

Software Architecture Working Group**May 16, 2008****Minutes of May 15, 2008 Meeting****Agenda**

1. Fedora 3.0 migration requirements (Jeffery)
2. XACML requirements (Jie)
3. How to handle multiple segments of metadata
4. ETD export update (Shaun, Jeffery)
5. Handling of signature failures (Kalaivani)
6. Quick update – Google indexing

Fedora 3.0 Requirements

We reviewed draft version 3 of the Fedora 3.0 migration requirements. We confirmed the following points:

- All objects in Fedora will have content models (CMs), whether or not they have a disseminator.
- The process for creating CMs will be manual in R5.0. The process for doing this for the initial migration and for adding new CMs later will be spelled out by Jeffery and Ron in a subsequent specification.
- For every current object architecture (e.g. book, article, photograph, etc), we will create a corresponding CM. The object architecture vocabulary will be carried forward and applied to CMs. Therefore, for example, in techMD, a new field will be added labeled “contentModel”. The old element “objectArchitecture” will be dropped and all associated software in WMS will be deprecated. Our discussion indicated that there was no value in continuing to support the object architecture concept as implemented in WMS 4.5 and earlier.
- The disseminators used in Fedora 2.x have been shown to work properly in Fedora 3.0.
- WMS Impact
 - In each object, WMS will insert a rels-ext reference that points to the proper content model. WMS will not need to include disseminators within the object since the CM will, in turn, point to the proper bdef/bmech (if one exists).

- WMS will not need to handle xacml in R5.0. XACML policy datastreams, either inline xml for ETDs or an external object for NJVid, will be added after the object is ingest via dlr/EDIT.
- Storage for large files (archival masters) will be in a file system not under Fedora management. WMS will insert an “R” in the url pointer to these files and mark the ID as “EARCH1” as opposed to “ARCH1”.
- WMS will need to insert the proper rutgers-lib ID into the pre-ingest xml for all new objects that are to be ingested.
- Because PHP5 does not support Java bridge, we will need to explore the possibility of updating WMS edit to use the PHP5/Soap class. Yang and Ron will work this issue offline.
- We need to be able to edit xacml from dlr/EDIT. When the xacml is contained within a separate object, this is not a problem. When the xacml is inline with the POLICY datastream, we need to deal with how authorization is handled. Sho and Jeffery will propose a solution for next meeting.

XACML Requirements

We reviewed the specification for xacml requirements in R5.0. For R5.0, as noted above, xacml for both NJVid and ETDs will be added into the object after the object has been ingested into Fedora. For NJVid, the xacml will be in a separate object and pointed to by the POLICY datastream in the video object. The url is marked as “E”. For ETDs, the xacml will be xml inline as part of the ETD object (since we expect access policies to be unique to the dissertation). Primary issues to be resolved regarding xacml are how xacml is to be edited and how Shibboleth authorization attributes (person ID, institution, role) are passed to Fedora and to the xacml engine.

Multiple Segments of Metadata

In an earlier sw_arch meeting, we had proposed that WMS should be modified to handle multiple occurrences of any of the five sections of metadata: descriptive, rights, source, technical, and digital provenance. In this meeting, there were two separate scenarios that we discussed: a) for Fedora-based applications including RUcore (e.g. ETDs) and others who use WMS open-source with Fedora and b) non-Fedora users such as the Library of Congress.

We ran out of time on this topic but there were a few points that began to surface. Ron commented that moving to a multiple-object model for ETDs where supplemental files are represented as separate objects, interconnected via rels-ext, would be a management and preservation “nightmare”, largely because Fedora gives us very little capability to manage these compound objects. Functionally, there appears to be no reason to use the compound object model for ETDs if the following three tasks are undertaken: a) WMS accepts a METS file from the ETD application that has multiple segments of metadata for the main dissertation and the supplemental files, b) the ETD application inserts the proper linkages in the file section using the METS AMDID and DMDID pointers, and c) the search engine and user interface provide access to multiple sets of descriptive metadata and the links to all of the supplemental – changes that would be relatively easy. We’ll need to discuss this further in the next meeting. Given the urgency of delivering WMS for the LOC, we will discuss the multiple metadata issue in the next several days. Yang will initiate the discussion with email.

Other Items and Next Meeting

We ran out of time on several of our items. Regarding the treatment of signature failures, we’ll try to work this item via email discussion. For the next meeting (9:30 am May 29), the following are agenda items:

1. Final discussion/baselining of the Fedora 3.0 and xacml requirements (Jeffery, Jie)
2. Results/further discussion from the Shibboleth meeting (Ron, et al)
3. How to edit xacml POLICY code (Jeffery, Sho)
4. Multiple sets of metadata (all)
5. How to generate content models (Jeffery, Ron)
6. Update on ETD export function (Shaun)
7. Handling of signature failures (Kalaivani)
8. Google indexing