Chapter 11 - Metadata in Islandora

Many discipline-specific and community-specific metadata standards have evolved to meet the challenge of supporting data management and discovery as well as capturing information and communicating it to users. Islandora by default tends to use MODS, and the DC datastreams provided natively by FedoraCommons, for descriptive metadata, PREMIS for preservation metadata (leveraging the AUDIT datastream from FedoraCommons) MARCXML for some ingests, etc. However, Islandora supports any XML-based metadata standard or approach and leverages xsl for crosswalking and indexing of metadata.

Extensible Markup Language (XML) and Descriptive Metadata

As the proliferation of Descriptive Metadata standards continues to create interoperability and compatibility issues, XML and its accompanying tools are increasingly viewed as key for automating and translating metadata. The benefits are widely recognized as reduced effort, greater consistency of metadata, and enhanced accuracy of metadata.

- A representative document defines the XML elements allowed in a given schema; this representative document has an .xsd file extension.
- A mapping document defines how to translate XMLS elements between schemas; this document has an .xsl or .xslt extension.

Metadata Datastreams in Islandora

When an object is created in Islandora, a datastream containing Dublin Core XML metadata is automatically produced and is given "DC" as its DSID, but you will most likely want a separate datastream containing metadata from a richer metadata schema. For this reason, Islandora Solution Packs usually provide on or more MODS forms (and occasionally other forms) for storing more complex descriptive metadata. Typically, developers of Islandora Solution packs will define DSIDs appropriate to the metadata standard being used. For example, Islandora Solution packs usually store MODS metadata in a datastream with the DSID "MODS."

A user ingesting a new object is presented with the metadata form appropriate for that collection. Associations between forms and content models can be changed or removed by users of Islandora as described in the XML Forms section of this documentation. One Islandora content model may be associated with a number of forms to suit the needs of different collections.In order to fully utilize the Forms Builder, users will have to have an understanding of XML, Schema documents, and XPath (the language used to navigate XML documents).

Crosswalking Metadata Datastreams in Islandora

In order to crosswalk metadata, Islandora makes extensive use of XML transformations, or .xslts. Transformation serve a number of purposes in the Islandora system. Solution packs provide default transformations that do things like crosswalk MODS metadata to DC on ingest and edit of metadata. Both MODS and DC are thus persisted and kept in sync. When creating and editing forms based on new schemas, systems administrators can also add xslt files to folders in an Islandora installation, and make them available for administrators.

The architecture surrounding metadata in Islandora is designed to provide out-of-the box metadata creation, but also customization. New forms can be created and associated with Content Models via the Islandora interface. Content Models can be written to define any number of metadata datastreams, and to call .xslt files to create new datastreams on ingest, and to update datastreams when metadata is edited. The system leverages the external community by taking advantage of .xslts that are commonly produced to serve similar use-cases for other organizations. When installing an Islandora module, explore what metadata datastreams, transformations, and forms are made available to learn more about what options are available to you.