

eSpace development at the University of Queensland Library

As part of its eScholarship testbed (<http://www.library.uq.edu.au/escholarship>) for the Australian Partnership for Sustainable Repositories project (<http://www.apsr.edu.au/>), staff at the University of Queensland Library are developing software for a flexible, digital repository and workflow management system which will be released under open source license by the end of 2005. The digital repository software is PHP- and MySQL-based and works as a front-end and administration tool using Fedora (<http://www.fedora.info/>). Designed around Fedora 2, it uses RELS-EXT to describe relationships between objects for communities, collections, and records. Records will have associated datastreams which may be documents such as PDFs. Records can belong to both collections and communities. All records will also be associated with a controlled subject thesaurus. The software will also be able to handle multiple metadata schema, i.e. Dublin Core, EAD and so on.

The digital repository will be able to handle an infinite number of document types, such as PDFs, ASCII text, HTML, digital audio and video formats, and image files. The system is flexible enough that new document types can be added at any stage. Each object type is governed by an XSD that maps that XSD against HTML inputs. The forms and the consequent XML objects are created dynamically from these mappings.

Each object will have layers of associated metadata – structural, rights, preservation and so on.

The system is designed to be open access, with records harvestable under OAI-PMH. Some records can be of restricted access if so desired, for example, embargoed archival material.

Records can be added to the system singly. For bulk ingest, existing scripts on the eScholarship page that convert OAI records to METS/XML for ingest can be used (OAI to METS XML Converter (PHP) (<http://www.library.uq.edu.au/escholarship/tools/oai2mets.zip>)). There is also a script for converting records currently in ADT into an OAI stream that can then be converted to METS/XML (ADT OAI HTML Stripping Service Provider (PHP) (<http://www.library.uq.edu.au/escholarship/tools/adt2oaisp.zip>)).

The system is also designed to handle a number of different roles – creator, editor, viewer, approver, commenter, comment-viewer, annotator and so on. The permissions and authentication assigned to each role will be governed by rules set up in the eSpaceACML.

Authentication can be by groups such as LDAP/Active Directory, the III Innopac library system, or eSpace internal groups, as well as by any other groups defined in the system.

The workflow system will also be covered by an XSD to dynamically describe workflows for particular document types. The workflow will cover the life cycle of an object in Fedora – from the create or deposit stage, through approval and edit, to the publish stage. It will also cover security and the creation of an archival copy.

Achieved:

The digital repository set up and authentication are completed.

Still to be done:

- Workflow system
- Search engine
- Registration process
- Front end (Web page)
- Browse by author
- III authentication
- Preservation Metadata schema
- Automatic preservation metadata extraction

Automatic archival to web format datastream conversion
Annotation system
Commenting system
Statistics

Further development

Federated searching, and federated authentication

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17 June, 2005