LTER Information Managers Report to the Coordinating Committee

Prepared by IMExec
10 August 2004

Summary of activities since LTER CC meeting at SBC, April 2004.

1. Annual IM Meeting. The annual IM meeting was held July 28-31, 2004 in Portland, Oregon and was attended by representatives from 23 of the 26 sites. The meeting agenda included presentations from recent projects (items 2-3 below), working group discussions (4-9), appointment of a new DataBits editor (10), and election of new IMExec members (11).

2. EML Best Practices. A working group assembled last spring met at LNO on May 19-20, 2004 to formulate best practice recommendations for EML implementation across the LTER Network. Goals included providing guidance to sites in their initial implementation of EML, identifying subsets of EML to correspond to the various levels of the tiered trajectory formulated by NISAC, and maximizing the interoperability of LTER EML documents to facilitate synthesis and tool development. A draft document with specific EML examples was presented at the annual IM meeting. The document will be distributed to the IM Committee for comment in Sep 04 and subsequently posted on the LTER Intranet web page (contact: Wade Sheldon GCE).

3. EML Harvester. The EML Harvester recently completed by Duane Costa LNO is designed to periodically retrieve EML documents from LTER sites for automatic inclusion in the LNO Metacat (Metacat is a network-accessible metadata database system developed by NCEAS). Four LTER sites are currently using the Harvester, and it is expected that other sites will participate in the near future. In addition to supporting centralized searches for LTER datasets, the new system will enable LTER sites to leverage new EML-based tools under development by NCEAS, SEEK, and LNO to access and analyze data distributed across the network (contact: Duane Costa LNO).

4. Metacat Query Interface. This working group (four sessions at the annual meeting) initiated design of a query interface for EML-based catalogs such as the LNO Metacat described above (3). The goal was to create a system that would support queries useful to ecologists and would provide some measure of standardization and interoperability among distributed information resources. A set of design specifications and a general prototype interface were created. Specific plans were also developed for review of the interface by LTER researchers, design completion, implementation on the LNO Metacat, and posting of the generic code for use by the community (contact: Peter McCartney CAP).

5. Site IM Evaluation Criteria. This working group (four sessions) drafted a document containing recommended criteria for the evaluation of information management at LTER sites. The document is intended to be used as a reference in formal reviews by NSF as well as in informal self-assessments by LTER sites. The proposed criteria focus on functionality in specified key areas and include metrics for evaluation. The current plan

is that the draft will be completed by the working group and the IM Committee this fall, reviewed by the NISAC Committee next winter, presented to the CC meeting next spring, and then in its final form presented to NSF (contact: Emery Boose HFR).

6. LNO Support for EML. This working group (one session) discussed the needs of individual LTER sites for LNO assistance in implementing EML. A survey was created and distributed to assess these needs. Results of the survey and feedback from LNO will be passed on to the NISAC Committee (which sets priorities for the NIS development team at LNO) early this fall (contact: Ken Ramsey JRN).

7. LNO Web Development Tools. This working group (one session) discussed current web tools and projects at LNO, as well as ideas and needs for the future. Demos of SiteDB and the IM Mentoring web page were discussed. SiteDB is scheduled for release early this fall and sites should update their data by the end of August (a demo version is available on the LTER Intranet). LNO will work with members of the IM Committee to complete the IM Mentoring web page later this year (contact: Marshall White LNO).

8. Designing LTER Web Sites. This working group (one session) discussed the diversity in content and structure currently found across LTER web pages, and the various problems that may result from that diversity (e.g., difficulty locating information, lack of network identity). At the same time the LTER Network web page (http://lternet.edu) provides a single portal to the Network, while SiteDB will provide a unified interface for outside users (see 7) and the Metacat Query Interface will provide a unified access point for data (see 4). Future action items of this group may include development of general guidelines for site web pages, creation of a controlled vocabulary for dataset keywords, and a workshop on web design techniques (contact: Karen Baker PAL).

9. Partnership & Outreach Planning. This working group (one session) discussed future LTER IM outreach and partnership activities, including an eco-informatics symposium at the 2005 ESA meeting and an information management volume in the LTER Oxford series. Preliminary chapters for the volume were identified (contact: James Brunt LNO).

10. Databits. The LTER Information Managers newsletter is available online at http://lternet.edu/databits. The newsletter is designed to engage the LTER IM community with a rotating editorship and authorship. Jonathan Walsh BES is editor for the fall issue. Eda Melendez-Colon LUQ is co-editor and will become editor for the spring 05 issue.

11. IMExec Committee. Regular members for the coming year include: Emery Boose HFR, Nicole Kaplan SGS, Linda Powell FCE, Ken Ramsey JRN, Wade Sheldon GCE, and Jonathan Walsh BES. Ex officio members include: Barbara Benson NTL (IM chair), James Brunt LNO, Don Henshaw AND (NISAC chair), and Peter McCartney CAP (LTER Exec).

The LTER Technology committee has interacted on an informal basis, primarily by Email and phone, since it last held a formal meeting in 2001. The committee has however, been very active in related committees and workshops including the Information Management (IM) and LTER Network Information Management System (NIS) development. The 1991 workshop and previous workshops produce a long list of recommendations for technologies that were a priority for implementation by the LTER Network. A large number of these recommendations have been implemented though a variety of means over the last few years. This includes direct internet connectivity at LTER research sites, adoption of wireless communication and data transmission, various sensor deployment by a number of LTER sites, and important computer infrastructure for support of LTER Information System implementation.

Recently the LTER Network Information System Advisory Committee (NISAC) requested that the LTER Technology Committee convene to produce a strategic plan for technology and technological applications related to development of the LTER NIS. The LTER Technology Committee will submit a proposal to the LTER Chair and LTER Executive Committee to develop this plan, and produce it prior to the spring LTER Coordinating Committee Meeting in 2005.

John Vande Castle
LTER Technology Committee Chair

IM Activities

- Metadata Best Practices Guide.
- Common LTER data catalog and standard query interface.
- Information Management Evaluation Guide

Recommendations for IM

- Reaffirm importance of publishing datasets online as per Network data release policy.
- Standardize interfaces through which data are accessed across the network
- Standardize the data use requirements across the network.

IM Evaluation Guide

- Document to be published by LTER IM Committee online.
- specifies broad functional requirements and not detailed implementation
- reference document for NSF review committees
- self-assessment guide for sites developing IM plans and preparing for review
- draft to be submitted to NISAC Fall 04, presented to CC at Spring 05
- contact: Emery Boose (HFR)

LNO NIS Task Status – 25 August 2004

(Note: highlighted text indicates task resulting from IM meeting in Portland, OR Fall 2004)

1 LNO Support for EML/update survey of site metadata to determine status and quality with regard to EML Best Practices
  1.1 Present at Fall 2004 IM meeting – completed
  1.2 Evaluate additional survey information obtained during Fall IM Meeting in Portland – in progress
  1.3 Revise survey statistics and repost to IM community – not started
  1.4 Define EML goals and strategies based on additional survey and present to NISAC during next conference call – not started
  1.5 Enter L. Powell's PERL script into CVS and generalize for other sites – end October

2 Enhanced Metacat search interface
  2.1 Review current Metacat search interface – completed
  2.2 Review Sheldon's email trail for change/enhancement request – completed
  2.3 Interview McCartney for vision of middle-ware search application – completed
  2.4 Prepare requirements and high-level architecture specification for IM meeting – initial requirements define during IM Meeting in Portland, OR; architecture design in progress
  2.5 Develop prototype query interface for Metacat – not started

3 Develop EML for LNO data holdings, register in Metacat, and utilize SRB where appropriate
  3.1 Query McCartney about CAP's EML for spatial artifacts (Earth imagery) – completed
  3.2 Develop strategy and implementation for Earth imagery data on Space – reviewed dataset; planning phase in progress
  3.3 Develop strategy and implementation of North Inlet data on Lternet – not started

4 Determine strategy to implement LTER Network EML support tool(s) based on current and available tools and/or development of a new tool
  4.1 Review Morpho 1.5.1 for usefulness – in progress
  4.2 Review Morpho 1.5.1 with Vanderbilt at SEV and ascertain usefulness – not started
  4.3 Propose strategy (as part based on EML Best Practices) – in progress; strawman design in preparation

5 Analyze, salvage, and dispose of legacy conversion tools begun under KNB project
  5.1 Outline list of required artifacts for completion of KNB project EML Conversion Tools that are completed or nearly completed (HBR, PIE, MCM Soils and Lakes, FCE, NWT, and ARC); have Waide approve – in progress; ARC toolset is currently in evaluation

5.2 Request proposal, including level of effort, from Blankman to address "a" (above) – in progress; need to plan meeting
5.3 Refactor completed or nearly completed tools (where appropriate) to organize and clean-up; enter into CVS - completed
5.4 Create deployable modules for completed or nearly completed tools – not started

6 Determine strategy for EML "Custom Units" hurdle
6.1 Follow-up with the SEEK group (Rich Williams?) to see what work they have completed – not started
6.2 Query Sheldon about vision of "Custom Units" solution – not started
6.3 Query McCartney about vision of "Custom Units" solution – not started

7 Enhance site and personnel databases with EML hooks
7.1 Query McCartney about vision for site/personnel database EML hooks – not started

8 EML Mentor Program Virtual Help Page
8.1 Propose options for the Virtu Help Page and respond to IMs – in progress
8.2 Implementation of a web-based Mentorship Help Page or Forum where questions/answers can be posted – in progress; will prototype with additional feedback from IM's

9 XMLSpy LTER Network License
9.1 Evaluate XMLSpy versions Professional versus Enterprise – completed
9.2 Obtain qoute from Altova/XMLSpy for prefered version as LTER Network wide license

10 Metacat/Harvester Support
10.1 Support/Maintenance for LNO Metacat server – completed
10.2 Development of Metacat Harvester – completed
10.3 Support/Maintenance for Metacat Harvester – in progress