Film Institute Catalog.

Although there are no current goals or maintenance schedules available on the DLPS website, there is a list from 2009 that can offer insight into their long-term planning. The majority of their concerns are for the functionality of their software and websites. For example, the Hathi Trust needed to “Maintain and enhance Page Turner and Collection Builder functionality,” while DLXS needed to “Enhance Image Class and FindAid Class as needed and time permitting” (Goals, 2009).

TECHNOLOGIES

The Digital Library eXtension Service, DLXS, is the backbone of the DLPS and their initiatives at the University of Michigan. This system originated at the University of Waterloo, passed to the Open Text Corporation, and then was licensed to the University of Michigan. The DLXS website states: “The newest DLXS enhancement - XPAT - is a powerful, SGML/XML-aware search engine, and an ultra-versatile tool for the

development of digital libraries. XPAT provides excellent support for word and phrase searching, indexing of SGML elements and attributes, a baseline of support for XML (without Unicode), fast retrieval, and open systems integration. (Overview)” The University provides a lite version of their software as a free, open source download. In addition they provide a full version for a nominal fee.

In the digital collections at the University of Michigan this translates into two main styles of web pages. Both offer basic searches and the ability to browse the collection. However, the first type offers fewer search features, while allowing more display features. With the first type it is only possible to search either ‘anywhere in the record’ or in up to two ‘descriptors.’ The second type offers a much larger selection of search options: basic, Boolean, proximity, and bibliographic. Also, a history of previous searches is available. Generally, collections devoted to images use the first style, while collections devoted to text use the second. This is not a hard and fast rule however. Each collection has its own unique homepage, some that simply display the search page upon entering the site, while others display an initial page describing the collection, sometimes with a graphic and a more stylized page layout and color scheme.

There are a number of different ways to access the collections. They are listed in alphabetical order on the DLPS’s website. There the user is able to browse through the list or select them by topic. A more integrated approach is offered by Mirlyn, the University’s OCLC. Here a patron is able to enter their search query. A list of all available resources is then displayed on the return page. Various resources are listed such as returns from databases, the main catalog, websites, government documents, and collections. However, the collection returns do not point directly to the item. The user

must first visit the Mirlyn page devoted to the item. Then they must click on a second link, which will take them to the actual listing for the item in its respective collection.

EVALUATION

There is a multitude of methods that have been developed over the last few years for evaluating digital libraries. The method used in this paper was developed by Sudatta Chowdhury. It focuses on the following usability factors: 1) interface features, 2) search process, 3) query formulation, 4) search options for text, multimedia, etc., 5) search operator, 6) results manipulation, and 7) help options (Chowdhury, 2006).

As state previously, DLPS offers two types of search interfaces, which generally correspond to either text or image based collections. This is explainable because a proximity search would be of much less value to a user searching for image titles and descriptions rather than someone who is searching through entire books or articles with large amounts of text.

Although the amount of search options is less than many databases focused on journal articles or reference books, the four separate options available (basic, Boolean, proximity, and bibliographic) make the interface quite versatile.

As well, there are quite a few sort options for the return page: not sorted, title, author, date ascending, date descending, and frequency. The user cannot, however, choose how many returns are displayed on each page. This can be a problem since depending on the search the user might receive many returns.

Finally, for text collections, the ‘table of contents’ page makes viewing each volume relatively simple. This page mimics a physical table of contents and allows the user to skip to any place in the text with minimum effort.

Image collections offer even more options for sorting their returns: none, title, main entry, date, dimensions, image filename, date, and others. Also, the returns can be displayed with their full record, with image and caption, or with caption alone. The actual record page offers zoom options and a variety of image sizes.

As well, the Finding Aid and Bibliographic and Reference Collections have tailored search pages. Finding Aid offers basic and Boolean searches in addition to a variety of ‘search in’ options, whereas the Bibliographic and Reference Collection offer basic and advanced searches. Each of these is tailored to the specific collection or collections the user is searching. In addition there is a ‘look for items published between’ box that enables the user to further limit their queries.

As stated previously, the Mirlyn OCLC is a vantage point from which users can access not only all of DLPS’s collections, but also all the holdings of the University Library. This is extremely advantageous to a user who is seeking the widest amount of information. If such a scope is unnecessary, then DLPS’s collection homepage offers many options for finding the correct collection. DLPS does offer direct searches of individual collections, but if the user wishes to search more than one collection at a time, the options are not powerful as Mirlyn. Here the user must select from categories of collections, such as Nineteen Century American Publishing or Dentistry Collections. This takes the user to a search page very similar to the search page for a single collection, except at the bottom another list shows the collections available for searching.

One very useful feature that could easily be overlooked is the ‘search tips’ link. Below the search bar there are two quick tips on how to formulate a search query. However, below this there is a link, ‘more tips,’ that opens up the ‘searching tips’ section of the Help menu. Here proper query formulation is discussed.

The help menu itself is very thorough. It offers four options: 1) searching, 2) interpreting search results, 3) viewing search history, and 4) using the bookbag. With text and images the help menu leads the user through all the various facets of the search engine.

Finally, printing of text sources is also available. In the top right corner of the page is a ‘print’ button. This takes the user to a new page where the text is optimized for printing. Then a message appears telling the user to click the print button in the ‘file’ dropdown menu of their browser. It seems that this process could be streamlined to print pages with only one click of the button. For images, there is no print option, but there are two download options: ‘download current size’ and ‘download largest size.’ Printing can then be done at the user’s discretion.

Overall the DLPS is an exciting, well-realized project. It allows users to search its collections through a variety of access points, some (such as Mirlyn) more advantageous than others. Since the collection is mainly devoted to the humanities, it is recommended highly for anyone who is interested in such fields. The project is constantly growing, so in time they may expand their subject catalog. As it stands they have a very flexible base for growth and improvement. Some possibilities follow. A page from which users can search all of DLPS’s collections simultaneously is lacking, as well as the ability to control the amount of returns on each page. Printing could also be

streamlined. Nonetheless, DLPS has created a digital library and related software that can stand as an example of what is possible in the field.

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