Metadata database models and EML creation at LTER sites

Abstract
The purpose here is to spark discussion. Preparing for data integration, we will each examine our IM System to ask if it will meet potential new metrics. Some LTER sites already generate PASTA-ready EML. Will their design work at any site?

Survey
Please correct or update your site information. Write directly on this participatory poster.

Commonalities
All LTER sites share common things. Entity-relationship diagrams show how these things are related. Each thing corresponds to one or more EML elements.

All sites need to present metadata on websites, in EML documents and other uses, such as other metadata standards.

Longevity and Continuing Design
Some LTER sites’ models designed in the 1990s are still in use today, such as VCR and AND, having migrated to new servers and new applications as technology changed. They remain useful because their schemata inherently model the characteristics of metadata and through continuing design to keep pace with evolving standards.

Mature Models
DataZoo at CCE/PAL, GCE Metabase and AND Metadata Database are three examples of mature models, in production, and part of a larger IM System at these LTER sites. These models continue to undergo improvements. Web page display is just one of their uses. EML is currently generated by scripts from all three of these metadata databases. The AND and GCE metadata model designs pre-dated EML; the extraction of EML was developed after the initial design. EML is just one of several metadata standards these three are designed to serve. All three undergo continuing development.

EML generated from a constrained model of a database is more likely to meet future metrics, especially if the data itself is filtered through a connected system.

Metabase collects data descriptions as part of a data ingest application.

DataZoo uses a data access layer to synchronize data with its metadata.

Future
Web services add options for development and use of data and metadata. The Unit Registry web service will soon be followed by the Controlled Vocabulary of Keywords and then subsequently by the NIS Administrative modules (bibliography and personnel). With this approach, sites may connect to services, replacing or synchronizing those parts of their local database. How will this affect our metadata database architecture?

Several sites are looking to participate in future development of metadata data models.

The GCE Metabase has been adopted by CWT and is planned to be ported to PostgreSQL at MCR and SBC.

Six LTER sites (LUQ, SEV, PIE, ARC, NTL, VCR) are pooling resources to develop a Drupal-based metadata storage, display and EML creation system.

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EML Specification

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