Multi-facetted Metadata - Describing datasets with different metadata schemas at the same time

Damian Ulbricht, Jens Klump and Roland Bertelmann, GFZ German Research Centre for Geoscience, Potsdam, Germany.
E-Mail: {ulbricht, jens.klump, rab}@gfz-potsdam.de

Generate Metadata

Individual instances of panMetaDocs are provided to research groups to produce metadata during the life-time of a project. The software is designed as data exchange platform for federated projects. It uses RSS, OAI-PMH and e-mail to notify users about recent changes. panMetaDocs produces XML-based metadata which are stored together with the dataset files in the eSciDoc-Items. Scientists can describe data before uploading in a metadata editor and at the same time make use of meta information that is stored as project settings. panMetaDocs allows to mint DOIs directly through DataCite or through GFZ DOI dB.

DOIDB and eSciDoc metadata catalogues

At GFZ we deployed DOIDB and eSciDoc as two systems that collect metadata of research data. DOIDB acts as a proxy service to the DataCite Metadata Store and builds a local log of dataset DOIs that were registered through DataCite. DOIDB accepts and disseminates XML-based metadata in the metadata schemas DataCite, DIF and ISO19139. eSciDoc and its dataset items are designed as persistence layer of web applications in a scientific publishing environment. The deposited metadata can be searched and modified via the eSciDoc REST API in two catalogues for published and unpublished data. Additionally, metadata of published items are available via OAI-PMH. Building interoperable metadata catalogues is one of our tasks in DFG project KOMFOR. Please visit our webpage at http://www.komfor.net.

Presentation of Datasets

The presentation of the datasets described in the eSciDoc-Items can be displayed in different "flavours", depending on the expected use context. A closer view on a set of parameters and methods may be interesting for smaller research communities. For a general summary of the dataset as a DOI landing page we developed an XSLT-style sheet that assembles information required for citation of datasets from the earth sciences. Currently, the stylesheet handles eSciDoc-, DataCite-, DIF-, and ISO19139-metadata. Files embedded in the eSciDoc-Item are provided for download. Stored HTML content can be embedded in an <iframe>. In this way content from external websites and content management system can be archived using eSciDoc as the persistence layer.

Using metadata records to describe datasets

The eSciDoc repository is able to hold multiple files per eSciDoc-Item and allows to store an arbitrary number of descriptive metadata records for both the files and the eSciDoc-Item. Our strategy is to make use of these metadata records to describe the data for different use cases using established metadata schemas that are used by a particular community. Thus, software and migration instructions provided by these communities can be used to migrate metadata into common formats of the future, making the task of long-term preservation of metadata easier. Workflows for long-term preservation of research data, and policies to govern this process is a task in our DFG-project EWIG. Please visit poster EGU2013-8170 presented by our colleagues at FU Berlin in this session and also our blog at http://ewig.gfz-potsdam.de.

Resources:
http://github.com/datacite / DataCite software
http://panmetadocs.net : panMetaDocs project
http://www.randomnoise.com/wr4/Icon : Iconic Icon Set
http://glyphicons.com : Glyphicons

Acknowledgements
* panMetaDocs is based on the source code of panMetaWorks. The source code is provided by R. Huber of DFC.
* Funding for the software development was provided by the projects Ewig and KOMFOR.
* DOI and ISNI-Registry are based on the source code of DataCite Metadata Store.
* panMetaDocs uses Iconic Icon Set and Glyphicons.