ABSTRACT

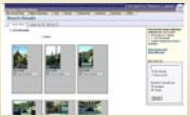
An increasing number of institutions are turning to freeware to support their digital collections. Several options emerged within the last five years and have successfully competed against the larger commercial digital library management systems (DLMS). Greenstone, Fedora, and dSpace are the three of the most popular freeware systems being employed today. These allow institutions to bring collections online without the inhibitive costs associated with systems like ContentDM and DigiTool. This poster session will compare the features in each of the freeware systems. We will examine some of the basic usability issues of each interface, such as navigation, searching, and results, as well as more advanced options from full text searching to support for the Open Archives Initiative (OAI). Additionally, we will be comparing the number of institutions using these newer systems. We will begin by examining member institutions of the Association of Research Libraries. Each institution's online digital collection will be reviewed to determine which DLMS has been implemented.

SEARCH & RESULT INTERFACES

Greenstone

DSpace

Fedora



COMPARISON OF FUNCTIONALITY

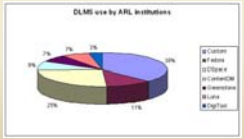
	Dspace	Fedora	Greenstone
Standards Information			
Dublin Core supported	✓	✓	✓
Z39.50 protocol compliant	✓	✓	✓
Open source license	BSD	MPL	GNU
Latest version release date	2005	2006	2006
Latest version number	1.3.2	2.1.1	2.17
Software Requirements			
Operating systems	Linux Mac/OSX Unix	Mac/OSX Windows Linux	Linux Windows
Programming language	Perl	Perl, Java, C++	C++
Database	Oracle	Oracle	Custom
Web server	Any	Tomcat 4.1	Any
Search engine	Lucene	Fedora	Lucene, BG
Support			
Documentation/manual	✓	✓	✓
Listserv	✓	✓	✓
Bug tracking/feature request system	✓		
Online support/help desk		✓	
Content Import/Export			
Upload compressed files	✓	✓	
Upload from existing URL		✓	
Volume import for objects	✓	✓	✓
Volume import for metadata	✓	✓	✓
Volume export/content portability	✓	✓	
Submitted items can comprise multiple files	✓	✓	✓
System generated usage statistics and reports			
System-generated usage statistics	✓	✓	
Usage Reports	✓	✓	

	Dspace	Fedora	Greenstone
Metadata			
Native METS support		✓	✓
Metadata schema supported	Qualified Dublin Core	Dublin Core	Dublin Core
Support for extended metadata	✓	✓	
Metadata recipe support	✓		
Metadata export	✓	✓	
Supports unicode characters for metadata	✓	✓	✓
User Interface			
Modify interface "look & feel"	✓	✓	✓
Multiple language support	✓	✓	✓
Single item page turning		✓	✓
Search Capability			
Full Text	✓		✓
Boolean logic			✓
Truncation/Wildcards			✓
Word Stemming			✓
Within a single document			
Search on descriptive metadata	✓	✓	✓
Boolean logic	✓		✓
Truncation/Wildcards	✓	✓	✓
Word Stemming	✓		✓
Search selected metadata fields	✓	✓	✓
Browse	✓	✓	✓
Sort search results			
User registration, authentication, & password administration			
Limit use by password	✓	✓	

Original functionality comparison from Open Society Institute. (2004). *A Guide to Institutional Repository Software*. 3rd Ed. Retrieved May 20, 2006 from: http://www.soros.org/openaccess/pdf/OSI_Guide_to_IR_Software_v3.pdf. Updated by Mark Sullivan and Marilyn Ochoa.

USE BY ASSOCIATION OF RESEARCH LIBRARIES

The Association of Research Libraries defines itself as "a nonprofit organization of 123 research libraries at comprehensive, research-extensive institutions in the US and Canada that share similar research missions, aspirations, and achievements." ARL institutions were selected because it was likely that many would have the resources to implement digital library collections. We looked at each ARL institution's web presence to identify the DLMS used to host their digital collection and found eighty-eight DLMS instances. Fifty institutional repositories were additionally identified.



DISCUSSION

In our research, we found that 38% of the ARL online collections use locally created custom interfaces and custom databases. While there is often a compelling reason for creating custom interfaces, the individual interfaces and data often introduce an associated problem; many of the online collections are individual silos of data, with little ability to search across all the collections even with OAI-PMH and Z39.50. The better solution is storing all the data in a single DLMS.

Although the functionalities of the three applications are similar, each has its own strengths. The choice of a DLMS must include factors from available programming staff to the types of resources to be included.

Greenstone is the easiest DLMS to implement "out of the box." Customizing the appearances of collections is well documented, although most implementations on the web have the original look and feel. Greenstone's item viewer allows you to navigate through page images. The object model for Greenstone is very simple, which makes for a quick learning curve. As a result, however, it is more difficult to create complex objects, or relate objects to one another in Greenstone than in Fedora. Greenstone is an excellent, quick-start open-source DLMS, particularly suited for smaller collections.

Fedora was created to serve as the foundation for information management systems. Fedora's code allows programmers to utilize Fedora as the data warehouse for larger projects. Less emphasis has been placed on the interface, and more placed on the object model, which is fairly complex. Fedora is particularly strong when it comes to building relationships between two or more digital resources. The single item display can be customized by creating new disseminator objects. The learning curve for Fedora is fairly steep and creating your own customized interface is fairly difficult. For a library with sufficient programming staff and the desire to create their own interface, Fedora is a very attractive option to house the digital resources and data.

Originally intended as institutional repository software, DSpace is increasingly utilized as an open-source DLMS. As its focus would suggest, DSpace is particularly strong in the submission stream, with several submittal roles and easy to use web forms. The search engine within DSpace, and resource discovery in general, is fairly robust. Once you find the digital resource, you can view the metadata and download the PDF, or other file format. However, DSpace does not include page turning software, and each digital resource is basically a collection of files available for download. However, if your digital library will primarily consist of PDF files or single images then DSpace should be sufficient.

REFERENCES

References available at http://www.uflib.ufl.edu/digital/development/poster/references.html